Presented here are constellation figures from *Atlas Coelestis* by John Flamsteed, 1753. This beautiful folio volume of twenty-eight double-page engraved star maps is hand-colored and bound in vellum. Flamsteed was the first Astronomer Royal at Greenwich. He had a passion for precision and accuracy in astronomical data. Lalande describes the atlas as "the great and magnificent celestial atlas, the best ever made."

The *Atlas Coelestis* is listed in the recently published Catalogue of the Rare Astronomical Books in the San Diego State University Library. This unique collection of early astronomical books is known worldwide and is kept in the Special Collections room of the Library.

Special Collections contains many rare books and manuscripts. These materials, including photographs, correspondence, sheet music, autographs, postcards, and artifacts, are noncirculating and must be used in the Special Collections room because they are rare and require security and care in handling. There are approximately 30,000 volumes, 35 manuscript collections, and thousands of uncatalogued items dating from 1298 to the present. The book collections contain incunabula (books printed before 1501), sixteenth and seventeenth century imprints, and special collections on the history of science, the natural sciences, astronomy, biology, orchids, private presses, American literature, and Western Americana.

The Bulletin may be purchased at the Aztec Shops on campus for $3.25.

To order by mail, send $7.35 to Catalog Sales, San Diego State University, 6505 Alvarado Road, Suite 114, San Diego, CA 92182. Make check payable to: SDSU FOUNDATION.

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ANNOUNCEMENT
OF THE
GRADUATE DIVISION
1989-1990

SAN DIEGO STATE UNIVERSITY
5300 Campanile Drive
SAN DIEGO, CALIFORNIA 92182-0763
(619) 594-5200
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1989-1990 Academic Calendar

Summer Sessions 1989
(Petition for concurrent master's degree credit must be filed during the first week of any summer session that concurrent credit is to be earned.)

May 26
Graduate admissions for fall semester 1989 closed to out-of-country foreign students, except those from Canada and Mexico.

June 1
Graduate School Foreign Language Test. Applicants should contact the Test Office two weeks in advance of the test date.

June 3
Graduate Record Examination General Test. Applicants should contact the Test Office five weeks in advance of the test date.

June 5-23
Term A (3 weeks).

June 5-30
Term B (4 weeks).

June 5-July 14
Term C (6 weeks).

June 19
Last day to apply for summer graduation with an advanced degree, Graduate Division.

June 26-July 28
Term D (5 weeks).

June 26-August 4
Term E (6 weeks).

July 3
Graduate admissions for fall semester 1989 closed to all foreign students.

July 4
Holiday—Independence Day. Staff holiday (no classes).

August 1
Final day for submitting thesis to the Graduate Division prior to being taken to the Thesis Review Service. (Theses will be accepted on an at-risk basis up to the last working day of the term, but unless final processing is completed by noon, August 24, the student will be required to reapply for graduation in any subsequent term in which the student expects to graduate.)

August 1
Final day for submitting thesis to the Thesis Review Service, University Library.

August 4
Last day to apply for leave of absence for fall semester 1989.

August 7-25
Term H (3 weeks).

August 18
Last day for submission of incomplete and SP grade removals (excluding thesis) for summer graduation with an advanced degree.

August 18
Last day for reporting results on comprehensive examinations to the Graduate Division by department or college.

August 24
Final day for depositing approved thesis at Aztec Shops Copy Center.

Fall Semester 1989

May 26
Graduate admissions for fall semester 1989 closed to out-of-country foreign students, except those from Canada and Mexico.

July 3
Graduate admissions for fall semester 1989 closed to all foreign students.

August 1
Applications for admission or readmission to San Diego State University for the spring semester 1990 accepted. Applications are accepted after August 31 only until enrollment quotas are met.

August 1
Mail applications for fall semester 1989 admissions closed. When submitted in person, applications for admission in postbaccalaureate status only will be accepted until August 18.

August 4
Last day to apply for a leave of absence for fall semester 1989.

August 18
Graduate admissions for fall semester 1989 closed.

August 21-23
Orientation and advising days.

August 22
Opening date of the academic year for faculty.

August 24-25
Testing and advising days.

August 28
First day of classes.

August 28
Graduate admissions for spring semester 1990 closed to out-of-country foreign students, except those from Canada and Mexico.

Aug. 28-Sept. 8
Late Registration.

September 4
Holidays—Labor Day. Staff Holiday (no classes).

September 11
Last day to drop classes.

September 12
Last day to apply for refunds.

September 15
Last day to file petition for concurrent master's degree credit for fall semester 1989.

September 18
Last day to add classes or change grading basis.

September 18
Last day to withdraw officially from the University for fall semester 1989.

September 18
Last day to apply for December graduation with an advanced degree, Graduate Division.

October 2
Graduate School Foreign Language Test. Applicants should contact the Test Office two weeks in advance of the test date.

October 14
Graduate Record Examination General and Subject Tests. Applicants should contact the Test Office five weeks in advance of the test date.

November 1
Applications for admission or readmission to San Diego State University for the fall semester 1990 accepted. Applications are accepted after November 30 (postmarked) only until enrollment quotas are met.

November 20
Final day for submitting thesis to the Graduate Division prior to being taken to the Thesis Review Service. (Theses will be accepted on an at-risk basis up to the last working day of the semester, but unless final processing is completed by noon, December 19, the student will be required to reapply for graduation in any subsequent term in which the student expects to graduate.)

November 20
Final day for submitting thesis to Thesis Review Service to ensure graduation in December.

November 23-25
Holiday—Thanksgiving Recess. Staff holiday (no classes).

December 4
Graduate admissions for spring semester 1990 closed to all foreign students.

December 7
Last day of classes before final examinations.

December 8
Study and consultation day.

December 9
Graduate Record Examination General and Subject Tests. Applicants should contact the Test Office five weeks in advance of the test date.

December 9-16
Final examinations.

December 11
Last day for submission of incomplete and SP grade removals (excluding thesis) for mid-year graduation with an advanced degree.

December 11
Last day for reporting results on comprehensive examinations to the Graduate Division by department or college.

December 18
Winter recess begins.

December 19
Final day for depositing approved thesis at Aztec Shops Copy Center.

December 21-27
Holiday—Winter recess. Staff holiday (no classes).

December 28
Grades due from instructors (Noon deadline).
January 1

January 8-26

January 2

December 28

January 2

January 12

January 15

January 19

January 25-26

January 22-24

January 29

February 3

February 6

February 9

February 16

January 12

January 15

January 19

January 22

January 22-24

January 25-26

January 29

Jan. 29-Feb. 12

February 16

February 16

February 16

April 7

April 9-14

April 16

April 20

April 20

April 21

April 24

December 28

January 2

Last day of fall semester.

January 1

Holiday—New Year’s. Staff Holiday (no classes).

January 2

Mail applications for spring semester 1990 admissions closed. When submitted in person, applications for admission in postbaccalaureate status only will be accepted until January 19.

January 8-26

Winter Session 1990.

Spring Semester 1990

August 28

Graduate admissions for spring semester 1990 closed to out-of-country foreign students, except those from Canada and Mexico.

December 4

Graduate admissions for spring semester 1990 closed to all foreign students.

January 2

Mail applications for spring semester 1990 admissions closed. When submitted in person, applications for admission in postbaccalaureate status only will be accepted until January 19.

January 12

Last day to apply for leave of absence for spring semester 1990.

January 15

Holiday—Martin Luther King Jr. Day. Staff holiday (no classes).

January 19

Graduate admissions for spring semester 1990 closed.

January 22

First day, second semester.

January 22-24

Orientation and advising days.

January 25-26

Testing and advising days.

January 29

First day of classes.

Jan. 29-Feb. 12

Late registration.

February 3

Graduate Record Examination General and Subject Tests. Applicants should contact the Test Office five weeks in advance of the test date.

February 6

Graduate School Foreign Language Test. Applicants should contact the Test Office two weeks in advance of the test date.

February 9

Last day to drop classes.

February 12

Last day to apply for refunds.

February 16

Last day to file petition for concurrent master's degree credit for spring semester 1990.

February 16

Last day to apply for May graduation with an advanced degree. Graduate Division.

February 16

Last day to add classes or change grading basis.

February 16

Last day to withdraw officially from the University for spring semester 1990.

April 7

Last day of classes before spring recess.

April 9-14

Spring recess.

April 16

Classes resume.

April 20

Final day for submitting thesis to the Graduate Division prior to being taken to the Thesis Review Service.

April 20

Final day for submitting thesis to Thesis Review Service to ensure graduation in May. (Theses will be accepted on an at-risk basis up to completed by noon on May 31, the student will be required to reapply to graduate.)

April 21

Graduate Record Examination General and Subject Tests. Applicants should contact the Test Office five weeks in advance of the test date.

April 24

Graduate School Foreign Language Test. Applicants should contact the Test Office two weeks in advance of the test date.

May 4

Last day for submitting approved doctoral dissertations to the Graduate Division for May commencement.

May 17

Last day of classes before final examinations.

May 18

Study and consultation day.

May 19-26

Final examinations.

May 21

Last day for submission of Incomplete and SP grade removals (excluding thesis) for May graduation with an advanced degree.

May 21

Last day for reporting results on comprehensive examinations to the Graduate Division by department or college for May graduation with an advanced degree.

May 25

Graduate Admissions for fall semester 1990 closed to all foreign students, except those from Canada and Mexico.

May 27

Commencement.

May 28

Holiday—Memorial Day. Staff holiday (no classes).

May 31

Graduate School Foreign Language Test. Applicants should contact the Test Office two weeks in advance of the test date.

May 31

Final day for depositing approved thesis at Aztec Shops Copy Center.

June 1

Grades due from instructors. (Noon deadline.)

June 1

Last day of spring semester.

June 5

Graduate School Foreign Language Test. Applicants should contact the Test Office two weeks in advance of the test date.

June 9

Graduate Record Examination General Test. Applicants should contact the Test Office five weeks in advance of the test date.

August 3

Last day to apply for leave of absence for fall semester 1990.

Summer Sessions 1990

(Petition for concurrent master's degree credit must be filed during the first week of any summer session that concurrent credit is to be earned.)

June 2

Graduate Record Examination General Test. Applicants should contact the Test Office five weeks in advance of the test date.

June 4-22

Term A (3 weeks).

June 4-29

Term B (4 weeks).

June 4-July 13

Term C (6 weeks).

June 18

Last day to apply for summer graduation with an advanced degree. Graduate Division.

June 25-July 27

Term D (5 weeks).

June 25-August 3

Term E (6 weeks).

June 25-August 17

Term F (8 weeks).

July 4

Holiday—Independence Day. Staff holiday (no classes).

July 6

Graduate admissions for fall semester 1990 closed to all foreign students.

July 6

Term G (6 weeks).

July 18-24

Final day for submitting thesis to the Graduate Division prior to being taken to the Thesis Review Service. (Theses will be accepted on an at-risk basis up to the last working day of the semester, but unless final processing is completed by noon on May 31, the student will be required to reapply for graduation in any subsequent term in which the student expects to graduate.)

July 30

Final day for submitting thesis to the Thesis Review Service to ensure graduation in August.

August 3

Last day to apply for leave of absence for fall semester 1990.
Academic Calendar

August 6-24  Term H (3 weeks).
August 17   Last day for submission of incomplete and SP grade removals (excluding thesis) for summer graduation with an advanced degree.
August 17   Last day for reporting results on comprehensive examinations to the Graduate Division by department or college.
August 23   Final day for depositing approved thesis at Aztec Shops Copy Center.

(Please Note: This is not to be construed as an employee work calendar.)

Annual Calendar

CALENDAR 1989

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CALENDAR 1990

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CALENDAR 1990

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Schedule of Fees 1989-90

Fees and tuition are subject to change without advance notice by the Trustees of The California State University.

FEES MUST BE PAID AT TIME OF REGISTRATION. CHECKS OR CHARGE SLIPS ACCEPTED FOR EXACT AMOUNT OF FEES. OVERPAYMENTS OF $5.00 OR LESS ARE REFUNDED ONLY UPON REQUEST. IF YOUR CHECK OR CHARGE SLIP IS RETURNED BY THE BANK FOR ANY REASON, YOUR REGISTRATION MAY BE CANCELED AND YOU WILL BE BILLED $20.00 (Dishonored payment charge and late fee of $10.00 each). PAYMENT OF FEES FOR ADVANCE REGISTRATION OR LATE REGISTRATION SHOULD BE MADE BY CHECK, MONEY ORDER, OR CHARGE CARD. THE UNIVERSITY RESERVES THE RIGHT TO REFUSE PAYMENT BY PERSONAL CHECK FROM THOSE INDIVIDUALS WHO HAVE PREVIOUSLY HAD ITEMS RETURNED UNPAID BY THEIR BANK. REFUNDS MAY BE APPLIED AGAINST OTHER AMOUNTS DUE THE UNIVERSITY. CHECKS TO BE MADE PAYABLE TO SDSU. DO NOT ENCLOSE CASH.

ADMINISTRATIVE/FINANCIAL HOLDS

All administrative and financial holds must be cleared prior to submittal of payment for registration or other University services. See "Debts Owed to the Institution" below. Acceptance of payment by the University does not constitute completion of registration or guarantee of services if any kind of administrative or financial hold exists. Personal checks or charge cards will NOT be accepted.

REGISTRATION FEES—ALL STUDENTS: On basis of units carried.

Auditors pay same fees as students carrying courses for credit. Nonresident and foreign students pay additional fees—see information below.

<table>
<thead>
<tr>
<th>Units Attempted</th>
<th>Registration Fee</th>
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<tbody>
<tr>
<td>0 units—6.0 units</td>
<td>$288.00</td>
</tr>
<tr>
<td>6.1 or more units</td>
<td>$444.00</td>
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</tbody>
</table>

The above fee also includes a Student Activity Fee of $10.00, a Student Union Fee of $41.00, a Facilities Fee of $3.00, an Instructionally Related Activities Fee of $15.00, and a State University Fee of either $219.00 or $375.00, depending on unit load.

Imperial Valley Campus students pay a Student Union Fee of $16.00. See Imperial Valley Campus bulletin for details.

The total fee paid per term will be determined by the number of units taken, including those in excess of fifteen. No fees of any kind shall be required of or collected from those individuals who qualify for such exemption under the provisions of the Alan Pattee Scholarship Act. Legal residents of California are not charged tuition.

TUITION FOR NONRESIDENT STUDENT (Foreign and Domestic)

Tuition will be charged for all units attempted (Amount pending approval by Board of Trustees.)

(Tuition is payable in addition to registration fees listed above. For fee-paying purposes, zero unit and half-unit courses are counted as one unit. See Liability for Payment section for additional important information.)

Health insurance (mandatory for foreign students).......per year, approximately 269.00

PARKING FEES

Nonreserved parking space, per semester Car pool—see Cashiers Office. $72.00

Less than four-wheeled, self-propelled vehicle (motorcycle, moped) $55.00

MISCELLANEOUS FEES (Fees payable when service is rendered.)

Application for admission or readmission (nonrefundable) $18.00

Through spring semester 1990 $45.00

Fall semester 1990 and beyond (Amount pending approval by Board of Trustees) $55.00

Schedule of Fees / 11

Late registration (nonrefundable) (Refer to Class Schedule for dates when this fee will be assessed) 25.00

Failure to meet administratively required appointment or time limit (late fee) 10.00

Photo-identification card (One-time cost to both new undergraduate and graduate students at time of registration. Valid only when accompanied by current semester validation card) 3.00

Lost identification card

Photo I.D. card only 2.00

Registration validation card only 2.00

Photo I.D. card and validation card 4.00

Transcript of record (official or unofficial) 4.00

Second through tenth transcript, prepared at the same time as the first each 2.00

Additional copies over ten, prepared at the same time each 1.00

AFROTC deposit (Unexempted portion is refundable) 50.00

Check or charge slip returned for any cause* 10.00

Loss of or damage to library materials Replacement cost plus $8.00 service charge

Graduation fee** 10.00

Evaluation and diploma fee** 10.00

Credential application fee 60.00

Credential evaluation fee 25.00

Musical instrument repair fee 20.00

Lock and locker fee (optional) 1.00

Towel fee (optional) 2.00

Lost key fee (per key) 1.00

Miscellaneous course charge (optional) As established and approved

* Late fee also charged when applicable.

** Fee payable when graduation application is filed at Cashiers Office.

MISCELLANEOUS INSTRUCTIONAL COURSE CHARGES

Miscellaneous instructional course charges are payable at student's option for the following courses:

Accountancy 312

Art 225, 325, 425, 525, 526, 625, 627, 700D

Educational Technology 404, 471, 532, 540, 541, 544, 553, 572, 644, 671, 775

Family Studies and Consumer Sciences 205A, 205B, 301, 302, 405, 605

Geological Sciences 506

Industrial Arts 115, 119A-119B, 124, 138, 145, 146, 147, 150A-150B, 225, 325, 523, 533, 542, 553, 573, 583

Music 151, 345


CREDIT CARDS

Only VISA and MasterCard bank credit cards may be used for payment of Student Fees. Bank card payments are validated through the bank terminal system prior to acceptance by the University.

LIABILITY FOR PAYMENT

Whether or not an invoice is received from the University, students are liable for payment of all registration fees related to units held on or added after the close of business on the fourteenth day following the commencement of instruction. Foreign and nonresident students are liable for tuition related to all units held, except as provided for by the refund policy.

With the exception of doctoral students and students enrolling for 799A or 799B only foreign graduate students must pay or sign an installment agreement for a minimum of 6 units at time of registration. (Students participating in Advance Registration must make payment or submit an installment agreement to Cashiers prior to the first day of class.) Foreign students wishing to
pay for fewer than 6 units at registration must submit to Cashiers written approval to do so from the International Students Office or Graduate Division and Research, as applicable. 

IT IS THE STUDENT'S RESPONSIBILITY TO BE AWARE OF TOTAL FEES AND TUITION DUE. (Legal residents of California are not charged tuition.) Additional fees which may become due as a result of units added during the semester must be paid at the Cashiers Office at the time the units are added. Note fee schedule above. LATE FEE AND TUITION PAYMENTS ARE SUBJECT TO AN ADDITIONAL LATE FEE.

DISHONORED CHECK OR CHARGE SLIP
If your check or charge slip is returned by the bank for ANY REASON, the following action will be taken:

Advance Registration Payments. You will be disenrolled from all classes received through Advance Registration; it will then be necessary to re-register during Late Registration. You will be notified that this action was taken no earlier than the time your registration and withdrawing of further services until all financial liabilities have been resolved.

REFUND OF FEES
Details concerning fees which may be refunded, the circumstances under which fees may be refunded, and the appropriate procedure to be followed in seeking refunds may be obtained through consulting Section 41803 of the California Education Code (parking fees), 41913 of the California Education Code (nonresident tuition), 42019 of the California Education Code (housing), and 41802 of the California Education Code (all other fees) of Title 5, California Code of Regulations. In all cases it is important to act quickly in applying for a refund. Information concerning any aspect of the refund process is available at the Cashiers Office.

Refund of Registration Fees
REFUNDS ARE NOT AUTOMATIC; WHETHER OR NOT YOU RECEIVE CLASSES THROUGH THE REGISTRATION PROCESS, YOU MUST APPLY FOR THE REFUND BY THE REFUND DEADLINE.

Refunds may be applied against other amounts due the University.

Complete Withdrawal. To be eligible for refund of registration fees, a student withdrawing completely from the University (from all classes) MUST file a refund application with the Office following the commencement of instruction (Refund Deadline). All but $5.00 will be refunded RETURNED AT THE TIME YOU FILE YOUR REFUND APPLICATION. (See Class Schedule for details. The registration process is not complete until all fees due are paid and you are officially enrolled in classes through Admissions and Records.

APPEALS PROCESS – CASHIERS OFFICE
An appeals process exists for students who believe that individual circumstances warrant exceptions from published policy. Students should file a "Petition for Special Consideration" obtainable at the Cashiers Office. Petitions must be filed with the Cashiers Office prior to the end of the twelfth week of class.

EXTENSION COURSE FEES
Extension/Open University (approximately per unit) $75.00

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

ALAN PATTEE SCHOLARSHIPS
Children of deceased public law enforcement or fire suppression employees, who were California residents and who were killed in the course of law enforcement or fire suppression duties, are not charged fees or tuition of any kind at any California State University campus, according to the Alan Pattee Scholarship Act, Education Code Section 68121. Students qualifying for these benefits are known as Alan Pattee scholars. For further information contact the Admissions and Records Office, which determines eligibility.
Procedure for the Establishment or Abolishment of a Student Activity Fee

The law governing The California State University provides that a student activity fee may be established by student referendum with the approval of two-thirds of those students voting. The Student Activity Fee was established at San Diego State University by student referendum in 1955. The same fee can be abolished by a similar two-thirds approval of students voting on a referendum called for by a petition signed by 10 percent of the regularly enrolled students. (Education Code, Section 69300.) The level of the fee is set by the Chancellor. An increase in fee increase approved by a majority of students voting. Student activity fees support a variety of cultural and recreational programs, child care centers, and special student support programs.

Debts Owed to the Institution

Should a student or former student fail to pay a debt owed to the institution, the institution may "withhold permission to register, to use facilities for which a fee is authorized to be charged, to receive services, materials, food or merchandise or any combination of the above from any person owing a debt" until the debt is paid (see Title 5, California Code of Regulations, from any person owing a debt" until the debt is paid (see Title 5, California Code of Regulations, Sections 42380 and 42381). For example, the institution may withhold permission to receive part of an unpaid obligation, the student should contact the campus referred by the Cashiers Office, will review the pertinent information, including information of the student activity fee may be approved by the Chancellor only following a referendum on the rezult e may be approved by the Chancellor only following a referendum on the

Cost of Living

In order to ensure equity, San Diego State University establishes standard student budgets in coordination with The California State University system. Student budgets, updated annually for inflation are currently:

<table>
<thead>
<tr>
<th>Estimated Expenses for the 1989-90 Academic Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration fee for materials, service, student activity, student union, facilities</td>
</tr>
<tr>
<td>Books and supplies</td>
</tr>
<tr>
<td>Room and board</td>
</tr>
<tr>
<td>Transportation</td>
</tr>
<tr>
<td>Personal</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

In addition to the registration fee, foreign students and out-of-state students will pay tuition of $189.00 per unit in 1989-90. All fees and costs are subject to change without notice.

Institutional and Financial Assistance Information

The following information concerning student financial assistance may be obtained from the Financial Aid Office, CL-122, 594-6323.

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

Information concerning the refund policy of San Diego State University for the return of unearned tuition and fees or other refundable portions of costs is available from the University Cashiers Office, CL-108, 594-5253.

Information concerning the academic programs of San Diego State University may be obtained from the Office of the Vice President for Academic Affairs, HH-114, 594-6542, and may include:

1. The current degree programs and other educational and training programs;
2. The instructional, laboratory, and other physical plant facilities which relate to the academic program;
3. The faculty and other instructional personnel; and
4. Data regarding student retention at San Diego State University and, if available, the number and percentage of students completing the program in which the student is enrolled or expresses interest; and
5. The names of associations, agencies, or governmental bodies which accredit, approve, or license the institution and its programs, and the procedures under which any current or prospective student may obtain or review upon request a copy of the documents describing the institution's accreditation, approval, or licensing.

Information regarding special facilities and services available to handicapped students may be obtained from the Director of Disabled Student Services, Campus Lab 110A, telephone 594-6473.
PART ONE

San Diego State University
San Diego State University

San Diego State University was founded on March 13, 1897 for the training of elementary school teachers. The seven faculty and ninety-one students of the then Normal School's first building of the campus was under construction at Park Boulevard where El Cajon Boulevard begins.

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

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

7-acre site, and a campaign was begun in the 1920s to build a new campus. The Legislature, on what was then the far eastern border of the city, was approved by the electorate.

In February 1931, the college moved to a new mission-style buildings of the present Main Quad which is still called the Main Quad. In 1935, the Legislature removed the programs into areas other than teacher preparation in order to provide the city funds to build a new site and buy the old one. In 1928 the present campus, what is now the Main Quad, was approved by the electorate.

In February 1931, the college moved to a new mission-style buildings of the present campus, surrounding what is still called the Main Quad. In 1935, the Legislature removed the programs into areas other than teacher preparation.

In the same year, Walter R. Hepner then, with the coming of war, of contraction. At the end of World War II, enrollment had fallen to 1,918.

In the next quarter century, under Dr. Hepner and subsequently under Malcolm A. Love State is today one of the largest institutions in the State. In 1960, the College became a part of Chancellor's Office, under a state-wide Board of Trustees and a university, the Legislature renamed the system The California State University and Colleges, with President Donald E. Walker (1971-1972), President Brage Elding (1972-1977), and Day (1978--). The school is now called the University of California, San Diego.

To accommodate the steadily increasing enrollment, the campus continued to grow in terms of physical facilities as well. It currently encompasses over 3.5 million square feet in 44 buildings, including the College of Business Administration, the College of Arts and Sciences, the College of Education, the College of Health Sciences, the College of Letters and Sciences, the College of Social Sciences, the College of Science, and the College of Engineering.

The College of Business Administration and the School of Accountancy are accredited by the American Assembly of Collegiate Schools of Business. Several College of Business Administration programs are registered with the International Board of Certified Financial Planners. The Interior Design area in the Department of Art has been granted provisional status by the Council on Interior Design Education Standards Board.

San Diego State University's programmatic accreditation is through membership in the following associations:
- Accrediting Council on Education for Journalism/Mass Communication
  - American Chemical Society
  - American Dietetic Association
  - American Speech-Language-Hearing Association
  - Educational Standards Board and Professional Services Board
- California Commission on Teacher Credentialing
- Council on Education for Public Health
- Council on Education of the Deaf
- Council on Social Work Education
- Foundation for Interior Design Education Research
- National Association of Schools of Art and Design
- National Association of Schools of Music
- National Association of Schools of Public Affairs and Administration
- National Association of Schools of Theatre
- National Council for Accreditation of Teacher Education
- National League for Nursing
- National Room and Parks Association
- The College of Business Administration
- The School of Accountancy

San Diego State University is accredited by the American Assembly of Collegiate Schools of Business. Several College of Business Administration programs are registered with the International Board of Certified Financial Planners. The Interior Design area in the Department of Art has been granted provisional status by the Foundation for Interior Design Education Research.

The College of Engineering programs in aerospace, civil, electrical, and mechanical engineering are accredited by the Accreditation Board for Engineering and Technology, Inc.

The School of Nursing is accredited by the California Board of Registered Nursing.
Principal Officers of Administration

President of the University ............................................. Thomas B. Day
Vice President for Academic Affairs .......................... Albert W. Johnson
Vice President for Business and Financial Affairs ....... William L. Erickson
Vice President for Student Affairs ......................... Daniel B. Nowak
Vice President for University Relations and Development ........ Leslie Verger
Director of University Telecommunications .................. Paul J. Steen

Academic Administration

GRADUATE DIVISION

Dean of the Graduate Division and Research .............. James W. Cobble
Associate Dean ........................................................... Brad N. Bartel
Associate Dean ........................................................... Lawrence B. Feinberg
Assistant Dean ............................................................. Arthur W. Schatz

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 Deans of the Graduate Division, members of the faculty from the various schools and colleges, and two classified graduate students. For the academic year 1988-89, the membership of the Council was as follows:

James W. Cobble .......................... Dean of the Graduate Division and Research
Albert W. Johnson ............................ (ex officio) Vice President for Academic Affairs
Don L. Bosseau ......................................... (ex officio) University Librarian
Brad N. Bartel ........................................... Associate Dean of the Graduate Division
Lawrence B. Feinberg .............................. Associate Dean of the Graduate Division
Arthur W. Schatz ........................................ Assistant Dean of the Graduate Division
James H. Banks ......................................... Department of Civil Engineering
Joseph J. Beilinghier ...................................... Department of Drama
Mark C. Butler ........................................... Department of Management
James J. Conniff .......................... Department of Political Science
John B. Conway ........................................... Graduate School of Public Health
Ricardo J. Corell ......................................... School of Teacher Education
Anne-Charlotte Harvey .......................... School of Drama
John Lantz .............................................. Department of Nursing
Richard J. Laub ........................................... Department of Chemistry
Joseph M. Mahaffy ...................................... Department of Mathematical Sciences
Michael R. Seitz ........................................... Department of Communicative Disorders
Douglas A. Stow .......................................... Department of Geography
Gordon M. Thompson ..................................... Department of Counselor Education
Larry D. Thompson ....................................... Department of Mechanical Engineering
Penny L. Wright ........................................... Department of Management

Academic Deans

College of Arts and Letters ......................................... Marilyn J. Boxer
College of Business Administration .......................... Allan R. Bailey
College of Education ................................................. Ann J. Mone
College of Health and Human Services ..................... George T. Craig
College of Professional Studies and Fine Arts ............. Peter A. Dual
College of Sciences ................................................. Joyce M. Gattas
College of Extended Studies .................................... Donald R. Short
Division of Undergraduate Studies ............................ William P. Locke
Imperial Valley Campus .............................................. Bonnie H. Neumann

PART TWO

Graduate Division

The Graduate Division
Admissions Regulations
Requirements for Doctoral Degrees
Requirements for Master's Degrees

(Membership for 1989-90 will be determined prior to the beginning of the academic year.)
Graduate Division

Students who need specific information or assistance are invited to visit the Graduate Division, which is located in Room 220 of the Administration Building, or telephone (619) 594-5213. The Graduate Division comprises all departments and academic units of the University that offer graduate study and programs leading to advanced degrees. The Graduate Council is delegated University-wide jurisdiction over all matters relating to graduate studies, subject only to the right of review by the Senate. The Council’s responsibility is broad and includes, but is not limited to, the development of University-wide policy on graduate programs, graduate student affairs, graduate research and scholarship, and the participation of faculty in graduate programs.

The Graduate Dean is the chief administrative officer of the Graduate Division and is general responsibility for the development, improvement, and administration of all faculty and graduate students. Graduate study is highly exciting and requires intense study and scholarship and not merely the completion of a prescribed set of courses. Further, thesis and dissertation research be achieved through dedicated and persistent scholarship. The University has the necessary faculty and facilities to offer such opportunities to over 50 different areas of knowledge.

Authorized Graduate Degrees

<table>
<thead>
<tr>
<th>Authorized Graduate Degrees</th>
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</thead>
<tbody>
<tr>
<td>Biology</td>
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<tr>
<td>Chemistry</td>
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</tbody>
</table>

DOCTOR OF PHILOSOPHY

<table>
<thead>
<tr>
<th>Clinical psychology</th>
<th>Ecology</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public history</td>
<td>Radio and television</td>
<td>Russian</td>
</tr>
<tr>
<td>Liberal arts</td>
<td>Linguistics</td>
<td>Sociology</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Music</td>
<td>Spanish</td>
</tr>
<tr>
<td>Philosophy</td>
<td>Physical education</td>
<td>Social major</td>
</tr>
<tr>
<td>Political science</td>
<td>Physics</td>
<td>Speech</td>
</tr>
<tr>
<td>Psychology</td>
<td>Psychology</td>
<td>Communication</td>
</tr>
</tbody>
</table>

MASTER OF ARTS

<table>
<thead>
<tr>
<th>Economics</th>
<th>Education</th>
<th>English</th>
<th>French</th>
<th>Geography</th>
<th>History</th>
<th>Industrial arts</th>
<th>Latin American studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public history</td>
<td>Radio and television</td>
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<td>Philosophy</td>
<td>Physical education</td>
<td>Physics</td>
<td>Political science</td>
</tr>
</tbody>
</table>

MASTER OF SCIENCE

<table>
<thead>
<tr>
<th>Accountancy</th>
<th>Aerospace engineering</th>
<th>Applied mathematics</th>
<th>Astronomy</th>
<th>Biology</th>
<th>Business administration</th>
<th>Chemistry</th>
<th>Civil engineering</th>
<th>Master of Business Administration</th>
<th>Master of City Planning</th>
<th>Master of Fine Arts in Art</th>
<th>Master of Fine Arts in Creative Writing</th>
<th>Master of Fine Arts in Drama</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer science</td>
<td>Counseling</td>
<td>Electrical engineering</td>
<td>Geophysical sciences</td>
<td>Home economics</td>
<td>Mass communication</td>
<td>Mechanical engineering</td>
<td>Microbiology</td>
<td>Master of Music</td>
<td>Master of Public Administration</td>
<td>Master of Public Health</td>
<td>Master of Social Work</td>
<td></td>
</tr>
<tr>
<td>Nursing</td>
<td>Nutritional sciences</td>
<td>Physics</td>
<td>Psychology</td>
<td>Radiological health physics</td>
<td>Rehabilitation counseling</td>
<td>Special major</td>
<td>Statistics</td>
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</tbody>
</table>

Certificate Programs

The advanced certificate at the postbaccalaureate entry level gives students a program of coursework leading to a specific applied goal. The general educational background of a bachelor's degree with a major in the appropriate field(s) of study is prerequisite to such a certificate.

The advanced certificate at the post-master's entry level also gives students a program of coursework and supplemental practical experience leading to a specific applied goal. The theoretical and methodological subject matter obtained from the master's or doctoral degrees is prerequisite to such a certificate. A certificate at this level is an endorsement of the specialized competence beyond that obtained in the student's graduate degree program.

Nondegree Postbaccalaureate Study

In addition to specific programs of graduate study, the Graduate Division offers to individuals holding a bachelor's degree the opportunity to pursue postbaccalaureate study for reasons other than acquiring an advanced degree, credential, or certificate. By selecting from among the advanced certificate programs at the University, the student can acquire additional skills, or perhaps to prepare for a change in career.

Not bound by a prescribed course of study or a time limit, the postbaccalaureate student is eligible to enroll in all courses for which he or she meets the prerequisites. Additionally, greater freedom is provided to the postbaccalaureate student to obtain a program of study that is most suited to his or her particular needs.

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

Further information about nondegree postbaccalaureate study, including graduate academic certificates, may be obtained by contacting the Graduate Division.

Graduate Teaching Assistantships

Graduate teaching assistantships may be obtained by qualified graduate students in the areas of anthropology, art, automotive technology, chemistry, psychology, applied mathematics, educational technology, engineering, English, fine arts, and art education. Graduate teaching assistantships are available in many of the departments and programs of the University. Applicants for assistantships must be admitted to the University with classified graduate standing, and enroll in and complete at least six units each semester on the official program of study.

Information concerning an appointment as a graduate teaching assistant may be obtained from the Handbook for Graduate Assistants, Graduate Teaching Assistants and Graduate Teaching Associates, published by the Graduate Division.

Graduate Assistantships

Graduate assistantships not involving teaching duties and permitting up to 20 hours of work per week are available in many of the departments and programs of the University. Information concerning an appointment as a graduate teaching assistant may be obtained from the Handbook for Graduate Assistants, Graduate Teaching Assistants and Graduate Teaching Associates, published by the Graduate Division.
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 academic year 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 of the student. 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 Teaching Associates**

Some departments may offer qualified graduate students appointments as graduate teaching associates. Graduate students appointed as graduate teaching associates must be admitted to matriculated graduate student status. Graduate students who do not hold a master's degree in the discipline of their appointment must have completed one academic year of doctoral study to be eligible for graduate teaching associate positions. Reappointment is dependent upon satisfactory performance in graduate studies, as prescribed by the Graduate Division, and upon satisfactory teaching performance. Reappointment will be based on the continued teaching assignment and course work permitted during the semester. Information about the appointment as a graduate teaching associate may be obtained from the head of the department, school, or college in which the applicant intends to pursue advanced study.

**Graduate Scholarships and Awards**

A scholarship is a monetary award given to outstanding students to recognize them for their academic excellence, leadership, achievements, and promise. They are provided by private donors, corporations, educational associations, and alumni. Scholarships are designated for specific majors. Eligible students will be notified through the graduate assistantship programs or the Graduate Division. Competition is based on outstanding academic achievement. Terms of the Graduate Assistantship Program are announced, and all permits, by the Graduate Office during the academic year. Applications are available each year during one application period November through mid-December for the following academic year. The average SDSU scholarship award is $500. There is no limit to the number of scholarships available. The number of scholarships awarded is dependent on the number of applications submitted by students.

**Fellowships**

The San Diego State University Scholarship Office receives the annual announcements of Fellowships from the Fulbright, Marshall, Kent, Rotary and other similar fellowship programs. Since limitations are placed on each college and university as to the number of applications they may endorse, students interested in fellowships of this type are encouraged to discuss their applications with the Scholarship Director and members of the University faculty who have themselves in the past received these fellowships. Since scores from the Graduate Record Exam (GRE) 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.

**Graduate Equity Fellowship Program**

California residents who are members of underrepresented groups at the graduate level (ethnic minority, female, disabled) may apply for this grant administered through the Graduate Division. Applications are available in June and July for the annual award which begins with the fall semester.

**California State Graduate Fellowship Program**

California residents may apply for grants administered by the California Student Aid Commission. Applications are available in the Financial Aid Office during the annual application period (December to early February). The deadline to submit applications for the 1989-90 academic year is March 2, 1989.

**Financial Aid**

Student financial aid programs are intended to provide assistance to students who do not have the necessary financial resources to meet educational costs. For scholarships recognizing academic excellence and not generally based on financial need, see the Scholarships section. Only United States citizens and permanent residents are eligible to apply for financial aid.

San Diego State University makes every effort to advise students of all available financial aid programs. Financial Aid is available in the form of loans, grants, and part-time employment for eligible students. Since funds are limited and there are program deadlines, not all eligible students may be awarded financial aid. Information about all state, federal, and institutional aid programs is available from the Financial Aid Office, 122, (619) 594-6323. A financial aid brochure, which describes the available programs and the eligibility requirements, is available from the Financial Aid Office.

**Applying for Aid**

To be considered for first priority funding, applicants must file a Student Aid Application for California (SAAC) by March 1, and submit all required supporting documents to the Financial Aid Office by April 15 of the calendar year prior to the academic year for which aid is requested. Applications and supporting documents received after these dates will be considered on a space-available basis. In San Diego State University summer sessions, a graduate student may earn credit in the following categories:

- **Graduate Study in the Summer Sessions**

  Students may be admitted to any department, school, or college in which the student holds the necessary financial resources to meet educational costs. For scholarships recognizing academic excellence and not generally based on financial need, see the Scholarships section. Only United States citizens and permanent residents are eligible to apply for financial aid.

- **Summer Session Bulletin**

  The facilities of San Diego State University for graduate study are available to qualified students. For more information about the summer sessions, contact the Office of the Graduate Division.

- **Graduate Study for Foreign Students**

  The facilities of San Diego State University for graduate study are available to qualified students. For more information about the summer sessions, contact the Office of the Graduate Division.
Admission to Postbaccalaureate and Graduate Study

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

Importance of Filing Complete, Accurate, and Authentic Application for Admission Documents

The CSU advises prospective students that they must supply complete and accurate information on the application for admission, residence questionnaire, and financial aid forms. Further, applicants must submit authentic and official transcripts of all previous academic work attempted. Failure to file complete, accurate, and authentic application documents may result in denial of admission, cancellation of academic credit, suspension, or expulsion (Section 41301, Article 1.1, Title 5, California Code of Regulations). This requirement is effective from initial contact with the University and throughout the period the academic record is maintained.

Requirement and Use of Social Security Account Number

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

Measles and Rubella Immunizations Health Screening Provisions

All new and readmitted students born after January 1, 1957 will be notified of the California State University requirement to present proof of measles and rubella immunizations. This is not an admissions requirement but shall be required of students by the beginning of their second term of enrollment in CSU. San Diego State University students who have not complied with this CSU mandate will be notified of the need to comply before receiving registration materials for their second term. Proof of measles and rubella immunizations shall also be required for certain groups of enrolled students who have increased exposure to these diseases. Students subject to this health screening requirement include:

Students who reside in campus residence halls;
Students who obtained their primary and secondary schooling outside the United States;
Students enrolled in dietetics, medical technology, nursing, physical therapy, and any practicum, student teaching, or field work involving preschool-age children and/or school-age children or taking place in a hospital or health care setting.

Immunization documentation should be mailed or brought to SDSU Student Health Services, Immunization Program, 5300 Campanile Drive, San Diego, CA 92182. For those students unable to obtain acceptable proof of immunizations, Student Health Services will provide immunizations at no cost.
Application Proced nes

All applicants for any type of postbaccalaureate status (doctoral degree applicants, masters degree applicants, those seeking credentials or advanced certificates, and those application within the appropriate filing period. A complete application for postbaccalaureate is provided to each graduate admissions application (Part B). Postbaccalaureate applicants who submit an application and the $45 nonrefundable supplemental fee. Since applicants for application to any of the alternative campuses or later of a single campus on each an initial minimal. In the event that postbaccalaureate applicant wishes to be assured of initial application to the same institution as two letters of recommendation from academic or professional sources are required. At least 24 semester units of credit in the major field are awarded for classroom and laboratory study during a period of matriculation at the degree-granting institution. The student provides from the institution granting the credit full documentation showing how the experiential learning was evaluated and the basis on which such credit was awarded. In some circumstances, students holding a baccalaureate degree from an institution with limited accreditation (generally includes special purpose institutions) may be admitted to postbaccalaureate study provisionally for the purposes of validating the degree. The General Admission Dean, the degree may be validated if the student completes or has completed a general education program comparable in scope to the general education requirements of San Diego State University. Students who expect to enter an advanced degree program must have completed all the prerequisites prior to admission to the program. Students in this category may not enroll in 600- or 700-numbered courses, no units completed prior to validation of the baccalaureate degree may be included subsequently on an advanced degree program.

TOEFL Requirement

All graduate and postbaccalaureate applicants, regardless of citizenship, whose preparatory education was principally in a language other than English must demonstrate competence in English. Those who do not possess a bachelor's degree from a postsecondary institution where English is the principal language of instruction must receive a minimum score of 550 on the Test of English as a Foreign Language (TOEFL).

Admission Categories

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

Postbaccalaureate Standing (Unclassified)

A student wishing to enroll in courses at the University for personal or professional reasons, but not necessarily with an objective of an advanced degree, credential, or advanced but not necessarily with an objective of an advanced degree, credential, or advanced degree may be admitted to, or with postbaccalaureate standing (unclassified) does not constitute admission to, or with postbaccalaureate standing (unclassified) may not enroll in 600- and 700-numbered courses except by special permission.

Postbaccalaureate Standing (Classified)

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

Graduate Standing (Classified)

A student wishing to be admitted to a program of study leading to an advanced degree must meet the criteria specified under General Admission Requirements and, in addition, must:
1. Achieve a satisfactory score on the GRE General Test. (Students holding an advanced degree from an institution which is a member of the Council of Graduate Schools are exempted from this requirement; students applying to the College of Business Administration will take the Graduate Management Admissions Test; students applying to the Concentration in Health Services Administration, Graduate School of Public Health, can take either the Graduate Management Admissions Test or the Graduate Record Examination.)
2. Have completed an undergraduate major appropriate to the field in which the student desires to earn an advanced degree.
3. Satisfy the special departmental or college requirements as stated in Part Three of the Graduate Bulletin under "Fields of Study and Courses of Instruction.
4. Meet the professional, personal, and scholastic standards for graduate study established by the department and the Graduate Council.

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

Conditional Graduate Standing (Classified)

A student wishing to be admitted to a program of study leading to an advanced degree who meets the criteria specified under General Admission Requirements but who has deficiencies (classified), if the deficiencies can be met by specific additional preparation, including undergraduate deficiencies in the major and all course conditions must be met within five standing (classified) are admitted to authorized advanced degree curriculum and may enroll in or college have been met, the student should request that the program graduate adviser file a change of status form with the Graduate Division.

Continuing Students

Students enrolled in the University with postbaccalaureate standing may request conditional classified. Applications for such continuing standing are available in the University before continuing students may apply for graduate standing (classified).

Second Bachelor's Degree

Second bachelor's degrees are awarded by most departments. Currently Business Administration, Liberal Studies Option I, Mexican American Studies, and Telecommunications Administration, Bachelor of Arts, Bachelor of Science, Bachelor of Music, and Bachelor of Fine Arts do not participate in the second bachelor's degree program. A student wishing to earn a second bachelor's degree must apply for admission to San Diego State University during the postbaccalaureate program. In addition, applicants must fulfill all conditions. Applicants already enrolled at San Diego State University during the postbaccalaureate program, unless already enrolled at San Diego State University during the postbaccalaureate program, students will be sent a separate application for a second bachelor's degree.

Determination of Residence for Nonresident Tuition Purposes

The campus Admissions and Records Office determines the residence status of all new, returning, and continuing students for nonresident tuition purposes. Responses to the following statement of the rules regarding residency determination (see below) for office. The campus Admissions and Records Office will determine the residence status of all new, returning, and continuing students for nonresident tuition purposes.

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

Admission to a second bachelor's degree program is based on a review of the second bachelor's degree application and the applicant's academic record. Applicants must be eligible for admission as a postbaccalaureate student, meet all undergraduate admission subject requirements, show strong promise of success in the new field, and have a clearly indicated change in educational objectives.

Classified graduate students are not eligible to apply for a second bachelor's degree. Credit earned while a second bachelor's candidate may not be applied toward an advanced degree at a later date. Candidates for a second bachelor's degree are ineligible to enroll in 600- and 700-numbered courses.

To receive a second bachelor's degree, the student must complete a minimum of 30 postbaccalaureate units in residence with a minimum grade point average of 2.00; at least 15 units must be upper division in the new major. Up to six upper division units from the previous major may be used in the new major provided the student completed the same number of units above minimum requirements for the first degree. The student must fulfill all current requirements for the graduate degree, including but not limited to: General Education, major, upper division writing, and foreign language if required by the major. Students are subject to undergraduate policies and procedures, including rules governing deadlines, course forgiveness, and academic probation and disqualification.

The second bachelor's degree is not granted automatically. When eligible for graduation, students must submit an application for graduation with the Office of Admissions and Records. Students are granted admission to the second bachelor's degree program by the 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.
Legal residence may be established by an adult who is physically present in the state and who, at the same time, intends to make California his or her permanent home. Steps must be taken in California the permanent residence determination date to show an intent to make steps necessary to show California residence intent will vary from case to case. Included California vehicle plates and operator’s license; maintaining accounts in California banks; maintaining permanent military address and home of record; income; ownership of residential property or continuous occupancy or renting of an apartment membership in California professional or social organizations. The student who is within the state for educational purposes only does not gain the status of resident regardless of the length of the student’s stay in California. In general, the unmarried minor (a person under 18 years of age) derives legal residence. A married person may establish his or her residence independent of spouse. Nationality Act from establishing domicile in the United States. An unmarried minor alien under the age of 19 who is self-supporting for that year. The exception applies only to California residents for at least one year prior to the residence determination date and not met by the student or the student’s parents. The exception applies only to students whose parents were residents of California but left the state. The exception continues for one year following the student’s emancipation. A person who is an active member of the armed forces stationed in California meets California residence requirements. The exception applies only to students who are registered to the Legal Residence Office and are registering. There are exceptions for nonresident tuition, including:

1. Persons below the age of 19 whose parents were residents of California but who left the state while the student, who remained, was still a minor. When the minor reaches 18, the student must have been present in California with the intent of acquiring residence for a period of time.
2. Minors who have been present in California with the intent of acquiring residence for a period of time.
3. Persons below the age of 19 who have lived and been under the continuous direct residence determination date. Such students must meet California residence requirements.
4. Dependent children and spouses of persons in active military service stationed in California on the most recent residence determination date. Exceptions apply only for the minimum time required for the student to obtain California residence and maintain that residence for a period of time.
5. Military personnel in active 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.
6. Dependent children of a California resident who has been a California resident for the minimum time necessary to become a resident, so long as continuous residence is maintained that residence for a period of time.
7. Certain credentials, full-time employees of California school districts, and those students who do not have an adequate command of English as a foreign language. The California State University, Office of General Counsel, 400 Golden Shore, Long Beach, California 90802-4275, within 120 calendar days of notification of the final decision on campus of the classification. The Office of General Counsel may make a decision on the issue, or it may send the matter back to the campus for further review. Students classified incorrectly as residents or who are not granted nonresident status 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 Code of Regulations. Resident students who become nonresidents, and nonresident students who are classified incorrectly as residents are subject to discipline pursuant to Section 41301 of Title 5 of the California Code of Regulations.
student has met all University requirements except English language proficiency and may enter
the University after appropriate training at the American Language Institute and the
achievement of acceptable TOEFL scores. Health insurance coverage is mandatory for international (foreign) students. Acceptable
health insurance is available on campus at approximately $269 per year.
Arrangements for housing should be completed well in advance of the student's arrival on
the campus. Detailed information regarding housing may be obtained from the Housing and
limited; no scholarships are specifically reserved for students from another country. Further
information regarding scholarships will be found in the section of this catalog on Financial Aid.
Upon arrival at San Diego State University, the student should contact the Office of
International Student Services.

Limitation of Enrollment

Admission to the University must be restricted to the number of students for whom an
adequate education can be provided by the staff and facilities available. San Diego State
University limits graduate enrollment on the basis of field and aptitude of the applicant;
instruction or lecturers may not be candidates for degrees on this campus. Faculty may register
for courses as unclassified students.

Registration

San Diego State University students are afforded the opportunity to participate in an
Advance Registration system. On-campus registration is also held just prior to the beginning of
Handbook, issued each semester and obtainable at the University bookstore prior to the
term, and a listing of the fees required for registration, the courses offered for the
registration and depend on the number of units selected. Failure to pay fees will result in
cancellation of registration. For policies governing registration after classes begin, consult the
current Class Schedule.

Changes in Class Schedule

Students are responsible for any change in their semester's schedule of classes after the
official study list has been filed. Forms for changes in the official study list may be obtained at
the Office of Admissions and Records.
A change in schedule of classes includes the following: withdrawal from a class; adding a
class, adding or reducing units to a class for which the student is already registered; changing
sections of the same course, and changing from latter grade to credit/no credit or audit. Consult
the current Class Schedule for deadline dates for change of schedule.

Concurrent Master's Degree Credit

The bachelor's degree must be completed at the end of the semester or term in which the
concurrent credit is earned. A senior who has met all of the required competencies in writing
and mathematics and who is within 12 units of completing requirements for the bachelor's
may petition the Graduate Council to take for concurrent master's degree credit 500-numbered
certain 600- and 700-numbered courses approved by the department, with the remaining
must be submitted to the Evaluations Office of the Graduate Division.
Petitions must be filed before the beginning of the semester or term in which the concurrent credit is earned, and the
maximum number of units that may be earned as concurrent master's degree credit is
and 15.

Concurrent Postbaccalaureate Credit

Applicable to the “Fifth Year” Credential Requirement only

Concurrent postbaccalaureate credit may be earned during the final semester or summer
session by seniors admitted to the College of Education who meet all of the following
qualifications:
1. Have a minimum grade point average of 2.5 on the last 60 units attempted;
2. Complete coursework in excess of graduation requirements during the semester (or
summer session) when graduation occurs;
3. Attempt no more than 18 units during the final undergraduate semester (or 15 units
during summer session);
4. Request no more than a maximum of 12 units of 300-, 400-, or 500-numbered courses
for postbaccalaureate credit;
5. Submit petition before the end of the first week of classes (or the first week of summer
term A) of the final undergraduate semester (or term) when graduation occurs;
6. Petition the Dean of the College of Education;
7. Be graduated at the end of the semester (or summer session) the petition is made.
Extension courses are not acceptable for concurrent postbaccalaureate credit. Concurrent
postbaccalaureate credit will not be granted retroactively.
Petition forms are available in the Evaluations Office, AD-127.

Second Master's Degree

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

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

All students beginning graduate study at San Diego State University after August, 1989 will be required to follow the procedures and regulations stated in the 1989-90 edition of the 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 for the Graduate Bulletin. A student who was admitted to a graduate degree curriculum each year of the academic year must be enrolled in one or more courses each consecutive semester since first enrolling as a graduate student, or whose attendance for the academic year must be interrupted by more than two consecutive semesters, will be held responsible for the regulations in effect at the time the official master's degree program of study was approved.

Student Responsibility for Catalog Information

Students are individually responsible for the information contained in this bulletin. Although information contained herein is subject to change from year to year as university rules, policies, and curricula change. Failure to keep informed of such annual changes will not exempt students from whatever penalties they may incur.

Changes in Rules and Policies

Although every effort has been made to assure the accuracy of the information in this catalog, students and others who use this bulletin should note that laws, rules, and policies publication. Changes may come in the form of statutes enacted by the Legislature, rules and policies adopted by the Board of Trustees of The California State University, by the Chancellor Further, it is not possible in a publication of this size to include all of the rules, policies and other University. More current or complete information may be obtained from the appropriate Information Handbook outlines changes in academic policy and procedure and current deadlines which are of importance to students.

Notices in this bulletin shall be construed, operate as, or have the effect of an abridgment or limitation of any rights, powers, or privileges of the Board of Trustees of The California State University. The Trustees, the Chancellor, or the President are authorized by law to adopt, contract or otherwise bind the University or The California State University. The relationship of the student to this institution is governed by statute, rules, and policies adopted by the Legislature, the Trustees, the Chancellor, and their duly authorized designees.

Privacy Rights of Students in Education Records

The federal Family Educational Rights and Privacy Act of 1974 (20 U.S.C. 1292g) and 99 and California Education Code Section 67100 et al maintained by the campus. Specifically, the statute and regulations concerning access to student to the campus must provide students access to records directly related to the student, not misleading or otherwise inappropriate. The right to a hearing is provided for in the above designates as the student in question. The above designated information about themselves, including student records connected with the campus' academic, administrative, or service-related functions and who have reason for using student records connected with their campus or other related academic responsibilities.

Nondiscrimination Policy

Handicap

The California State University does not discriminate on the basis of handicap in admission to, or treatment or employment in, its programs and activities. Section 504 of the Rehabilitation Act of 1973, as amended, and the regulations adopted thereunder prohibit such Rehabilitation Act of 1973, as amended, and the regulations adopted thereunder prohibit such discrimination. The Office of Student Affairs has been designated to coordinate the efforts of compliance. The Office of Student Affairs has been designated to coordinate the efforts of discrimination. Inquiries concerning the application of Title VI to program activities of San Diego State University may be referred to the Affirmative Action Officer, ED-150, 594-6464.

Race, Color, or National Origin

The California State University complies with the requirements of Title VI of the Civil Rights Act of 1964 and the regulations adopted thereunder. No person shall, on the grounds of race, color, or national origin, be excluded from participation in, or be denied the benefits of, or be otherwise subjected to discrimination under any program or activity of The California State University. Inquiries concerning the application of Title VI to program activities of San Diego State University may be referred to the Affirmative Action Officer, ED-150, 594-6464.

Sex

The California State University does not discriminate on the basis of sex in the educational programs and activities it conducts. Title IX of the Education Amendments of 1972, as amended, prohibits discrimination on the basis of sex in the educational programs and activities operated by San Diego State University. Inquiries concerning the application of Title IX to programs and activities of San Diego State University may be referred to the Affirmative Action Officer, ED-150, 594-6464.

Numbering of Courses

Courses numbered 80-99 are nonbaccalaureate level and are not acceptable for a bachelor's degree or General Education. Those numbered 100 through 299 are in the lower division (freshman and sophomore years), those numbered 300 through 499 are in the upper division (junior and senior years).
Grading System

The end of each semester or summer session in which a student is enrolled, a report of a student's performance and academic standing is given to the student. Grades and grade point averages are calculated on a scale from 0.0 to 4.0, based on the following grading system:

**A** (Outstanding performance) 4.0
**A-** (Above average) 3.7
**B+** (Better than average) 3.3
**B** (Average) 3.0
**B-** (Below average) 2.7
**C+** (Satisfactory progress) 2.3
**C** (Minimal progress) 2.0
**C-** (Minimal effort) 1.7
**D+** (Passing grade) 1.3
**D** (Credit/no credit) 1.0
**F** (Fail) 0.0

**Incomplete (I)**: This grade is used to report the satisfactory completion of courses 797, 798, and 799 in the Graduate Bulletin and Class Schedule. Failure to complete satisfactorily such courses will result in the student being counted as equivalent to an F grade.

**Credit/No Credit Courses (Cr/NC)**

Students may enroll for credit/no credit only in those courses designated in the Graduate Bulletin for credit/no credit only. The symbol "Cr" is used to report the satisfactory completion of Courses 797, 798, and 799. The symbol "NC" is used to report the satisfactory completion of courses specifically designated in the Graduate Bulletin and Class Schedule. Failure to complete satisfactorily such courses will result in the student being counted as equivalent to an F grade.

**Authorized Incomplete Grade (I)**

The symbol "I" (Incomplete Authorized) indicates that a portion of required coursework has not been completed and evaluated in the prescribed time period due to unforeseen circumstances. The reasons for such a grade may be justified, reasons and that there is still a possibility of earning credit. It is the student's responsibility to communicate with the instructor and to arrange for additional work. The conditions for removal of the incomplete grade are determined by the instructor and given to the student with the approval of the college dean or designee. Incompletes cannot be made retroactive to a previous grade. The incompletes will be removed when the remaining coursework is satisfactorily completed. The student must officially request credit for the course after the degree has been granted, and it will be counted as an F grade for grade point purposes up after the degree has been granted, and it will be counted as an F grade point purposes up...
at the time of graduation. If students do not wish to be graduated with the grade of incomplete on their record, they must officially cancel their application for graduation.

Unauthorized Incomplete Grade "U"
The symbol "U" indicates that an enrolled student did not withdraw from the course but failed to complete course requirements. It is used when, in the opinion of the instructor, evaluation of academic performance is for purposes of grade point average computation this failing grades, withdrawals without explanation, that student should normally receive a final grade of F.

Assignment of Grades and Grade Appeals
1. Faculty have the right and responsibility to provide careful evaluation and timely assignment of appropriate grades.
2. There is a presumption that grades assigned are correct. It is the responsibility of anyone appealing an assigned grade to demonstrate otherwise.
3. Students who believe that an appropriate grade has not been assigned should first seek informal resolution with the instructor of record. If the matter cannot be resolved, the student may present the case to the Office of the Ombudsman for advice on appropriate procedures.

Computation of Grade Point Average
To compute the gpa, divide the total number of grade points earned by the semester or summer session in which the student registers for it, upon which the grade symbol "S" is written. Units earned in grades of P (pass), CR (credit), and S (satisfactory grade) are included in the computation. A grade of "F" (failure grade) is not included in the grade point computation until the student has completed a minimum of one semester at San Diego State University.

Uncompleted Theses
A student who registers for Course 799A, Thesis, but does not complete the thesis by the end of the semester or summer session in which the student registers for it, upon which the grade symbol "W" (unofficial withdrawal) is assigned, will receive an "F" grade in the thesis course. A second registration in Course 799A is expressly prohibited.

Withdrawals
A graduate student who has been admitted to a graduate degree program but has withdrawn from the University must initiate action formally through the Graduate Divison upon recommendation of the student's major professor. A student who withdraws from graduate degree requirements is required to comply with regulations and requirements in effect at the time of registration. The student must be registered in the Graduate Division for the course and the completed thesis is granted final approval.

Withdrawals
A student who registers for a course at the University for two consecutive semesters is considered to have withdrawn from the University for the purposes of the academic year. The student must be registered in the Graduate Division for the course and the completed thesis is granted final approval.

Official Withdrawal
With certain exceptions, graduate students may stop out of San Diego State University one semester in a calendar year and maintain continuing student status. Continuing status includes the maintenance of bulletin requirements for graduation. Disqualified students, students absent for more than one semester without an approved leave of absence, and those who attend another institution for more than one semester must apply for readmission should they wish to return to San Diego State University.

Leaves of Absence
One-Semester Stop Out
With certain exceptions, graduate students may stop out of San Diego State University one semester in a calendar year and maintain continuing student status. Continuing status includes the maintenance of bulletin requirements for graduation. Disqualified students, students absent for more than one semester without an approved leave of absence, and those who attend another institution for more than one semester must apply for readmission should they wish to return to San Diego State University.

Educational Leave of Absence
Students are permitted to take up to four consecutive semesters of approved leave of absence. An educational leave application is appropriate in those cases where students will be absent from the University for the majority of the leave time in an activity other than attending an accredited academic institution. The leave time is considered to be a leave of absence if it is not related to their formal academic careers or otherwise approved by the University. The leave time is considered to be a leave of absence if it is not related to their formal academic careers or otherwise approved by the University. The leave time is considered to be a leave of absence if it is not related to their formal academic careers or otherwise approved by the University.

Students who wish to withdraw from the University must initiate action formally through the student's major professor. The student must be registered in the Graduate Division for the course and the completed thesis is granted final approval.
Readmission

An enrolled student is eligible (if not disqualified) to stay out one semester without penalty. No application is necessary and advance registration materials will automatically be mailed to the last address on file.

A student who withdraws from the University for more than one semester must file an application for readmission with a $45 application fee. If the student was enrolled at another institution subsequent to the last attendance at San Diego State University, an official transcript Admissions and Records before readmission can be completed. SDSU students in good standing from the University for no more than one semester.

Repeated Courses

Ordinarily, a graduate student may not repeat courses which have been taken as part of an official master’s degree program. With prior permission of the graduate advisor, a graduate student may repeat one course on the official program of study in which a grade of B, D, F, or U which a C, D, or F has been earned; both grades will remain on the student’s permanent record, a U grade will be calculated in the grade point average. If a student repeats a course in the second semester, only the original grade will be used in computation of the grade point average. A course in which a U grade has been earned may be repeated only once. Repeated courses may not be taken for credit/honors for the same reason for which the student has been placed on administrative academic probation previously.

Probation and Disqualification

Scholastic Probation

A graduate student in any admission category shall be placed on academic probation if the student fails to maintain a cumulative grade point average of at least 2.5 in all units attempted.

Scholastic Disqualification

Any postbaccalaureate student who has been admitted to a graduate degree curriculum and whose performance therein is judged to be unsatisfactory with respect to the academic or professional standards of the program will be placed on academic probation. Failure to comply, after due notice, with an academic requirement or regulation which is student.

Administrative Academic Probation and Disqualification

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

1. Withdrawal from all or a substantial portion of a program of studies in two successive terms or in any three terms.
2. Repeated failure to progress toward the stated degree or objective or other program objective when such failure appears to be due to circumstances within the control of the student.
3. Failure to comply, after due notice, with any academic requirement or regulation which is student.
4. If the student becomes subject to administrative academic probation for same or similar reason for which the student has been placed on administrative academic probation previously, although not currently in such status.

Petition for Readmission

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

Student Discipline and Grievances

Inappropriate conduct by students or by applicants for admission is subject to discipline on the San Diego State University campus. The Office of Judicial Procedures coordinates the San Diego State University campus. The Office of Judicial Procedures coordinates the judicial process and establishes standards and policies for conduct on campus.

41301. Expulsion, Suspension and Probation of Students.

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

(a) Cheating or plagiarism in connection with an academic program at a campus.
(b) Forgery, alteration or misuse of campus documents, records, or identification cards.
(c) Misrepresentation of oneself or of an organization to the campus educational community.
(d) Obstruction or disruption, on or off campus property, of the campus educational community.
(e) Physical abuse on or off campus property of the person or property of the campus community or of members of his or her family or in the possession abuse.
(f) Theft of, or nonaccidental damage to, campus property, or property in the possession of the campus community.
(g) Unauthorized entry into, or use of, or unauthorized possession of campus property, of the University, except when lawfully prescribed pursuant to the campus community.
(h) Unlawful possession or use of explosives, the University, except when lawfully prescribed pursuant to the campus community.
(i) Engaging in lewd, indecent, or obscene behavior on campus property.
(j) Abusive behavior directed toward, or hazing of, a member of the campus community.

Administrative Academic Probation and Disqualification

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

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

Petition for Readmission

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(c) Misrepresentation of oneself or of an organization to the campus educational community.
(d) Obstruction or disruption, on or off campus property, of the campus educational community.
(e) Physical abuse on or off campus property of the person or property of the campus community or of members of his or her family or in the possession abuse.
(f) Theft of, or nonaccidental damage to, campus property, or property in the possession of the campus community.
(g) Unauthorized entry into, or use of, or unauthorized possession of campus property, of the University, except when lawfully prescribed pursuant to the campus community.
(h) Unlawful possession or use of explosives, the University, except when lawfully prescribed pursuant to the campus community.
(i) Engaging in lewd, indecent, or obscene behavior on campus property.
(j) Abusive behavior directed toward, or hazing of, a member of the campus community.

Administrative Academic Probation and Disqualification

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

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

Petition for Readmission

A postbaccalaureate student disqualified from the University under the foregoing regulations may be readmitted to the University by the Graduate Dean. Application for readmission must be made on forms available at the Office of Admissions and Records.
41301. Qualified admission or denial of admission; in such cases shall be determined under procedures adopted pursuant to Section 41304.

41304. Student Disciplinary Procedures for The California State University.

The University shall prescribe, and may from time to time revise, a code of student disciplinary procedures for The California State University. Subject to other applicable law, this code shall provide for determinations of fact and sanctions to be applied for conduct which is a ground of discipline under Sections 41301 or 41302, and for qualified admission or denial of admission under Section 41303; the authority of the campus President in such matters; conduct related determinations on financial aid eligibility and termination; alternative kinds of proceedings, including proceedings conducted by a Hearing Officer; time limitations; notice; conduct of hearings, including provisions governing evidence, a record, and review; and such other related matters as may be appropriate. The Chancellor shall report to the Board actions taken under this section.

Student Grievances

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

Plagiarism

Plagiarism is formal work publicly misrepresented as original; it is any activity wherein one person knowingly, directly, and for personal, public or commercial gain resorts to the published or unpublished work of another in order to represent it as one's own. Work shall be deemed plagiarism: (1) when prior work of another has been demonstrated as the accessible source; (2) when substantial or material parts of the source have been literally or evasively appropriated (substance denoting quantity; matter denoting qualitative format or style); and (3) when the work lacks sufficient or unequivocal citation so as to indicate or imply that the work was neither a copy nor an imitation. This definition comprises oral, written, and crafted pieces. In short, if one purports to present an original piece but copies ideas word for word or by paraphrase, those ideas should be duly noted.


San Diego State University is a publicly assisted institution legislatively empowered to certify the competence and accomplishment in general and discrete categories of knowledge. The tenure of this University is therefore obliged not only to society at large but to President and faculty of this University are therefore obliged not only to society at large but to President and faculty of this University. This is because the citizenry of the State of California to guarantee honest and substantive knowledge in those who hold the offices of this University. Writing willfully to whom they assign grades and whom they recommend for degrees. Writing willfully to whom they assign grades, the University is to condone dishonesty, to ignore or to allow students' attribution of others' work to themselves is to condone dishonesty, and to fail the public trust.

The objective of university endeavor is to advance humanity by increasing and refining one's knowledge and is, therefore, ill served by students who indulge in plagiarism. According to, one knowledge and is, therefore, ill served by students who indulge in plagiarism. A student who is suspected or accused of disregarding, concealing, aiding, or committing plagiarism to whom they assign grades and whom they recommend for degrees. Writing willfully to whom they assign grades, the University is to condone dishonesty, to ignore or to allow students' attribution of others' work to themselves is to condone dishonesty, and to fail the public trust.

Transcripts of Record

A student may obtain an official academic transcript by filing an application at the Cashiers Office. A fee is charged for all transcripts and must be paid in advance. One week should be allowed for processing and mailing of the transcript. Transcripts from other schools are not released or copied. Transcripts from other schools are not released or copied. Transcripts from other schools are not released or copied. Transcripts from other schools are not released or copied. Transcripts from other schools are not released or copied. Transcripts from other schools are not released or copied. Transcripts from other schools are not released or copied. Transcripts from other schools are not released or copied. Transcripts from other schools are not released or copied.
General Requirements for Doctoral Degrees

The degree Doctor of Philosophy (Ph.D.) is offered jointly by San Diego State University and cooperating universities in biology, chemistry, clinical psychology, and engineering science. The general requirements are found in the program adviser at San Diego State University for more specific details on application procedures.

Admission to the Programs

After formal admission to a doctoral program, the student must declare an intention to enter the 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 cooperating campuses of the University of California and the Claremont Graduate School.

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 accordance with the regulations of the university cooperating with SDSU. At San Diego State University, the minimum of one year of full-time residence consists of registration in and completion of at least six semester units each semester of the required year’s residence. To maintain good standing in the program, the student must declare an intention to enter the doctoral program on each campus and fulfill the degree within the specified time frame.

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 knowledge of the field of study. This examination, called a Qualifying Examination, ordinarily consists of written and oral parts. The faculty of the cooperating institutions collaborates in planning and conducting the examination. The student must be satisfied that the student is prepared 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. Except for those in the Education program, doctoral students must be enrolled on at least one of the cooperating campuses each term they are in the program unless granted an official leave of absence.

Admission to Graduate Study

An applicant for admission to a doctoral program must first be admitted to regular graduate standing in the appropriate campus of the University of California or the Claremont Graduate School and to San Diego State University. Fees and regulations governing the doctoral programs are found in the Graduate Division Bulletin of San Diego State University and in the Graduate Studies Bulletin of each of the cooperating campuses of the University of California and the Claremont Graduate School. Applicants are advised to consult the program adviser at San Diego State University for more specific details on application procedures.

Study List Limits in the Graduate Division

A “full-time enrollment” means that a student is enrolled for not less than 12 units per semester. For purposes of computing units for graduate level courses, the following are considered credits: a weighted factor of 1.5 shall be applied to each unit. Enrollment in Thesis (793A) or Graduate Teaching Assistant (988) is also considered full-time enrollment. Graduate students are advised that 12 units of 600-800 numbered courses or 15 units of a semester's coursework is the recommended maximum for graduate students who are employed full time. Students who wish to begin graduate study at one campus must consult the graduate adviser on each campus for approval. The student must declare an intention to enter the doctoral program on each campus and fulfill the degree within the specified time frame.

Teaching Assistant's Handbook for further information on unit limitations.

Unofficial Transcripts

Students may obtain an unofficial copy of their SDSU transcript by paying the unofficial transcript fee at Admissions and Records. These transcripts are usually available on an immediate basis. However, during peak periods, Admissions and Records reserves the right to offer a 48-hour turnaround. These records do not bear the seal of the University and are not suitable for transfer purposes. Unofficial copies will be made ONLY of the SDSU transcript.

Final Examinations

No final examination shall be given to individual students before the time specified in the Class Schedule. Any student who finds it impossible to take a final examination on the date and must take the deferred final examination within the time allowed for making up incomplete grades.

Transfer or Extension Course Credit

Subject to lower limitations for individual programs, as indicated in Part Three of this bulletin, the maximum amount of transfer and San Diego State University extension course credit, which permits 6 units, Master of Science degree in Nursing, which permits 12 units of extension credit; Master of City Planning degree, which permits 27 units (including a maximum of 9 units of extension credit); and the Master of Fine Arts degree, which permits 30 units (including a maximum extension credit); the Master of Fine Arts in Creative Writing which permits 28 units of extension credit; and the Master of Science degree in Rehabilitation of business and university cooperation with SDSU. At San Diego State University the

Students who wish to become candidates for the degree Doctor of Philosophy in Biology, Chemistry, Clinical Psychology, Ecology, Education, or Psychology should utilize the accredited graduate programs of the cooperating 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. Except for those in the Education program, doctoral students must be enrolled on at least one of the cooperating campuses each term they are in the program unless granted an official leave of absence.

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Teaching Assistant’s Handbook for further information on unit limitations.

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Credit earned by first-time students through one semester of enrollment in Open University nonmatriculated programs, who have completed individual course prerequisites and who meet the standards for regular enrollment, to enroll in regular campus classes on a space-available basis. 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 or associates at San Diego State University are limited to 15 units of combined teaching assignments on campus credit earned by extension credit. Graduate teaching assistants employed as graduate assistants are limited to 20 hours of work per week combined with a maximum of 8 units of coursework. Any excess load must be approved by the department chair and the Graduate Dean. Graduate teaching assistants who enroll for more units than authorized will not receive credit on their official degree.

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

2. After passing the Qualifying Examination the student must apply to the graduate dean at the cooperating campus with which the student is associated for advancement to candidacy. After approval by both graduate deans, the student will be notified of advancement to candidacy by the Graduate Dean, University of California campus of Claremont Graduate School.

3. A dissertation (or thesis) on a subject chosen by the candidate and approved by a committee chosen by the Graduate Councils of the cooperating institutions is required of every candidate. Approval of the dissertation by this committee affirms that the research is significant to the body of knowledge in the particular field and 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 the student is required to show the relationship of the dissertation to the general field in which the subject lies and to answer specific questions concerning the investigations. In addition to meeting the dissertation filing requirement of the cooperating campus, doctoral students are required to provide one bound copy of the dissertation for deposit in the San Diego State University library. Binding must meet the ALA library standard. Doctoral students must maintain a 3.0 grade point average in all coursework attempted to remain in good standing.

Award of Degree

The degree Doctor of Philosophy in Biology, Chemistry, Clinical Psychology, Ecology, or the Trustees of The California State University in the names of San Diego State University and commencement ceremonies of both institutions providing they have completed all degree requirements in the graduate offices, by the deadlines of the respective institutions. The deadline dates of the ceremonies at San Diego State University should consult the academic calendar for the last University also requires that the students must apply for graduation in any term they intend to

Procedures

Doctoral students are expected to make steady progress toward completion of the dissertation but rather depends on the mastery of the subject matter field and completion of all degree requirements. Doctoral students must be continuously enrolled until all degree requirements governing graduate students enrolled in doctoral programs are available from the cooperating institutions.

Financial Support

San Diego State University students are eligible to apply for financial aid through the Financial Aid Office at the cooperating campuses. Students admitted to the doctoral programs normally are also appointed as research assistants, graduate assistants, or graduate teaching assistants or equivalent research positions.

Basic Requirements for the Master's Degrees

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

Examinations

As part of the admission procedure, all students desiring an advanced degree must take the Graduate Record Examination General Test. Students holding a master's or higher degree from an institution that is a member of the Council of Graduate Schools of the United States are exempt from this requirement. The College of Business, the College of Health Services Administration, Graduate School of Public Health, requires either the GMAT or the GRE General Test. Examinations required in the various subject matter fields of study are listed in the appropriate sections of Part Three. Courses and Curricula under Specific Requirements for the Master's Degree. (See below for the foreign language examinations and for the comprehensive examination required in lieu of thesis under Plan B.)

Official Programs of Study

Official programs of study are to be submitted to the Graduate Division for approval after the student has been granted full classified graduate standing. The program must be submitted prior to the time the student wishes to be considered for advancement to candidacy. The prior time the student desires to be considered for advancement to candidacy must be approved in the Graduate Division.

Official master's degree programs of study are designed or revised by the graduate adviser and approved by the Graduate Council. Official master's degree programs of study that have been completed as part of the graduate program are required to submit a new program that has been approved in the Graduate Division.

When course requirements listed on an official master's degree program deviate from those requirements, the department concerned must submit to the Graduate Bulletin, the department concerned for adjustment of academic requirements.

Foreign Language Requirement

Departments that require students to pass a foreign language examination may direct a student to complete one of the following options of a combination thereof: a departmental student examination or a combination thereof, a combination of the MLA-Cooperative Foreign Language Test, or a departmental student examination or a combination thereof, a combination of the MLA-Cooperative Foreign Language Test (GSFLT). Students may not attempt the MLA test or the Graduate School Foreign Language Test (GSFLT) more than twice.

Advancement to Candidacy

A student who holds classified graduate standing at San Diego State University and who meets its chronological, professional, and personal standards may be considered for advancement to candidacy by the Graduate Dean. For the Master of Business Administration, the Graduate School of Business Administration, the Graduate School of Public Administration, and the Master of Public Administration, a student must be advanced to candidacy in the Master of Public Administration, a student may be advanced to candidacy in the Master of Public Administration degree, a student may be advanced to candidacy in the Master of Public Administration degree, a student may be advanced to candidacy in the Master of Public Administration degree, a student may be advanced to candidacy in the Master of Public Administration degree, a student may be advanced to candidacy in the Master of Public Administration degree, a student may be advanced to candidacy in the Master of Public Administration degree after completing at least 12 units of coursework listed on the official program of study with a
Degree Requirements

Master of Fine Arts in Creative Writing Degree
Fifty-four units of 500-, 600- and 700-numbered courses specified by the Department of English and Comparative Literature, at least 36 of which must be completed in residence. Courses required to remove undergraduate deficiencies are in addition to the minimum 54 units for the degree. No more than a total of six units in course 798 will be accepted for credit toward the degree.

Master of Fine Arts in Drama Degree
Sixty units of 500-, 600- and 700-numbered courses specified by the Department of Drama, at least 30 of which must be completed in residence. Courses required to remove undergraduate deficiencies are in addition to the minimum 60 units for the degree. No more than a total of six units in course 798 will be accepted for credit toward the degree.

Master of Public Health Degree
Forty-eight units (45 units for Health Services Administration) of approved 500- and 700-numbered courses earned in graduate standing, at least 39 of which must be earned in residence. Courses required to remove undergraduate deficiencies are in addition to the minimum 48 units required for the degree. Not more than a total of six units in courses numbered 797 and 798 will be accepted for credit toward the degree.

Master of Science in Rehabilitation Counseling Degree
Sixty units of 600- and 700-numbered courses specified by the Rehabilitation Counselor Program, at least 30 of which must be completed in residence. Courses required to remove undergraduate deficiencies are in addition to the minimum 60 units for the degree. Not more than a total of nine units in course 744 will be accepted; not more than a total of nine units in courses numbered 743 and 745 will be accepted.

Master of Social Work Degree
Fifty-six units of 500- and 700-numbered courses specified by the School of Social Work at least 28 of which must be completed in residence. Courses required to remove undergraduate deficiencies are in addition to the minimum 56 units for the degree.

Degree Time Limitations
In all advanced degree curricula offered at San Diego State University, any course completed more than seven years prior to the date on which all requirements for the degree are completed must be used for advanced degree credit. 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.

Satisfactory completion of a thesis, project, or comprehensive examination, is defined as follows:
(a) A thesis is the written product of a systematic study of a significant problem. It identifies the problem, states the major assumptions, explains the significance of the undertaking, sets forth the sources for and the methods of gathering information, analyzes the data, and offers a
Degree Requirements / 53

Conclusion or recommendation: The finished product evidences originality, critical and independent thinking, appropriate organization and format, high level of writing competency, and thorough documentation. Normally, an oral defense of the thesis is required.

A project is a significant undertaking appropriate to the time and applied arts or to professional fields. It evidences originality and independent thinking, appropriate form and organization, and a rationale. It is described and summarized in a written abstract that includes the project's significance, objectives, methodology, and a conclusion or recommendation. An oral defense of the project may be required.

A comprehensive examination is an assessment of the student's ability to integrate the knowledge of the area, show critical and independent thinking and demonstrate mastery of the organization, high level of writing competency, critical thinking, and accuracy of documentation with the records retention policy of The California State University.

Plan A, requiring a thesis or project, may be selected by a student seeking the master's Thesis or in the official program of study. Three units of "CR" are granted for a satisfactory department or school concerned and the Graduate Council. Assigning of "CR" grade for the required, however, students will not be permitted to register for this course until they have an officially approved thesis or project committee form on file in the Graduate Division. The student must obtain clearance for registration in Thesis from the Graduate Division. Failure to accessioned by the library of San Diego State University and are subject to the regulations of advising as to publication. At the current edition of the Manual of Instruction for the Preparation and Plan B, requiring a comprehensive written examination in lieu of a thesis, may be followed in comprehensive examinations in lieu of theses are the determined by the department or Division by the department or school concerned. Refer to the academic calendar in Part One of this bulletin. Dates on which school concerned. Results of comprehensive examinations must be reported to the Graduate for determination by dates. To be eligible to take the Plan B comprehensive examination, the student must have been advanced to candidacy.

Thesis Research Involving Human Subjects and Animal Subjects

Students conducting thesis research involving human subjects must submit a protocol to the departmental Human Subjects Committee (where applicable) and then to the university's CPHS review. Students must allow at least ten weeks for obtaining approval. Guidelines for obtaining approval include the following:

1. The research must be approved by the CPHS Office, Physics 3433, 295-6662.

2. Students are required to register for thesis and must obtain written approval from the CPHS before engaging in any activity involving human subjects.

3. Students may conduct research involving human subjects by obtaining permission from the Human Subjects Coordinator. Upon written approval of the proposal, the student must start research and inform the coordinator of the status of the research.

Theses in Foreign Languages

As presentations of original research to the academic community, theses are ordinarily written in the subject language. In certain cases, however, a student's specific research topic may require the use of non-English languages and literatures. The theses committee, the appointment of the student's thesis committee and authorization of the thesis research by the Graduate Dean shall be based on the provisions that (1) an abstract of the thesis shall be presented in English, (2) all members of the thesis committee shall be fluent in the subject language, and (3) student competency in standard written English shall be demonstrated through satisfactory completion of graduate courses in research methodology and bibliography.

Submission of Theses

Completion of the academic process for final acceptance of a thesis requires that the thesis be submitted for final approval. The thesis requires that the student be enrolled in 799A, Thesis, or 799B, Thesis, on the official program of study. Three units of "CR" are granted for a satisfactory completion of the thesis or project following its acceptance by the student's thesis committee. The thesis is the responsibility of the Graduate Division. Registration in Course 799A, Thesis, is required. The thesis is the responsibility of the Graduate Division. Registration in Course 799A, Thesis, is required. The thesis is the responsibility of the Graduate Division. Registration in Course 799A, Thesis, is received official notification of advancement to candidacy from the Graduate Division and have student must obtain clearance for registration in Thesis from the Graduate Division. Failure to accessioned by the library of San Diego State University and are subject to the regulations of advising as to publication. At the current edition of the Manual of Instruction for the Preparation and Plan B, requiring a comprehensive written examination in lieu of a thesis, may be followed in comprehensive examinations in lieu of theses are the determined by the department or Division by the department or school concerned. Refer to the academic calendar in Part One of this bulletin. Dates on which school concerned. Results of comprehensive examinations must be reported to the Graduate for determination by dates. To be eligible to take the Plan B comprehensive examination, the student must have been advanced to candidacy.

Grade Point Averages

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

1. All courses listed on the official degree program required to complete undergraduate requirements for a master's degree.
2. All courses listed on the official degree program.
3. All courses, 300-level and above, taken at San Diego State University concurrently with courses accepted for transfer credit.

No transfer or extension credit may be used to improve the grade point average of units courses accepted for transfer credit.

Grade Restrictions for Master's Degree Programs

No course in which a final grade below "C" (2.0) was earned may be used to satisfy the deficiencies.

All courses listed on the official degree program.

Students must complete all course requirements on the official degree program, including those courses not approved for transfer credit.

No transfer or extension credit may be used to improve the grade point average of units courses accepted for transfer credit.

Final Approval

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

Writing Competency

The University requires that all candidates for an advanced degree demonstrate writing competency in the English language. This requirement may be met by successful completion of graduate level courses in research methodology and bibliography.
In cases of organic disorder that make it impossible for the student to fulfill the ordinary obligations of writing competency, alternative modes will be used (Sec. 504 of the Rehabilitation Act).

**Application for Graduation**
Graduation is not automatic on the completion of degree requirements. An application must be filed in the Graduate Division during the semester or term in which the student expects to be graduated. Refer to the academic calendar preceding Part One of this bulletin for deadline dates.

There is a $10 graduation fee and a $10 evaluation and diploma fee. Students who do not graduate in the semester or term for which they have applied must reapply (and pay the $10 evaluation fee) in the subsequent semester or term in which they expect to be graduated.

**Award of Degrees**
The Board of Trustees of The California State University, upon recommendation of the faculty of San Diego State University, awards the appropriate degree to a student who has completed the prescribed course of study.

**Diploma**
The Graduate Division will mail the appropriate diploma to the student approximately eight to ten weeks after the date of graduation.
Courses and Curricula

This section contains the specific requirements for all graduate degrees authorized at San Diego State University by the Board of Trustees of The California State University. These requirements for departments or schools supplement and are in addition to the specific 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 an advanced degree are listed under major fields and areas of concentration. Each course is listed by department number, title, and is offered not less than once during a two-year period. Refer to the Class Schedule or the Summer Session Bulletin for a listing of course offerings.

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.

Postbaccalaureate (Unclassified) Enrollment

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

Prerequisites for Graduate Courses

Graduate level (600-, 700- and 800-numbered) courses require, as general prerequisites, of upper division study in the field or in a closely related field. Unless otherwise specified in the permission of the instructor. Undergraduate students are not permitted to enroll in 600-, 700- and 800-numbered courses except under special circumstances (see section “Concurrent and Special Prerequisites for each course are stated in the course description.

Students must complete a course prerequisite (or its equivalent) prior to registering for the course to which it is prerequisite. Students who have not completed the stated prerequisite must notify the instructor by the end of the second week of class in order for the instructor to determine if the student has completed the equivalent of the prerequisite.

Special Prerequisites for Registration in 798 and 799A

Registration in Course 798, Special Study, must be arranged by the student through the administrative offices. Forms for this purpose are available in the departmental offices. Only those students who have been advanced to candidacy and who have an officially appointed thesis committee are permitted to register for Course 799A. Thesis. The student must obtain clearance for registration in this course from the Graduate Division. Failure to obtain this clearance may result in cancellation of enrollment.

Thesis Extension (799B)

This course is intended solely for those graduate students who have had prior registration in (0 units, 0 credit) in any semester following assignment of SP in Course 799A in which the course when the completed thesis is granted final approval.

Unit or Credit Hour

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. These requirements for departments or schools supplement and are in addition to the basic requirements for the degree in question.

In addition, courses acceptable for credit toward an advanced degree are listed under major fields and areas of concentration. Each course is listed by department number, title, and is offered not less than once during a two-year period. Refer to the Class Schedule or the Summer Session Bulletin for a listing of course offerings.

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.

American Studies

The American Studies program is administered through the American Studies Committee. Faculty assigned to teach courses in American Studies are drawn from departments in the College of Arts and Letters. Student advisors and committee members are listed below:

Francine Deutsch, Ph.D., Professor of Family Studies and Consumer Sciences
Thomas S. Denahue, Ph.D., Professor of Linguistics
Lawrence R. Ford, Ph.D., Professor of Geography
Jerome J. Griswold, Ph.D., Professor of English and Comparative Literature
Theodore Kornweibel Jr., Ph.D., Professor of Afro-American Studies
Howard I. Kushner, Ph.D., Professor of History, Graduate Coordinator

Eddie S. Meadows, Ph.D., Professor of Music
Lynn H. Peters, Ph.D., Professor of Management
Michael R. Reel, Ph.D., Professor of Telecommunications and Film
Larry A. Samoian, Ph.D., Professor of Speech Communication
Kenneth A. Santangelo, Ph.D., Professor of English and Comparative Literature
Clifford E. Trafzer, Ph.D., Professor of African-American Studies

Pershing Varner, Ph.D., Professor of History
Carey C. Wall, Ph.D., Professor of English and Comparative Literature
David V. DuFault, Ph.D., Associate Professor of History (Graduate Adviser)

Patricia Huckle, Ph.D., Associate Professor of Women's Studies
Hafian J. Lewin, Ph.D., Associate Professor of Political Science
Eve Kornfeld, Ph.D., Assistant Professor of History

General Information

The American Studies program at San Diego State University is one of thirty-three in the nation and one of six in California that offer an advanced degree. The Master of Arts degree in American Studies is an interdisciplinary degree administered by the American Studies Committee. Even though the American Studies idea is nearly fifty years old, its interdisciplinary approach has kept it flexible. Students are encouraged to select courses which develop their interests and approaches to their studies. Students who are pursuing specific degree requirements, diversity their interests and approaches to their studies. Students who are pursuing specific degree requirements, diversity their interests and approaches to their studies.

The program is designed to offer systematic training for students desiring an interdisciplinary approach to American Studies. The program is designed to offer systematic training for students desiring an interdisciplinary approach to American Studies.

Admission to Graduate Study

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

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

Specific Requirements for the Master of Arts Degree

(Major Code: 03131)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Two of this bulletin, the student must accept the requirements for master's degree programs. In special circumstances and with the approval of the adviser, substitutions may be made for the courses listed as follows. At least 18 units must be in 600-level courses in one or more disciplines as required by the American Studies Committee, and American Studies 798. The program must include a minimum of 12 units, excluding Thesis 799A, in one of the following fields:

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

The remaining units must be chosen from the other fields, with approval of the adviser, in addition, students will be required to (1) demonstrate a reading knowledge of a language other than English, or (2) complete six units in linguistics, from American English Technique selected from Economics 201*, 441; Geography 585; Information and Decision 407; Fundamentals of Linguistics (3); American Dialectology (3); Topics in American Literature (3); American Literature, 1800 until 1860 (3); American Literature, 1860 until 1890 (3); American Literature, 1900 until 1950 (3); American Literature, 1950 until Present (3); Genre Studies in American Literature (3); and American Culture, as recommended specialization of at least 12 (but not more than 15) units, excluding Thesis 799A, in one of the following fields:

History Courses

- American Studies Courses
  - 580. Topics in American Studies (1-3)

English Courses

- 522. American Literature, 1800 until 1860 (3)
- 523. American Literature, 1860 until 1920 (3)
- 524. American Literature, 1920 until 1950 (3)
- 525. American Literature, 1950 until Present (3)
- 526. Topics in American Literature (3)
- 527. Genre Studies in American Literature (3)

Linguistics Courses

- 520. Fundamentals of Linguistics (3)
- 524. American Dialectology (3)
- 551. Sociolinguistics (3)
- 552. Psycholinguistics (3)

History Courses

- 530. Colonial America (3)
- 531. The American Revolution (3)
- 532. The Early Republic (3)
- 533A. The Jacksonian Era (3)
- 533B. Civil War and Reconstruction (3)
- 534. The Rise of Modern America, 1660-1900 (3)
- 535A. The Age of Reform (3)
- 535B. The Age of Roosevelt (3)
- 536. The United States Since World War II (3)
- 537A-537B. The Westward Movement (3-3)
- 540. Environmental History of the United States (3)
- 541A-541B. California (3-3)
- 545A-545B. Constitutional History of the United States (3-3)
- 546A-546B. Development of American Capitalism (3-3)
- 547A-547B. Intellectual History of the American People (3-3)
- 548A-548B. Social History of the United States (3-3)
- 556. Selected Studies in History (when content relates to American Studies) (1-4)

Social Sciences and Education:

Anthropology Course

- 520. Ethnological Field Methods (3)

Geography Courses

- 572. Land Use Analysis (3)
- 573. Geography as Human Ecology (3)
- 575. Geography of Recreational Land Use (3)

Jounalism Courses

- 500. Current Problems in Mass Communication (3)
- 503. History of Mass Communication (3)
American Studies / 61

**Political Science Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>522</td>
<td>Urban Politics (3)</td>
<td></td>
</tr>
<tr>
<td>531</td>
<td>Interest Groups and Political Movements (3)</td>
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**Religious Studies Course**

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<th>Title</th>
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<tbody>
<tr>
<td>522</td>
<td>Religion in America (3)</td>
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</table>

**Sociology Courses**

<table>
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</thead>
<tbody>
<tr>
<td>522</td>
<td>The Family in Comparative and Historical Perspective (3)</td>
<td></td>
</tr>
<tr>
<td>555</td>
<td>Immigrants and Refugees in Contemporary American Society (3)</td>
<td></td>
</tr>
<tr>
<td>557</td>
<td>Urban Sociology (3)</td>
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**Fine Arts:**

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>560</td>
<td>History of American Art (3)</td>
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**GRADUATE COURSES**

**American Studies Courses**

<table>
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<tr>
<th>Course</th>
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<th>Credits</th>
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<tr>
<td>798</td>
<td>Special Study (1-3) Cr/NC/SP</td>
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<tr>
<td>799A</td>
<td>Thesis (3) Cr/NC/SP</td>
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<td></td>
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<tr>
<td>799B</td>
<td>Thesis Extension (0) Cr/NC</td>
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**English Courses**

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<tbody>
<tr>
<td>620</td>
<td>Twentieth Century Literature (3)</td>
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<tr>
<td>625</td>
<td>American Literature (3)</td>
<td></td>
</tr>
<tr>
<td>636</td>
<td>Special Topics (3)</td>
<td></td>
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<tr>
<td>700</td>
<td>Seminar: A Major Author (3)</td>
<td></td>
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<tr>
<td>710</td>
<td>Seminar: A Cultural Period (3)</td>
<td></td>
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<tr>
<td>730</td>
<td>Seminar: A Literary Type (3)</td>
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**History Courses**

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<tr>
<td>630</td>
<td>Directed Reading in United States History (3)</td>
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<tr>
<td>635</td>
<td>Seminar in United States History (3)</td>
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**Social Sciences:**

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<th>Course</th>
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<tbody>
<tr>
<td>620</td>
<td>Seminar in Regional Geography (3)</td>
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<tr>
<td>654</td>
<td>Seminar in Urban and Settlement Geography (3)</td>
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**Political Science Course**

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<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>620</td>
<td>Seminar in American National Government (3)</td>
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**Sociology Courses**

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>700</td>
<td>Seminar in Social Theory (3)</td>
<td></td>
</tr>
<tr>
<td>730</td>
<td>Seminar in Social Institutions</td>
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</tbody>
</table>

**Art Courses**

<table>
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<tbody>
<tr>
<td>647B</td>
<td>Seminar in History of Theatre and Drama-American Theatre (3)</td>
<td></td>
</tr>
<tr>
<td>652E</td>
<td>Seminar in Music History-American Music (3)</td>
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</table>

**Drama Course**

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>780</td>
<td>Seminar in Public Address (3)</td>
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</table>

**Music Course**

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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>655</td>
<td>Social Foundations of American Education (2 or 3)</td>
<td></td>
</tr>
</tbody>
</table>

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

Storm Hall 143B, (619) 594-5527

Faculty
Joseph W. Ball, Ph.D., Professor of Anthropology
Bradley N. Bartl, Ph.D., Professor of Anthropology, Associate Dean, Graduate Division and Research
Victor Gildenkind, Ph.D., Professor of Anthropology
Edward O. Henry, Ph.D., Professor of Anthropology
Larry L. Leach, Ph.D., Professor of Anthropology
Lois K. Lippold, Ph.D., Professor of Anthropology
Wade C. Pendleton, Ph.D., Professor of Anthropology
Vivian J. Rothen, Ph.D., Professor of Anthropology
Gary O. Roblson, Ph.D., Professor of Anthropology
Lawrence C. Watson, Ph.D., Professor of Anthropology
Dan Whitney, Ph.D., Professor of Anthropology, Chair of Department
Philip J. Greenfield, Ph.D., Associate Professor of Anthropology
Ronald S. Himes, Ph.D., Associate Professor of Anthropology
Mary Jane Moore, Ph.D., Associate Professor of Anthropology
Alexander Sonen Jr., Ph.D., Assistant Professor of 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 chair of the department.

General Information
The Department of Anthropology, in the College of Arts and Letters, offers graduate study in Anthropology designed to provide systematic training through two specializations: (1) general anthropology specialization, with a strong theoretical component, for students who anticipate additional work leading to the doctoral degree in Anthropology, or direct placement in employment in the nonacademic sector. This specialization is concerned with the government, and other settings. Research and special functional facilities provided by the Department of Anthropology and related disciplines. Additional facilities available in the community include the Museum of Man, the San Diego Zoo, and various internship sites for applied research.

Admission to Graduate Study
All students must satisfy the general requirements for admission to the University with seeking the Master of Arts degree in Anthropology. The number of Arts degree in Anthropology required for an undergraduate major in anthropology at San Diego State University. The student department.

Copies of transcripts and GRE General Test scores are to be sent to the Admissions Office.

In addition to these, the University admission forms, students applying to the department are asked to submit (1) at least three letters of recommendation from persons in a position to term paper or original experiment. Materials should be submitted by December 1 for admission for spring semester and May 1 for the fall semester.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as described in Part Two of this bulletin. In addition, students completing the General Anthropology specialization must: (1) satisfactorily complete all four core seminars (601, 602, 603, and 604) with a minimum grade point average of 3.0, and no less than a B- grade in each of the four core seminars, and (2) according to the specific recommendation of the Department of Anthropology, pass either an examination demonstrating working knowledge of an appropriate foreign language, or complete a sequence of at least one lower division and one upper division course (with a grade point average of 2.0 or better) in either:

(a) foreign language recommended by the department, or

(b) Anthropology 580 (Anthropological Data Analysis) or one of the following sequences in statistics: Sociology 201 and 406 or 407, Psychology 270 and 570, Biology 215 and 597B; Mathematics 250 and 360.

Those students who choose the Applied Anthropology specialization must: (1) satisfactorily complete three core seminars (601, 602, 603, or 604) selected with the approval of the Graduate Coordinator with a minimum grade point average of 3.0, and no less than a B- grade in each of these core seminars; (2) satisfactorily complete Anthropology 701 (Seminar in Applied Anthropology) and (3) satisfactorily complete a lower division course in quantitative methods (Biology 215, Psychology 270, Sociology 201, or Mathematics 250) and Anthropology 580 (Anthropological Data Analysis) with no less than a B- in each course. After having been advanced to candidacy, students in either the General Anthropology or Applied Anthropology specialization must submit a thesis proposal for approval by the Departmental Graduate Advisory Committee.

Specific Requirements for the Master of Arts Degree
(Major Code: 22021)

In addition to meeting the basic requirements for the Master of Arts degree as described in Part Two of this bulletin, students selecting the General Anthropology specialization must:

1. Nine units of core seminars chosen from Anthropology 601, 602, 603, and 604 with a minimum grade point average of 3.0, and no less than a B- grade in each of these core seminars;
2. Anthropology 601, 602, 603, and 604 (with a minimum grade point average of 3.0, and no less than a B- grade in each of these core seminars); and (3) satisfactorily complete a lower division course in quantitative methods (Biology 215, Psychology 270, Sociology 201, or Mathematics 250) and Anthropology 580 (Anthropological Data Analysis) with no less than a B- in each course. After having been advanced to candidacy, students in either the General Anthropology or Applied Anthropology specialization must submit a thesis proposal for approval by the Departmental Graduate Advisory Committee.

Courses Acceptable on Master's Degree Programs in Anthropology

UPPER DIVISION COURSES

500. Primate Social Behavior (3)
Two lectures and three hours of laboratory.
Special Prerequisite: Anthropology 101.
Analysis of modes of primate socialization. Development of social behavior with emphasis on communication, group structure, aggression, and sex. Various methods of analysis and observation practiced utilizing primate collection at the San Diego Zoo.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>503.</td>
<td>Human Variation</td>
<td>Anthropology 101</td>
<td>Morphological, physiological and genetic aspects of human variability. Significance of this diversity in the biological adaptations of human populations.</td>
</tr>
<tr>
<td>504.</td>
<td>Primate Anatomy</td>
<td>Anthropology 101</td>
<td>Identification of individual bones and teeth; sex, age, and racial variation; stature. Training in observations, measurements, and analyses.</td>
</tr>
<tr>
<td>505.</td>
<td>Human Osteology</td>
<td>Anthropology 101</td>
<td>Two lectures and three hours of laboratory. Use of genetic markers in the study of human population. Biology of blood groups, serum proteins, enzymes, etc., and analysis of gene frequencies. Significance of genetic markers in evolutionary studies.</td>
</tr>
<tr>
<td>506.</td>
<td>Physical Anthropology of the Living</td>
<td>Anthropology 101</td>
<td>Two lectures and three hours of laboratory. Use of genetic markers in the study of human population. Biology of blood groups, serum proteins, enzymes, etc., and analysis of gene frequencies. Significance of genetic markers in evolutionary studies.</td>
</tr>
<tr>
<td>507.</td>
<td>Genetic Markers and Anthropology</td>
<td>Anthropology 101</td>
<td>Two lectures and three hours of laboratory. Use of genetic markers in the study of human population. Biology of blood groups, serum proteins, enzymes, etc., and analysis of gene frequencies. Significance of genetic markers in evolutionary studies.</td>
</tr>
<tr>
<td>508.</td>
<td>Medical Anthropology</td>
<td>Anthropology 101 or 102</td>
<td>Evolution and ecology of disease, medical beliefs and practices in non-Western cultures, and complexities of health care delivery in pluralistic societies.</td>
</tr>
<tr>
<td>509.</td>
<td>Culture and Biological Aging</td>
<td>Anthropology 101 or 102</td>
<td>Do different cultures age at different rates? Theories of biological aging, genetics of longevity, and cultural influences on biological aging. Process of aging and roles of the aged in various cultures.</td>
</tr>
<tr>
<td>520.</td>
<td>Ethnological Field Methods</td>
<td>Anthropology 102</td>
<td>Two lectures and three hours of laboratory. The problems and techniques of obtaining data in ethnological and social anthropological observation. A review of literature followed by work with informants.</td>
</tr>
<tr>
<td>525.</td>
<td>Cultural Change and Processes</td>
<td>Anthropology 102 and six upper division units in anthropology</td>
<td>Patterns of change in subsistence, social structure, and belief systems. Processes of contemporary and historic peoples. (Formerly numbered Anthropology 426.)</td>
</tr>
<tr>
<td>529.</td>
<td>Urban Anthropology</td>
<td>Anthropology 102 and six upper division units in anthropology</td>
<td>Urban adaptations of past and present societies. Descriptive topics and applied concerns regarding urban origins, migrations, kinship, family, ethnicity, stratification, and change. Ethnographic examples drawn from Western and non-Western societies. (Formerly numbered Anthropology 429.)</td>
</tr>
<tr>
<td>531.</td>
<td>Applied Anthropology</td>
<td>Anthropology 102</td>
<td>Application of anthropological concepts to solution of practical problems of culture change in community development, complex organizations, and interdisciplinary and cross-national programs.</td>
</tr>
<tr>
<td>550.</td>
<td>Anthropological Data Analysis</td>
<td>Anthropology 101 and anthropology 102</td>
<td>Two lectures and three hours of laboratory. The relationship of individual personality to culture in a variety of cultures. A consideration of various theories and studies in the social and personality sciences.</td>
</tr>
<tr>
<td>560.</td>
<td>Advanced Archaeological Field Methods</td>
<td>Anthropology 101</td>
<td>One lecture and six hours of laboratory. Advanced projects in excavation and stabilization of ruins, archaeological surveys, laboratory analysis and preparation of reports.</td>
</tr>
<tr>
<td>561A-561B</td>
<td>Archaeological Laboratory Methods</td>
<td>Anthropology 101</td>
<td>Two lectures and three hours of laboratory. May be repeated with new content. Maximum credit six units.</td>
</tr>
<tr>
<td>582.</td>
<td>Regional Anthropology</td>
<td>Anthropology 101 or 102</td>
<td>Study of ethnographic societies of a major geographical region of the world such as Africa, the Arctic, East Asia, Europe, Latin America, the Middle East, North America, Oceania, or South America. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units.</td>
</tr>
<tr>
<td>583.</td>
<td>Topic in Anthropology</td>
<td>Anthropology 102</td>
<td>Study of a major subdiscipline such as applied anthropology, economic anthropology, historical anthropology, ethnographic genetics, or environmental archaeology. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units.</td>
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**GRADUATE COURSES**

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>600.</td>
<td>Seminar</td>
<td>Anthropology 102</td>
<td>An intensive study in advanced anthropology. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.</td>
</tr>
<tr>
<td>601.</td>
<td>Seminar in Physical Anthropology</td>
<td>Twelve upper division units in anthropology</td>
<td>History and theory in physical anthropology stressing the significant literature on such topics as functional anatomy, human paleontology, population genetics, and primatology.</td>
</tr>
<tr>
<td>602.</td>
<td>Seminar in Archaeology</td>
<td>Twelve upper division units in anthropology</td>
<td>History and theory in archaeological data collection, analysis, and interpretation.</td>
</tr>
</tbody>
</table>
603. Seminar in Ethnology (3)
Prerequisite: Twelve upper division units in anthropology.
History and theory in ethnology stressing the significant literature on such topics as cross-cultural comparison, structural-functional analysis and description, personality and culture, and sociocultural change.

604. Seminar in Linguistics (3)
Prerequisite: Twelve upper division units in anthropology.
History and theory of linguistics stressing the significant literature on such topics as cultural cognition, descriptive linguistics, lexicostatistics, and transformational analysis.

620. Seminar in Regional Anthropology (3)
Prerequisite: Twelve upper division units in anthropology.
Study of a major world region such as Africa, the Arctic, East Asia, Europe, Latin America, the Middle East, North America, Oceania, or South Asia. Maximum credit six units applicable to a master's degree. May be repeated with new content. See Class Schedule for specific content.

621. Seminar in Topical Anthropology (3)
Prerequisite: Twelve upper division units in anthropology.
Study of a major subdiscipline such as Political Anthropology, Economic Anthropology, Race and Variation, or Environmental Archaeology. Maximum credit six units applicable to a master's degree. May be repeated with new content. See Class Schedule for specific content.

701. Seminar in Applied Anthropology (3)
Prerequisite: Classified graduate standing.
Applied research, social impact assessment, policy analysis, planning, teaching, and field settings.

705. Internship in Anthropology (3-9) Cr/NC
Prerequisites: Classified graduate standing and/or consent of staff. Students will be assigned a position to work in government and private agencies where advisory committee and on-the-job supervision will be provided. Maximum credit nine units applicable to a master's degree.

797. Research (3) Cr/NC/SP
Prerequisite: Advancement to candidacy.
Independent investigation in the general field of the thesis.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with department chair and instructor. Individual study directed toward preparation of a paper or work on a specific problem. May be repeated with variable topic, with a maximum credit of three units applicable to a master's degree.

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

799B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis, 799A, with an assigned grade symbol of SP, which the student expects to use the facilities and resources of the university, also student must have completed a bachelor's degree in studio art or the equivalent from an accredited institution, including twelve units of art history, six units of which are to be in art history of the history of Western art. A grade point average of 3.25 or better in upper division art courses is required.

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

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

The Art Department offers advanced study in the fields of applied design, painting, sculpture, printmaking, and the history of environmental design, graphic design, interior design, and the history of art. A new building incorporating the existing facilities offers the student excellent studio and gallery space and equipment. In addition, the San Diego Museum of Art, the Putnam Foundation collection in the Timken Gallery, and the La Jolla Museum of Contemporary Art in La Jolla offer valuable exhibition space for students and the San Diego Art Center in Balboa Park and the San Diego Art Institute for specialized libraries for research. There are also numerous private galleries with a wide variety of offerings.

Master of Fine Arts Degree in Art

Admission to Graduate Study
All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. In general, the student must have completed a bachelor's degree in studio art or the equivalent from an accredited institution, including twelve units of art history, six units of which are to be in art history of the history of Western art. A grade point average of 3.25 or better in upper division art courses is required.
Students must also be able to show that they are adequately advanced to carry out projects which measure up to graduate standards. This requirement will be measured by a formal presentation of a portfolio of work to the graduate faculty in the area of emphasis.

Students seeking admission for the fall semester must submit Graduate Review Applications to the Graduate Coordinator by March 28, and submit portfolios by the first week in April. Applications for the spring semester are due October 28 and portfolios are due by the first week in November.

**Admission to Graduate Study**

**Studio Arts**

All students must satisfy the general requirements for admission to the University with at least 60 units of work from an accredited institution, with the last 30 units of work being at a 3.0 average or better. Students must also show evidence of their advanced standing and ability to carry out graduate level work. This requirement will be measured by a formal presentation of a portfolio of work to the graduate faculty in the area of emphasis. The portfolio should include examples of advanced studio work, such as a thesis or exhibition. A statement of the candidate's objectives and a critique of the work submitted should accompany this portfolio. It is determined that the student is capable of doing graduate work, he/she may be permitted to begin such work even though he/she has not completed an appropriate undergraduate major in art. Those whose work is insufficiently advanced will be allowed to begin work in the graduate program under guidance from the department in order to meet the standard requirements. Students seeking admission for the fall semester must submit Graduate Review Applications to the Graduate Coordinator by March 28, and submit portfolios by the first week in April. Applications for the spring semester are due October 28 and portfolios are due by the first week in November.

**Advancement to Candidacy**

In addition to meeting the requirements for advancement to candidacy as described in Part Two of this bulletin, all students will be required to pass a comprehensive examination covering the fields of history of art of western civilization, the principles of art appreciation, and the techniques and materials of the artist, or to have completed a year course in the history of art of western civilization and six undergraduate units of art history. Students wishing to specialize in studio arts will have the following requirements: (1) completed at least 12 units listed on his/her official program with a minimum grade point average of 3.0 (B); and (2) been reviewed by the graduate faculty in the area of emphasis and approved by the graduate faculty of the Department of Art. This examination will occur at the candidate's thesis project. Requests for more than six units must be approved by a committee of representatives from the Department of Art. All students must satisfy the requirements for classified graduate standing, maintain a minimum grade point average of 3.0 (B), and have been reviewed by the graduate faculty before advancement to candidacy. The comprehensive examination is given by the Test Office during the beginning of each semester; contact the Art History Department for permission to take the examination or under exceptional circumstances a reading proficiency examination as approved by the faculty. Alternatively, with the consent of the graduate adviser, students may demonstrate a reading knowledge of the appropriate language by passing either the Graduate School Foreign Language Examination, the Modern Language Association Examination (the French MLA examination is given by the Test Office during the beginning of each semester; contact the Art History Department for permission to take the examination), or under exceptional circumstances a reading proficiency examination administered by the art history area. The language requirement must be met prior to the add/drop date of the student's first semester as a classified graduate student, or the student must enroll for appropriate language courses.

**Specific Requirements for the Master of Fine Arts Degree**

(Major Code: 10022)

Candidates for the M.F.A. in addition to meeting the requirements for classified graduate standing, must complete a 60-unit graduate program which includes a minimum of 45 units at one of the studio art fields (applied design, painting, environmental design, graphic design, may focus on a program of study combining two studio art fields. Six units must be included in the program thesis must be included on the program. In addition, there will be an oral examination of each candidate by the graduate faculty of the Department of Art. This examination will occur at the candidate's thesis project. The language requirement must be met prior to the add/drop date of the student's first semester as a classified graduate student, or the student must enroll for appropriate language courses.

**Art History**

In addition to meeting the requirements for advancement to candidacy as described in Part Two of this bulletin, all students will be required to pass a comprehensive examination covering the fields of history of art of western civilization, the principles of art appreciation, and the techniques and materials of the artist, or to have completed a year course in the history of art of western civilization and six undergraduate units of art history. Students wishing to specialize in studio arts will have the following requirements: (1) completed at least 12 units listed on his/her official program with a minimum grade point average of 3.0 (B); and (2) been reviewed by the graduate faculty in the area of emphasis and approved by the graduate faculty of the Department of Art. This examination will occur at the candidate's thesis project. Requests for more than six units must be approved by a committee of representatives from the Department of Art. All students must satisfy the requirements for classified graduate standing, maintain a minimum grade point average of 3.0 (B), and have been reviewed by the graduate faculty before advancement to candidacy. The comprehensive examination is given by the Test Office during the beginning of each semester; contact the Art History Department for permission to take the examination or under exceptional circumstances a reading proficiency examination as approved by the faculty. Alternatively, with the consent of the graduate adviser, students may demonstrate a reading knowledge of the appropriate language by passing either the Graduate School Foreign Language Examination, the Modern Language Association Examination (the French MLA examination is given by the Test Office during the beginning of each semester; contact the Art History Department for permission to take the examination), or under exceptional circumstances a reading proficiency examination administered by the art history area. The language requirement must be met prior to the add/drop date of the student's first semester as a classified graduate student, or the student must enroll for appropriate language courses.

**Specflic Requirements for the Master of Fine 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 Two of this bulletin, all students must complete a graduate program of a minimum of 30 units which includes at least 24 units in art from courses listed below as acceptable on master's degree programs in art, of which at least 16 units must be in 600- and 700-numbered courses.
Studio Arts  
(Major Code: 10021)  
Those elective studio arts must complete a minimum of 18 units in the area of specialization.  
One course in the Art 760 or 770 series, Art 694, and Art 799A are required. Not more than a total of six units in Art 798 will be accepted. A creative project accompanied by a written report is required as fulfillment of Art 799A. In conjunction with this project, each candidate for the degree must present an exhibition of representative graduate work.  

Art History  
(Major Code: 10031)  
Those elective art history must complete at least 18 units from the 600- and 700-numbered courses in art history to include Art 799A, selected in consultation with the art history adviser. Students may select up to 12 units of 500-level courses in art, nine units of which must be in art 799A. Master's candidates in art history will also be required to give an open lecture on their thesis subject, to be scheduled with the approval of the thesis chair.  

Thesis and Projects in Art  
The thesis required for the Master of Fine Arts degree or 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 is cataloged and accessioned in the library. Color slides of the project must be retained in the slide library. One copy of art history theses must be given to the Department of Art.  

Courses Acceptable on Master's Degree Programs in Art  

500. Advanced Drawing  
(3)  
Six hours.  
Prerequisites: Art 203 and 204.  
Drawing emphasizing the qualitative aspect of visual subject matter. Maximum credit six units.  

501. Professional Orientation in the Arts  
(3) I, II  
Prerequisite: Twelve units of upper division art or graduate standing in art.  
Conditions met in professional art world as well as opportunities available: Exhibitions, fellowships and professional positions investigated.  

502. Inter-Media  
(1-3) I, II  
Two hours for each unit of credit.  
Prerequisites: Art 102 and 103.  
Development of problems and materials in plane and space. Maximum credit six units.  

503. Life Drawing and Painting  
(3) I, II  
Six hours.  
Prerequisites: Art 204 and 403.  
Drawing and painting from nude and costumed models. Maximum credit six units.  

504. Advanced Painting  
(3) I, II  
Six hours.  
Prerequisite: Art 404.  
Approaches to contemporary concepts in painting. Maximum credit six units.  

505. Advanced Waterbase Media  
(3) I, II  
Six hours.  
Prerequisite: Art 405.  
Approaches to contemporary concepts in waterbase painting. Maximum credit six units.  

506. Contemporary Issues for Studio Artists  
(3) I  
Prerequisites: Upper division or graduate standing in art and consent of instructor.  
Theory, practice, and philosophy of being an artist. Independent research on current art concepts and issues. Material will encompass the past five years. Field trips.  

509. Relief Printmaking  
(3) I, II  
Six hours.  
Prerequisites: Art 203 and 210.  
Woodcut, wood engraving, gessocut, linooleum, collograph, and relief printmaking processes. Emphasis on fine print quality and technical development using mixed media. Maximum credit six units.  

510. Intaglio Printmaking in Color  
(3) I, II  
Six hours.  
Prerequisite: Art 410.  
Advanced creative intaglio printmaking in color, including zinc and copper plate; etching, drypoint, aquatint, engraving, embossing and color variations. Emphasis on fine print quality and technical development in the color process unique to this medium. Maximum credit six units.  

511. Lithography Printmaking in Color  
(3) I, II  
Six hours.  
Prerequisite: Art 411.  
Advanced creative lithography printmaking in color. Emphasis on fine print quality in color process and color technology unique to this medium. Maximum credit six units.  

512. Serigraphy  
(3)  
Six hours.  
Prerequisites: Art 203 and 210.  
Techniques of reproducing original prints by means of the silkscreen process. Maximum credit six units.  

516. Advanced Sculpture  
(3) I, II  
Six hours.  
Prerequisite: Art 416.  
Individual investigations into sculpture ideas, methods and materials. Individual development in sculpture. Maximum credit six units for Art 516.  
A. Ceramic sculpture  
B. Plastic sculpture  
C. Foundry/metal sculpture  

517. Advanced Figurative Sculpture  
(3) I, II  
Six hours.  
Prerequisites: Art 216 and 217.  
Figurative study with emphasis on individual exploration. Maximum credit six units.  

523. Advanced Furniture Design  
(3) I, II  
Six hours.  
Prerequisite: Art 423.  
Advanced individual design; exploration of materials, process and function. Maximum credit six units. Maximum combined credit of nine units in Art 323, 423, and 523.  

525. Advanced Ceramics  
(3) I, II  
Six hours.  
Prerequisite: Art 425.  
Experimentation and application of research concerning the use of ceramic materials and techniques as an integral part of the design process. Maximum credit six units.  

529. Design in Enamels  
(3) I, II  
Six hours.  
Prerequisite: Art 429.  
Design and production of vitreous enamels. Maximum credit nine units; six units applicable to a master’s degree.
531. Advanced Jewelry and Metalwork (3) I, II
       Six hours.
       Prerequisite: Art 431
       Problems involving fabrication processes already studied in order to increase technical
       competence while exploring personal design statements; specialized techniques such as
       photoetching and electroforming. Maximum credit six units.

532. Advanced Metalsmiting (3) I, II
       Six hours.
       Prerequisite: Art 431
       Advanced problems involving metalsmiting processes already studied in order to increase
       technical competence while exploring personal design statements. Maximum credit six units.

533. Textile Techniques in Metal (3)
       Six hours.
       Prerequisite: Art 331 or 435.
       Textile structures as applied to precious and nonprecious metals. Individually designed
       projects utilizing information acquired through samples and documentation. For students of
       fiber, metal, and sculpture.

534. Advanced Weaving (3) I, II
       Six hours.
       Prerequisite: Art 334.
       Advanced individual problems in weaving. Maximum credit six units. Maximum combined
       credit of nine units in Art 234, 334, and 534.

535. Advanced Nonwoven Textile Construction (3) I, II
       Six hours.
       Prerequisite: Art 435.
       Advanced study in nonwoven techniques. Techniques to include: looping, braiding, plaiting,
       and special fabricating techniques. Experimentation with new man-made fibers and with
       synthetic commercial dyes. Maximum credit six units.

536. Advanced Textile Design (3) I, II
       Six hours.
       Prerequisite: Art 436.
       Application of design for the textile surface. Appropriate for both the individual designer and
       commercial reproduction. Maximum credit six units.

540. Advanced Graphic Imagery (3) I, II
       Six hours.
       Prerequisite: Art 340.
       Investigation of experimental photographic and technical reproductive media.

541. Advanced Graphic Design – Communication Systems (3) I, II
       Six hours.
       Prerequisite: Art 341.
       Symbolic processes, materials and structures, visual communications systems relating to
       corporate and visual identification programs. Maximum credit six units.

542. Advanced Professional Problems in Graphic Design (3) I, II
       Six hours.
       Prerequisite: Art 441 or 541; or consent of instructor by portfolio review.
       Refinement of personal visual imagery and the application of design concepts to production
       development of a professional level portfolio.

543. Advanced Drawing and Illustration for Graphic Design (3) II
       Six hours.
       Prerequisite: Art 443.
       Refinement of visual imagery and advanced illustration problems.

544. Advanced Visual Communication Media (3)
       Six hours.
       Prerequisite: Art 444.
       Experimental, creative and practical exploration of contemporary communication as related
       to advanced sequential visual imagery in multimedia formats.

547. Environmental Theory (3) I, II
       Prerequisites: Art 247 or 347.
       Survey of alternative solutions to the problem of design of the physical environment.

550. Environmental Prototypes (3) I
       Six hours.
       Prerequisites: Art 247, 250 and 450.
       Research and development of creative architectural concepts with emphasis in space
       enclosure systems and cybernetics.

552. Interior Design IV (3) I, II
       Six hours.
       Prerequisites: Art 451, 453, and completion of portfolio requirement.
       Projects in architectural interiors involving the use and perception of enclosed spaces.
       Space planning systems analysis. Maximum credit six units.

553. Interior Design V (3) I, II
       Six hours.
       Prerequisite: Art 552.
       Projects in interiors involving space planning analysis, specification writing, materials
       selection and furnishing design appropriate to commercial needs. Maximum credit six units.

557. Art of the Nineteenth Century (3) I, II
       Prerequisites: Art 258 and 259.
       Development of painting, sculpture, and architecture from the French Revolution to 1900.

558. Twentieth Century European Art to 1945 (3) I, II
       Prerequisite: Art 259.
       Major developments in the visual arts and art criticism from 1880 to 1945
       (Post-Impressionism through Surrealism).

559. Twentieth Century European and American Art Since 1945 (3) I, II
       Prerequisite: Art 558.
       Major developments in the visual arts and art criticism since 1945.

560. History of American Art (3)
       Prerequisites: Art 258 and 259.
       Development of painting, sculpture, and architecture from the Native American Art and
       Colonial Period to the present.

561. Art of Pre-Hispanic America (3)
       Prerequisite: Upper division standing.
       Art of ancient Meso-America, Central America, Caribbean and South America from earliest
       times until contact with Europe.

562. Art of Latin America (3)
       Prerequisite: Upper division standing.
       Art and architecture of Latin America from the colonial period to the present. Field trips
       included.

564. Art of China (3) II
       Prerequisite: Art 263.
       History of Chinese art from prehistoric times through the Ching Dynasty.

565. Art of Japan (3) II
       Prerequisite: Art 263.
       History of Japanese art from prehistoric times to the Meiji Restoration.

567. Art of the Ancient Near East (3)
       Prerequisite: Art 258.
       Development of painting, sculpture, architecture and crafts from prehistoric times to the
       fourth century B.C.

568. Art of Crete, Mycena, Greece, and Rome (3)
       Prerequisite: Art 258.
       Development of painting, sculpture, architecture, and crafts from prehistoric times to the
       fifth century A.D.

569. Art of Sub-Saharan Africa (3)
       Prerequisite: Upper division standing.
       Form and content of the art of Sub-Saharan Africa viewed within its cultural context.
570. Art of Oceania (3)
Prerequisites: Upper division standing. Form and content of the art of Australia, Melanesia, Polynesia, and Micronesia viewed within its cultural context.

572. Coptic and Byzantine Art (3)
Prerequisites: Art 258 and 259. The art of the Eastern Church from the reign of Justinian to the Russian Revolution.

573A. Early Renaissance in Italy (3)
Prerequisites: Art 259 and 259. Italian arts, architecture, artists, and patrons from fourteenth century Proto-Renaissance period through fifteenth century revival of classical humanism in cities of Florence, Siena, Bologna, Mantua, and Padua. (Formerly numbered Art 573.)

573B. Late Renaissance Art in Italy (3)
Prerequisites: Art 258 and 259. High Renaissance in Florence and Rome, followed by disintegration of classical principles and domination of Mannerism in Central and Northern Italy and history of arts of Venice in sixteenth century. (Formerly numbered Art 573.)

574. Northern Renaissance Art (3)
Prerequisites: Art 258 and 259. Architecture, sculpture, and painting north of the Alps during the Renaissance period.

575. Baroque and Rococo Art (3)
Prerequisites: Art 258 and 259. Architecture, sculpture, and painting of the Baroque and Rococo periods.

576. Arts of Native North America (3)
Prerequisites: Upper division standing. Form and content of the arts of North American Indians viewed within a cultural context. Field trips.

577. History of Architecture (3)
Prerequisites: Art 258 and 259. Architecture from primitive times to the present.

581. History and Theory of Environmental Design (3) II
Prerequisites: Art 256 and 259. Environmental arts in the nineteenth and twentieth centuries.

582. The Decorative Arts (3)
Investigations into the arts of ceramics, enameling, furniture, glass, jewelry, metalwork and textiles. Analyzing the aesthetic basis which determines their forms in various times and places. Field trips to museums and artisans.

586. Art Practicum Seminar (3) I
Prerequisites: Twenty upper division units in art and concurrent assignment to student teaching. Discussion, readings, and research study related to art presentation strategies.

590. Principles and Elements of Visual Aesthetic Organization (3)
Prerequisites: Art 157, or Art 258 and 259. Visual aesthetic materials and the psychological principles involved in aesthetic organization.

591. Gallery Exhibition Design (3) I, II
Six hours. Prerequisite: Fifteen units of art. Fundamental art elements and principles applied to the theories and techniques of gallery exhibition design.

592. Gallery Exhibition Design (3) I, II
Six hours. Prerequisite: Art 591. Advanced problems in the theories and techniques of gallery exhibition design.

593. History and Methodology of Art History (3)
Prerequisites: Upper division standing; art history major or minor. Readings and discussions on the historiography of art and on modern methodologies for art historical research.

596. Advanced Studies in Art and Art History (1-4)
Prerequisites: Twelve units of art and art history and consent of instructor. Advanced topics in art and art history. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses combined credit of six units of any combination of 596 applicable to a bachelor’s degree, maximum credit of six units of 596 applicable to a bachelor’s degree, maximum credit of three units of 596 applicable to a master’s degree. Maximum degree. Maximum credit of six units of any combination of 596 applicable to the M.A. degree. Maximum credit of three units of 596 applicable to the M.F.A. degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master’s degree.

GRADUATE COURSES

600. Drawing (3)
Six hours. Prerequisite: Art 500. Concepts and approaches to drawing. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

604. Painting (3)
Six hours. Prerequisites: Art 405, 504 and 506. Issues and concepts relating to contemporary painting. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

609. Printmaking (1-3)
Two hours for each unit of credit. Advanced creative work in selected printmaking media based upon the analysis of the history and philosophies of printmaking from its inception through contemporary concepts. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

615. Sculpture (3)
Six hours. Prerequisite: Art 516. Aesthetic organization of selected subject matter in the media of sculpture. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

623. Advanced Furniture Design (3)
Six hours. Prerequisite: Art 523. Problems in the design and construction of furniture. Projects determined by the individual students in conference with the instructor. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

625. Crafts (1-3)
Two hours for each unit of credit. Advanced creative work in selected craft media. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

627. Advanced Clay and Glaze Technology In Ceramic Design (3)
Six hours. Prerequisite: Art 425. Experimentation with the use of ceramic material and techniques as an integral part of the design process. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

629. Enamel Workshop (3) I, II
Six hours. Prerequisite: Art 529. Workshop in enamel technology and its application to the craft. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art. (Formerly numbered Art 628.)
631. Seminar in Jewelry and Metalwork (3)
Prerequisite: Art 316.
Problems in the design and execution of works in precious metals. Projects will be

determined by the individual student in consultation with the instructor. Maximum credit six units

equivalent to the M.A. degree; nine units applicable to the M.F.A. degree in art.

634. Seminar in Textile Design (3)
Prerequisite: Art 334.
Problems in textile design and technology. Projects will be determined by the individual

student in consultation with the instructor. Maximum credit six units applicable to the M.A.

degree; nine units applicable to the M.F.A. degree in art.

641. Graphic Communication (1-3)
Two hours for each unit of credit.

Prerequisite: Art 541.

Advanced individual study in graphic design. Maximum credit six units applicable to the

M.A. degree; nine units applicable to the M.F.A. degree in art.

650. Creative Environmental Design (1-3)
Prerequisite: Six upper division units in interior design, architecture or city planning.

Creative work in interior design, architecture and civic design. Maximum credit six units

applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

694. Seminar in the Principles of Design in the Space Arts (3)
Prerequisite: A semester course in art appreciation.

An intensive study of the activity of creative expression and aesthetic appreciation in the

area of visual experience. The aesthetic analysis of original works of art. Maximum credit six

units applicable to the M.A. degree.

700. Studio Art Experience (3)
Six hours.

Individual research in specified areas, which may require the presentation of a paper

with its oral defense.

Each course may be taken to a maximum of six units. Maximum credit six units of 700

applicable to the M.A. degree; nine units of 700 applicable to the M.F.A. degree in art.

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

716. Individual Research Problems in Sculpture (3)
Prerequisite: Art 616 (six units).
Graduate research problems including independent research in sculpture. Projects will be
determined by the individual student in consultation with the instructor. Maximum credit six units
applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

760. Seminar in Twentieth Century Art (3)
Prerequisites: Art 555 and 559.

Visual arts and art criticism since 1900.

761. Seminar in American Art (3)
Prerequisite: Art 560.

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

767. Seminar in Art of Native America, Africa, and Oceania (3)
Studies in problems of the development of art styles, concepts, imagery, and artists within
one of the following areas: Art of the Americas, Africa, or Oceania.

768. Seminar in the Art of Crete, Greece, and Rome (3)
Prerequisite: Art 566.

Selected topics in advanced studies of art in the areas of ancient Aegean (Cycladic,

Minoan), Greek and Roman civilizations.

771. Seminar in Medieval Art (3)
Prerequisites: Art 258 and 259.

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

medieval art.
Asian Studies

Faculty Members of the Center for Asian Studies
Theodore R. Brunson, D.M.A., Professor of Music
Mitton M. Chen, Ph.D., Professor of Information and Decision Systems
Pasquale Chu, Ph.D., Professor of History
Alvin D. Cox, Ph.D., Professor of History
Thomas R. Cox, Ph.D., Professor of History
Thomas S. Donahue, Ph.D., Professor of Linguistics
Edward O. Henry, Ph.D., Professor of Anthropology
Tae Jum Kang, Ph.D., Professor of Political Science
Elmer A. Keen, Ph.D., Professor of Geography
Murugappa C. Madhavan, Ph.D., Professor of Economics
Jack McIlvane, Ph.D., Professor of Philosophy
Dan D. McCord, Ph.D., Professor of English and Comparative Literature
Woo Hyn Nam, Ph.D., Professor of Economics
William N. Rogers II, Ph.D., Professor of English and Comparative Literature
Gary O. Boles, Ph.D., Professor of Anthropology
Ruben G. Rumrunt, Ph.D., Professor of Sociology
Larry J. Shaw, Ed.D., Professor of Teacher Education
Ray T. Smith Jr., Ph.D., Professor of History
William S. Snyder, Ph.D., Professor of Philosophy
Paul J. Strand, Ph.D., Professor of Political Science
Dan Whitney, Ph.D., Professor of Anthropology, Director of Center (Undergraduate Advisor)

Catherine C. Woo, Ed.D., Professor of Chinese
Mary E. Demner, M.A., Associate Professor of Academic Skills
David V. DuFaut, Ph.D., Associate Professor of History
Fay A. Frick, Ph.D., Associate Professor of History
Marcia K. Harriman, Ph.D., Associate Professor of Art
Yoshiko Higashii, Ph.D., Associate Professor of Religious Studies
Ronald S. Himes, Ph.D., Associate Professor of Anthropology
Keng Ima, Ph.D., Associate Professor of Anthropology
Rizalino A. Quinones, Ph.D., Associate Professor of Sociology
Glória Rogers, M.L.S., M.A., Senior Assistant Librarian
Sandra Wawrzykow, Ph.D., Lecturer in Sociology

Asian Studies Courses

Asian Studies Courses

560. History of Japanese Business and Trade (3) I, II
Prerequisites: Upper division standing and consent of instructor. Emphasis on Japan's rapid economic development since 1868, interplay of social and economic forces, structure of Japanese business system, and problems of international trade.

596. Selected Studies in Asian Cultures (3)
Topics on various aspects of Asian studies. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a 30-unit master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

Admission to Graduate Study
In addition to meeting the requirements for admission to the University with a Bachelor of Arts degree, as described in Part Two of this bulletin, the student must present a graduate standing, as described in Part Two of this bulletin, 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.

Advance to Candidacy
All students must satisfy the general requirements for advancement to candidacy, as described in Part Two 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 coursework in the particular language, the last four units with a grade of C (2.0) or better.

Specific Requirements for the Master of Arts Degree
(Major Code: 03011)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Two of this bulletin, the student must complete a minimum of 30 units of courses acceptable on master's degree programs, including Asian Studies 600 and 799A, with not less than 24 units in courses of Asian content, distributed as shown below.

Courses Acceptable on Master's Degree Programs in Asian Studies

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>600- level courses</td>
<td></td>
</tr>
<tr>
<td>Asian Studies</td>
<td>6 units</td>
</tr>
<tr>
<td>Department A</td>
<td>6 units</td>
</tr>
<tr>
<td>Department B</td>
<td>3 units</td>
</tr>
<tr>
<td>Department C</td>
<td>15 units</td>
</tr>
</tbody>
</table>

The remaining six of the total of 30 units will be elective, subject to Graduate Committee approval. The total program may not include more than nine units in 500-level courses.

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

Courses Acceptable on Master's Degree Programs in Asian Studies

UPPER DIVISION COURSES

Asian Studies Courses

560. History of Japanese Business and Trade (3) I, II
Prerequisites: Upper division standing and consent of instructor. Emphasis on Japan's rapid economic development since 1868, interplay of social and economic forces, structure of Japanese business system, and problems of international trade.

596. Selected Studies in Asian Cultures (3)
Topics on various aspects of Asian studies. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

Anthropology Course

562. Regional Anthropology (3)*

* Acceptable when of relevant content.
Asian Studies

**Geography Course**

540. Regional Geography (3)*

**History Courses**

561A-561B. Asia and the West (3-3)
562. Civilization of India: The Great Traditions (3)
563. Modern India and Its Neighbors (3)
564A-564B. Southeast Asia (3-3)
565. Revolution and Social Change in Asia (3)
566. Chinese Civilization: The Great Traditions (3)
567. China's Century of Modernization (3)
568. Communist Party and the Chinese Revolution (3)
569. Japanese Civilization (3)
570. Modern Japan (3)
596. Selected Studies in History (1-4)*

**Philosophy Course**

575. A Major Philosopher (3)*

**Religious Studies Courses**

506. Spiritual Traditions of India (3)
508. Spiritual Traditions of East Asia (3)
580. A Major Figure (3)*
581. A Metaphysical Doctrine (3)*

**Sociology Course**

556. Topics in Comparative Societies (3)*

**GRADUATE COURSES**

**Asian Studies Courses**

600. Seminar in Interdisciplinary Methods (3)
609. Printmaking (1-3)*

**Economics Courses**

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

**Finance Course**

654. Seminar in International Business Finance (3)*

**Geography Courses**

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

**History Courses**

601. Seminar in Historical Method (3)*
650. Directed Reading in Asian History (3)
655. Seminar in Asian History (3)

**Linguistics Course**

795. Seminar in Linguistics (3)*

**Management Courses**

723. Seminar in International Strategic Management (3)*
728. Seminar in Business Planning (3)*

**Marketing Courses**

765. Seminar in Marketing Channels and Physical Distribution (3)*
769. Seminar in International Marketing (3)*

**Philosophy Course**

696. Seminar in Selected Topics (3)*

**Political Science Courses**

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

**Sociology Course**

770. Seminar in Population and Demography (3)*

**Teacher Education Course**

656. Comparative Education (3)

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

* Acceptable when of relevant content.
** Required of all students who offer history as Department A.
Astronomy

Physics/Astronomy 210, (619) 594-6182

Faculty

Ronald J. Angione, Ph.D., Professor of Astronomy, Chair of Department, Director of Mount Laguna Observatory
C. T. Oudt, Ph.D., Professor of Astronomy
Arthur Young, Ph.D., Professor of Astronomy
Thomas L. May, Ph.D., Associate Professor of Natural Science
Freddie D. Talbert, Ph.D., Associate Professor of Astronomy
Paul B. Ezel, Ph.D., Assistant Professor of Astronomy

Adjunct Faculty

William S. Kovach, Ph.D., Astronomy
Edward Olson, Ph.D., Astronomy
Kenneth N. Yoss, Ph.D., Astronomy
Andrew T. Young, Ph.D., Astronomy

Assistantships

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

General Information

The Department of Astronomy, in the College of Sciences, offers graduate study leading to the Master of Science degree in Astronomy. The degree is designed to prepare students either for further graduate work leading to the doctorate, or for a professional career in teaching or in industry.

San Diego State University operates the Mount Laguna Observatory which is located 45 road miles east of the campus at an elevation of 6100 feet. The research telescopes at the observatory include three reflecting telescopes with apertures of 40, 24, and 16 inches. The 40-inch telescopes includes photometric photoelectric photometers, spectrographs, and photographic and CDD the main research facilities at the Observatory. Additionally, each telescope dome has an AT&T computer provides on-line data bases as well as reduction and analysis capabilities.

On campus are a Grant measuring engine, Joyce/Loebel isodensitometer, and an iris to one inch in aperture, for student training. Campus computing facilities include a Cyber Astronomy Department has both CRT and graphics terminals and a plotter for use with these facilities, with graphics peripherals, connected via Ethernet to a large, general-purpose, AT&T STARLAN. An intensive study in the department is the study of the structure and evolution of stars of both photometry and spectroscopy at the Observatory. Stellar evolution is further studied both theoretical and observational studies of planetary nebulae and the isodensitrometer. Theoretical and Earth's atmosphere.

Graduate students are extensively involved in many of these research programs. Students also may make use of Observatory facilities in support of their own research.

Admission to Graduate Study

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

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as specified in Part Two 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

(Major Code: 11111)

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

1. Complete at least 16 units of 600- and 700-numbered courses in astronomy including 790A (Thesis, 3 units).
2. Complete at least 12 additional units of graduate level or approved 500 level courses in astronomy or related fields as approved by departmental committee.
4. A reading knowledge of scientific French, German, or Russian is recommended. Facility with a scientific computing language is desirable.

Courses Acceptable on Master's Degree Programs in Astronomy

UPPER DIVISION COURSES

510. Astronomy Research Literature (1) I, II Cr/NC
Prerequisite: Credit or concurrent registration in Astronomy 440. Reading and discussion of recent research papers from major astronomical and astrophysical journals. Topic(s) to be specified by instructor. Maximum credit three units.

530. Celestial Mechanics (3)
Prerequisite: Physics 350A. Fundamental dynamics of celestial bodies, the central force motion, two-body motion, restricted 3-body and n-body problems. Orbital calculations. First order perturbations of orbital elements and the rotation and dynamics of earth satellites.

596. Advanced Topics in Astronomy (2 or 3) I, II
Prerequisite: Consent of instructor.
Selected topics in theoretical astronomy or astrophysics. May be repeated with new content upon approval of instructor. See Class Schedule for specific content. Maximum credit six units.

599. Thesis (3 units) A
Prerequisite: Consent of instructor.
A thesis project in astronomy or related fields as approved by departmental committee. Maximum credit six units.

GRADUATE COURSES

600. Seminar (2 or 3)
Prerequisite: Consent of instructor.
An intensive study in advanced astronomy. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

610. Binary Stars (3)
Prerequisite: Astronomy 450. An intensive study of visual, spectroscopic, and eclipsing binaries, including the determination of orbits. Process of mass transfer.
which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

799B. Thesis Extension (0) Cr/NC

799A. Thesis (3) Cr/NC/SP

799B. Thesis Extension (0) Cr/NC

617. Astronomical Photometry (3)
Prerequisite: Astronomy 350 and 450.
Theory and techniques of photographic and photoelectric photometry in ground-based astronomy. Emphasis on problems of precise measurement and use of modern high speed equipment in photon counting and data acquisition systems.

620. Galactic Structure (3)
Prerequisite: Astronomy 450.
Survey of basic observational data for determining the structure of the Milky Way Galaxy; luminosity functions, stellar distributions in and near the galactic plane, solar motion, kinematics and dynamics of stellar motions, and galactic rotation; introduction to stellar dynamics.

630. Stellar Interiors (3)
Prerequisite: Astronomy 450.
Structure of the interior of stars including the details of the reactions by which energy is obtained and the evolution of stars.

640. Interstellar Matter (3)
Prerequisites: Astronomy 450 and Mathematics 537.
Interstellar absorption and polarization, theory of interstellar grains, physics of a low density gas in a dilute radiation field, nebulae, interstellar absorption lines, dynamics of the interstellar medium, and radio observations of the interstellar medium.

650. Stellar Atmospheres (3)
Prerequisite: Astronomy 450.
Emission and absorption of radiation, continuous spectra, spectral lines, model stellar atmosphere calculations, and non-L.T.E. problems.

660. Extragalactic Structure (3)
Prerequisite: Astronomy 450.
The individual and collective properties of normal and peculiar galaxies. Topics include classification, spectra, masses, luminosity distributions, distance indicators, clustering, and redshifts.

670. Astrophysical Spectroscopy (3)
Prerequisites: Mathematics 252 and credit or concurrent registration in Astronomy 440.
Interpretation of astronomical spectra in terms of atomic theory and radiative transfer, measurement, and line profile analysis.

797. Research (1-3) Cr/NC/SP
Prerequisite: Classified graduate standing.
Research in one of the fields of astronomy. Maximum credit six units applicable to a master's degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff, to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master's degree.

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

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

Faculty

J. David Archibald, Ph.D., Professor of Biology
Michael D. Atkins, Ph.D., Professor of Biology
Frank T. Awbrey, Ph.D., Professor of Biology
Carol A. Barnett, Ph.D., Professor of Biology
William L. Baxter, Ph.D., Professor of Biology
Sanford A. Bernstein, Ph.D., Professor of Biology
Charles L. Brandt, Ph.D., Professor of Biology
Roger E. Carpenter, Ph.D., Professor of Biology, Graduate Coordinator, Biology
Lo-chai Chen, Ph.D., Professor of Biology
Theodore J. Cohn, Ph.D., Professor of Biology
Boyd D. Collier, Ph.D., Professor of Biology
Gerald Collier, Ph.D., Professor of Biology
George W. Cox, Ph.D., Professor of Biology
Deborah M. Dexter, Ph.D., Professor of Biology
Thomas A. Ebert, Ph.D., Professor of Biology
Richard D. Estes, Ph.D., Professor of Biology
Richard E. Etheridge, Ph.D., Professor of Biology
David A. Farris, Ph.D., Professor of Biology
Richard F. Ford, Ph.D., Professor of Biology
Terrence G. Frey, Ph.D., Professor of Biology
Christopher C. Glembocki, Ph.D., Professor of Biology
Barbara B. Hemmingsen, Ph.D, Professor of Biology
Don Hunsaker III, Ph.D., Professor of Biology
Stuart H. Huriburt, Ph.D., Professor of Biology
Albert W. Johnson, Ph.D., Professor of Biology, Vice President for Academic Affairs
Gerald G. Johnson, Ph.D., Professor of Biology
Kenneth D. Johnson, Ph.D., Professor of Biology
Neil Krekorian, Ph.D., Professor of Biology
Skardrite Krisans, Ph.D., Professor of Biology
Jochen Kummerow, Ph.D., Professor of Biology
Leroy R. McClanahan Jr., Ph.D., Professor of Biology
Norman McLean Jr., Ph.D., Professor of Biology
Ronald E. Monroe, Ph.D., Professor of Biology
Harold B. Moore, Ph.D., Professor of Biology
Associate Dean of the College of Sciences
James W. Niel, Ph.D., Professor of Biology
Walter C. Oechel, Ph.D., Professor of Biology
Paul J. Paolini Jr., Ph.D., Professor of Biology, Chair of Department
John A. Parsons, Ph.D., Professor of Biology
Jacques Perrault, Ph.D., Professor of Biology
Robert R. Rinehart, Ph.D., Professor of Biology
Roger A. Sabbadin, Ph.D., Professor of Biology
Hariette C. Schapiro, Ph.D., Professor of Biology
David C. Shepard, Ph.D., Professor of Biology
Richard F. Ford, Ph.D., Professor of Biology
William C. Sloan, Ph.D., Professor of Biology
Faye Parsons, Ph.D., Professor of Biology
Richard L. Weiss, Ph.D., Professor of Biology
Parsons, Ph.D, Professor of Biology

Life Sciences 104, (619) 594-6767
Michael F. Allen, Ph.D., Associate Professor of Biology
Vernon L. Avila, Ph.D., Associate Professor of Biology
Michael Brandy, Ph.D., Associate Professor of Biology
Wayne E. Daughtery Jr., Ph.D., Associate Professor of Biology
William F. Diehl, Ph.D., Associate Professor of Biology
David G. Fitch, Ph.D., Associate Professor of Biology
Zac Hanscom III, Ph.D., Associate Professor of Biology
Leroy N. Phelps, Ph.D., Associate Professor of Biology
Harry H. Plymale, D.V.M., Associate Professor of Biology
Michael G. Simpson, Ph.D., Associate Professor of Biology
William M. Thwaites, Ph.D., Associate Professor of Biology
Constantine Tsoukas, Ph.D., Associate Professor of Biology
Nancy M. Carmichael, Ph.D., Assistant Professor of Biology
Steven D. Clouse, Ph.D., Assistant Professor of Biology
Craig H. Davis, Ph.D., Assistant Professor of Biology
Kathy S. Williams, Ph.D., Assistant Professor of Biology

Assistantships
Graduate teaching assistanships and graduate nonteaching assistanships in biology are available to a limited number of qualified students. Application blanks and additional information may be secured from the Graduate Coordinator in Biology, or the Graduate Adviser in Microbiology.

General Information
The Department of Biology in the College of Sciences, offers graduate study leading to the degrees of Master of Arts and Master of Science in Biology and the Master of Science degree in Microbiology. In addition, the Department of Biology offers a joint doctoral program with the Graduate Group in Ecology at the University of California, Davis. A modern Life Science building provides facilities for graduate study in the biological sciences. Additional facilities available in the community include the San Diego Zoo, the United States Department of Agriculture, Fish and Game Commission, the Hubbs-Sea World Research Institute, the San Diego Natural History Museum, and the Naval Underseas Center. San Diego State University also operates a marine laboratory on Mission Bay and has access to research sites in the Chihuahua Valley, Fortuna Mountain, and Temecula (Riverside County).

Section I: Master's Degree Programs
The Master of Arts degree in Biology is considered to be essentially an academic degree which is planned to serve as a stepping stone to a higher degree, if the student so desires. The master's degree is also acceptable as preparatory to many more advanced degree programs. Study below.

Admission to Graduate Study
In addition to the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, a student must satisfy the following requirements:

1. Meet the requirements equivalent to a baccalaureate degree in Biology or Microbiology at San Diego State University.
2. Have a grade point average of 2.75 or better on work taken for the baccalaureate degree.
3. Have a grade point average of 3.0 or better in upper division courses (at least 24 units) acceptable for the major.
4. Have a score of 1100 or better on the GRE General Test (Quantitative plus Verbal).
5. Have a score above the 60th percentile rank on the GRE Subject (Advanced) Test in Biology. The student should take this test during the last semester in his undergraduate major. Applicants for the master's degree in Microbiology must pass the Advanced Test in Microbiology.
6. Be considered as capable of graduate work in the biological sciences by two references submitted to the Graduate Coordinator (Biology) or to the Graduate Adviser in Microbiology.
7. Be accepted by a Research Program and be sponsored by a faculty member of the area.

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

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

Specific Requirements for the Master of Arts Degree in Biology
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must pass the Advanced Test in Microbiology.

Specific Requirements for the Master of Science Degree in Biology
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two 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.

Specific Requirements for the Master of Science Degree in Microbiology
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two 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.

Specific Requirements for the Master of Science Degree in Biology
Master's Degree Research Programs

Ecology (Major Code: 04201): The overall program emphasizes quantitative approaches to ecological research and the framing of problems within the general context of ecological theory. Faculty and student research currently falls into the areas of limnology, marine ecology, plant community ecology and primary productivity, physiological plant ecology, marine aquaculture and fisheries ecology, animal population ecology and energetics, ecological genetics, ecosystems management, and systems ecology. Program adviser, Farris.

Genetics (Major Code: 04221): The genetics program offers an opportunity for graduate study in population genetics, biochemical and molecular genetics, developmental genetics, cyto genetics, and mutagenesis. Program adviser, Daugherty.

Microbiology (Major Code: 04111): A separate graduate degree is offered in Microbiology. Graduate adviser, Steenberg.

Molecular Biology (Major Code: 04161): The program area is concerned with approaches which aim to explain biology at a molecular level, with particular emphasis on the correlation of structure and function of macromolecules, catalysis and control, molecular genetics and regulation of gene expression, and the molecular basis of cellular architecture, cell movement, bioenergetics and membrane function (administered through Molecular Biology Institute). Program adviser, Dahms.

Physiology (Major Code: 04101): The major subareas of interest represented by the faculty in the physiology program area include comparative cellular physiology (especially osmoregulation, endocrinology and sensory physiology) photobiology, radiobiology and radioisotope technique, nerve and muscle physiology, and plant ecophysiology. Program adviser, Brandt.

Plant Sciences (Major Code: 04021): The areas of emphasis for graduate study in the botany program include plant morphology, plant physiology, mycology, plant pathology, plant ecology, and plant systemsatics. Program adviser, Dahms.

Systematics and Evolutionary Biology (Major Code: 04071): This research program is broadly concerned with the biology, systematics, and evolution of whole organisms. The student has a wide variety of research areas from which to choose, including morphology, systematics, paleontology, natural history, behavior, comparative physiology, developmental biology, population genetics, coevolution, and evolutionary theory. Many groups of organisms are studied, including marine and terrestrial invertebrates, vertebrates, and plants. Program adviser, Futch.

In addition to the emphasis described above, a number of faculty have active research programs in Marine Biology and accept graduate students in this area.

Microbiology

Advancement to Candidacy

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

Specific Requirements for the Master of Science Degree in Microbiology

(Major Code: 04111)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must select, with the approval of the graduate adviser, from the biological sciences and closely related fields.

Not less than 18 units must be selected from courses in the area of Microbiology to include not less than 15 units of 600- and 700-numbered courses. Among the 600- and 700-numbered courses selected, the student's program must include courses Biology 790, Bibliography; 799A, Thesis or Project; 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 College of Education.

A final oral examination on the field of the thesis and its implication in the broad fields of microbiology is required.

Section II: Joint Doctoral Programs

Biology (Cell and Molecular)

(Major Code: 04011)

The cooperating faculties of the Departments of Biology at the University of California, San Diego and at San Diego State University offer a Joint Doctoral Program in Biology (cell and molecular). The research interests of the participating faculty members cover a wide range of biological problems which represent the interdisciplinary nature of modern biology. At SDSU, the major areas of research at the graduate level and the participating faculty members include:

- Membrane transport and energy transduction: A. Dahms, R. Sabbadini.
- Biochemical genetics and gene expression: G. Johnson, H. Lebherz.
- Molecular biology of RNA viruses and bacteriophage: M. Breindl, J. Perrault.
- Regulation of metabolic pathways: M. Abbott, S. Krisans.
- Regulation of plant development and development: R. Clouse, D. Rayle.
- Substructure and function: motile cells: P. Paolini, R. Weiss.
- Cell and molecular immunology: C. Tsoukas.

Program

Undergraduate Preparation for Admission

Applicants for admission to the doctoral program offered jointly by UCSD and SDSU must present evidence of adequate preparation and capacity for advanced work in biology. There are no inflexible requirements for entrance to graduate study in this program, but a strong background in biology, mathematics, chemistry, and physics is recommended. The applicant must have a bachelor's degree or the equivalent from an accredited institution of higher learning with training comparable to that provided by the University of California's and San Diego State University's undergraduate programs. Admission to the program requires acceptance by each institution on recommendation of the participating departments at UCSD and SDSU. It is understood that acceptance of a student into the joint program by each of the departments will be conditioned by their respective standards for graduate admissions and also by available facilities.

Application

Students seeking admission to the Joint Doctoral Program in Biology should write directly to the Doctoral Program Adviser, SDSU.

Transcripts of academic work already completed.

Results of the Graduate Record Examination scores (including Advanced Biology, Chemistry or Physics Test score).

Residency Requirements

After formal admission to the joint doctoral program, the student must spend at least one academic 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, San Diego, and San Diego State University.
Advising Committee

Upon admission to the program the Joint Doctoral Graduate Advisers of the two institutions will establish an Advising Committee for the student. This committee will consist of three faculty members chosen jointly from the two cooperating institutions. In consultation with the student, the committee will develop the student's course of study and will establish the student's Joint Qualifying Committee. At least one member of the advising committee must be from SDSU and one from UCSD.

Course Requirements

There is no specific number of courses required for the doctoral program in Biology, except a one-year graduate course including genetics, cellular and molecular biology. Prior to taking the qualifying examination, every student is expected to have a firm understanding of modern biological principles. Usually students will be expected to complete a set of at least four laboratory rotations, and such rotations may be fulfilled on either campus. Coursework may be selected from offerings at either UCSD or SDSU.

Qualifying Examinations

Joint Qualifying Committee

A five-member committee, composed of appropriate numbers of faculty members from each of the cooperating institutions, will be recommended by the Advising Committee for each student and approved by the Graduate Deans from each institution. The student's dissertation advisor will be a member of the Joint Qualifying Committee.

The Joint Qualifying Committee will conduct a special oral comprehensive qualifying examination, which will evaluate the student's understanding of modern biological principles. The topics will be selected in consultation with the Advising Committee. The purpose of this examination is for the student to demonstrate competence not only in the major research field of the student but also in related areas of biology.

The Joint Qualifying Committee may specify a course of study to strengthen any weaknesses identified during the qualifying examination. Upon successful completion of the advancement to candidacy, the student must make application to the Graduate Division at UCSD for the Joint Doctoral Program in Biology. The student's dissertation advisor will be notified of his advancement to candidacy by the UCSD Graduate Division.

Joint Dissertation Committee

After a student is admitted to candidacy, a Joint Dissertation Committee consisting of at least three faculty members is nominated by the Graduate Advisers and appointed jointly by the chair of this committee. At least one member of this committee must be from SDSU and one from UCSD.

Dissertation

Following successful completion of the qualifying examination, the major remaining requirement for the Ph.D. degree will be satisfactory completion of a dissertation consisting of original and significant research carried out under the guidance of a faculty member. The dissertation must be complete and filed the University of California, San Diego: Graduate Division.

Award of the Degree

The Doctor of Philosophy degree in Biology will be awarded jointly by the Regents of the cooperating institutions.

Financial Support

The Department of Biology at SDSU endeavors to provide adequate support for all students, so that full time can be devoted to research, teaching, and study. During 1988-89, the support students are required to obtain teaching experience, which normally means that a student will perform limited duties as a graduate teaching assistant.

Staff

The following faculty members of the cooperating institutions participate in the Joint Doctoral Program being available for direction for research and as members of Joint Doctoral Committees.

San Diego State University:
Graduate Adviser: S. Krisans
Staff: Abbott, Barnett, Bernstein, Breindl, Clouse, Dahms
(Chemistry Department), C. Glembotski, G. Johnson, Krisans, Leberherz
(Chemistry), Paulini, Perras, Rayle, Sabbadini, Stumpf, Tsoukas, Weiss, Zyskind.

University of California, San Diego:
Graduate Adviser: D.L. Lindsley
Staff: Brody, Carpenter, Chrispeels, Firtel, Forbes, Green, Hayashi, Heinlinski, Holland,
Howell, Lindsley, Loomis, Nesbitt, Newport, Pinon, Posakony, Saier, Scheffler,
Smith, Spector, Stern, Subramani, Wang, Wills, Yaffe.

Ecology

(Major Code: 04201)

The cooperating faculties of the Department of Biology, San Diego State University and the Graduate Group in Ecology, University of California, Davis offer a Joint Doctoral Program in Biology.

The research interests of the participating faculty members cover a wide range of Biology.

At UCSD, the major areas of research include:

Systems ecology: The application of mathematical modeling to ecosystem studies, especially primary production processes in terrestrial and aquatic environments.

Public policy: Studies concerned with applying ecological principles to managing natural resources and regional development.

Aquaculture: Of marine plants and animals.

At SDSU, the major areas of research include:

Coastal marine ecology: including study of salt marshes and tidal channels, especially the ecology of rocky and sandy beaches.

Estuarine ecology: including studies of estuaries and the impact of human disturbance on estuarine functioning.

Animal population ecology: The dynamics of competitive and predator-prey interactions and their significance in community organization.

Plant ecology: including the study of chaparral and desert species in relation to environmental variability.

Program

Undergraduate Preparation for Admission

Applicants for admission to the doctoral program must present evidence of adequate preparation and capacity for advanced work in ecology.

Preparation should include a strong background in biology, physics, chemistry, and mathematics. Applicants must have a complete list of the participating faculty from SDSU can be obtained from the coordinator of the program.

Application

Application for admission must be made simultaneously to the Graduate Division at San Diego State University and to the Graduate Division at the University of California, Davis.

A complete application requires:

1. The appropriate application form.
2. Three letters of recommendation (send directly to Graduate Coordinator, SDSU).
3. Transcripts of academic work already completed.
4. Results of the Graduate Record Examination, including the Advanced Biology Test score.

Results of the Graduate Record Examination, including the Advanced Biology Test score.
Residency Requirements

After formal admission to the joint doctoral program, the student must spend at least one academic 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, Davis, and San Diego State University.

Advising Committee

Upon admission to the program the Joint Doctoral Graduate Advisers of the two institutions will establish an Advising Committee for the student. This committee will consist of three faculty members chosen jointly from the two cooperating institutions. In consultation with the student, the committee will develop the student's course of study and will establish the student's Joint Qualifying Committee. At least one member of the advising committee must be from SDSU and one from UCD.

Course Requirements

There is no specific number of courses required for the joint doctoral program in ecology. Prior to taking the qualifying examination, every student is expected to have a firm understanding of modern biological principles, and to be conversant with several areas of ecology. Students are expected to fulfill course requirements in human ecology and physics-chemical ecology, as well as in biological ecology. Coursework may be selected from offerings at either UCD or SDSU.

Qualifying Examinations

Joint Qualifying Committee

A five-member committee, composed of appropriate numbers of faculty members from each of the cooperating institutions, will be recommended by the Advising Committee for each student and approved by the Graduate Deans from each institution. The student's dissertation adviser cannot be a member of the Joint Qualifying Committee.

The Joint Qualifying Committee will conduct an oral comprehensive qualifying examination, which will evaluate the student's understanding of modern biological principles. The examination will focus on four areas related to the major research interest of the student. The purpose of this examination is for the student to demonstrate competence not only in the major research field but also in related areas of ecology. The Joint Qualifying Committee may specify a course of study to strengthen any weaknesses identified during the qualifying examination. Upon successful completion of the qualifying examination, the student must make application to the Graduate Division at UCD for advancement to candidacy. Upon payment of the candidacy fee to UCD, and after approval by the Graduate Deans on both campuses, the student will be notified of his advancement to candidacy by the UCD Graduate Division.

Joint Dissertation Committee

After a student is admitted to candidacy, a Joint Dissertation Committee consisting of at least three faculty members is nominated by the Graduate Advisers and appointed jointly by the Graduate Deans at SDSU and UCD. The student's dissertation research adviser will be the chair of this committee. At least one member of this committee must be from SDSU and one member from UCD.

Dissertation

Following successful completion of the qualifying examination, the major remaining requirement for the Ph.D. degree will be satisfactory completion of a dissertation consisting of Requirements currently in force at UCD and SDSU must be met for completing and filing the dissertation.

Award of the Degree

The Doctor of Philosophy degree in Ecology will be awarded jointly by the Regents of the University of California and the Trustees of The California State University in the names of both cooperating institutions.

Financial Support

The Department of Biology at SDSU endeavors to provide adequate support for all students, so that full time can be devoted to research training and study. During 1988-89, the support packages included tuition support, a stipend for the year, and funds for research supplies. All students are required to obtain teaching experience, which normally means that a student will perform limited duties as a graduate teaching assistant.

Graduate coordinators:
San Diego State University: B. Collier
University of California, Davis: M. Love

Courses Acceptable on Master's and Doctoral Degree Programs in Biology

UPPER DIVISION COURSES

506. Special Topics in Entomology (3-4)
Two lectures and three hours of laboratory.
Prerequisites: Biology 356 or 462.
Treatment of some aspect of entomology, such as biological control, microbial control or forest entomology, not covered in regularly scheduled courses. See Class Schedule for specific content. Maximum credit nine units. Maximum credit six units applicable to a master's degree.

Format of course to vary according to the nature of the selected topics.
A. Lecture course.
B. Lecture and laboratory course. See Class Schedule for lecture/lab format.

513. Marine Microbiology (2)
Prerequisites: Biology 350 or an introductory course in microbiology and consent of instructor.
Principles and practices of the marine microbial population and its role in the physical and chemical environment.

513L. Marine Microbiology Laboratory (1)
Six hours of laboratory.
Prerequisite: Credit or concurrent registration in Biology 513.

514. Phycology (4)
Three lectures and three hours of laboratory.
Prerequisite: Biology 200B.
Structural, morphological, and phylogenetic relationships of marine algae.

515. Marine Invertebrate Zoology (4)
Two lectures and six hours of laboratory.
Prerequisite: Biology 200B.
Behavior, physiology, and phylogenetic relationships of marine invertebrates.

517. Biological Oceanography (4)
Two lectures and six hours of laboratory.
Prerequisite: Biology 354 or 515.
Ecological concepts applied to pelagic and benthic marine organisms and their environment. Field and laboratory experience in oceanographic techniques, particularly the coastal environment.

518. Fisheries Biology (3)
Two lectures and three hours of laboratory.
Prerequisite: Biology 354.
Fisheries of commercial importance. The dynamics of exploited populations.

519. Aquaculture (3)
Prerequisite: Biology 200B.
Principles and practices of the farming of aquatic organisms.

520. Ichthyology (4)
Two lectures and six hours of laboratory.
Prerequisite: Biology 200B.
Identification, systematic, evolution, structure, physiology, behavior and ecology of fishes.
521. Advanced General Microbiology (2)
Prerequisite: Biology 350 or an introductory course in microbiology and consent of instructor.
Taxonomy, comparative physiology and ecology of representative microorganisms found in various natural environments.

521L. Advanced General Microbiology Laboratory (2)
Six hours of laboratory.
Prerequisite: Credit or concurrent registration in Biology 521.
Methods and procedures for the selective isolation and characterization of important groups of soil and water bacteria.

522. Evolution of Vertebrate Structure (4)
Two lectures and six hours of laboratory.
Prerequisite: Biology 200B.
Structural changes that have occurred in organ systems of vertebrates during the course of evolution.

523. Herpetology (4)
Three lectures and three hours of laboratory.
Prerequisites: Biology 200B and consent of instructor.
The origin, evolution, distribution and systematics of amphibians and reptiles of the world.

524. Ornithology (4)
Two lectures, six hours of laboratory or field excursions, and a field project.
Prerequisites: Biology 200B and consent of instructor.
The study and identification of birds, especially those of the Pacific Coast and the San Diego region.

525. Mammalogy (4)
Two lectures and six hours of laboratory.
Prerequisites: Biology 200B and consent of instructor.
The evolution, systematics, distribution and ecology of mammals of the world.

526. Vertebrate Paleontology (4)
Two lectures and six hours of laboratory.
Prerequisite: Biology 522.
Advanced studies in the evolution of vertebrates, including relations to earth history and topics in paleoecology and functional morphology. Field and laboratory techniques and exercises in identification are included.

527. Animal Behavior (4)
Two lectures and six hours of laboratory.
Prerequisites: Biology 215, Biology 200B or Psychology 211 and 260 for psychology majors.
Biological bases of animal behavior with emphasis on the ethological approach, including the evolution and adaptive significance of behavior.

528. Mycology (4)
Two lectures and six hours of laboratory.
Prerequisite: Biology 200B.
The structure, food relations, and classification of fungi.

529. Vascular Plants (4)
Two lectures and six hours of laboratory.
Prerequisite: Biology 200B.
The structure, development and phylogenetic relationships of the bryophytes and vascular plants.

530. Plant Systematics (4)
Two lectures and six hours of laboratory, field trips.
Prerequisite: Biology 200B.
Plant description, identification, classification and nomenclature with emphasis on evolutionary patterns, interdisciplinary data acquisition, and phylogenetic analysis.

531. Genetics and Evolution (3)
Prerequisites: Biology 352 and 354.
Contributions of genetics to theory of evolution. Processes of microevolution and speciation. Topics include cytotaxonomy and population, quantitative, molecular and behavior genetics.

532. Plant Structure and Function (3)
Two lectures and three hours of laboratory.
Prerequisites: Biology 200B.

533. Plant-Soil Ecology (3)
Two lectures and three hours of laboratory.
Prerequisite: Biology 200B. Recommended: Geography 505.
Plant-soil relationships from an ecological perspective. Biotic interactions controlling soil fertility and plant growth.

534. Ecological Methods (1-3)
Three hours of laboratory per unit.
Prerequisites: Biology 215 and 354 or 454.
Modular course in vegetation sampling, ecophysiological methods, plankton sampling. See Class Schedule for specific content. Maximum credit three units.

535. Ecology of Renewable Resources (3)
Two lectures and three hours of laboratory.
Prerequisite: Biology 354 or 454.
Ecological principles in exploitation and management of forest, range, watershed, and recreation lands for sustained human benefit.

536. Limnology (4)
Three lectures and three hours of laboratory.
Prerequisite: Biology 354.
Biological, chemical, and physical considerations of inland waters.

537. Regional Field Studies in Biology (1-3)
One to three-week periods during vacations and summer sessions; may be combined with class meetings during academic year.
Prerequisites: At least twelve units in the biological sciences, including Biology 200B, and consent of instructor.
Extended field studies of the flora, fauna, and biotic communities of major natural regions of western North America. May be repeated with new content. Maximum credit six units.

538. Systems Ecology (4)
Three lectures and three hours of laboratory.
Prerequisites: Biology 354 and 354L, Mathematics 122 or 150, and consent of instructor.
Covers major ecological problems. Theory and techniques of systems analysis and mathematical modeling as applied to biological communities.

539. Prokaryotic and Eukaryotic Molecular Biology (4) I, II
Prerequisites: Biology 352 or 556, Biology 356 or 554, Chemistry 361A and 361B.

550. Recombinant DNA (3) I, II
Prerequisites: Chemistry 361A; Biology 350, 352, 356, 550.
Theory and practice of recombinant DNA techniques.

551L. Recombinant DNA Laboratory (2) I, II
Six hours of laboratory.
Prerequisite: Consent of instructor.
A laboratory course in recombinant DNA techniques.

552. General Virology (2)
Prerequisite: Biology 350. Recommended: Biology 585 and 589.
Viruses, their structure, function, culture, and methods of study.

552L. General Virology Laboratory (2)
Six hours of laboratory.
Prerequisite: Consent of instructor.
The culture, isolation, and characterization of viruses.
553. Molecular Approaches in the Medical Laboratory (3) I
   One lecture and six hours of laboratory.
   Prerequisites: Biology 350, 356 or 554. Recommended: Biology 361A, 361B.
   Application of recombinant DNA and molecular cell biology techniques in modern medical laboratory: theory and practice.

554. Microbial Physiology (2) I, II
   Prerequisites: Biology 350 or 554. Recommended: Biology 361A. Physiology of selected bacteria, fungi and other microorganisms. Not open to students with credit in Microbiology 350.

554L. Microbial Physiology Laboratory (2) I, II
   Six hours of laboratory.
   Prerequisite: Credit or concurrent registration in Biology 554.
   Techniques and instrumentation used in microbial physiology; computer applications in physiology. Not open to students with credit in Microbiology 350.

556. Bacterial and Viral Genetics (2)
   Prerequisites: Biology 350, Chemistry 361A.
   The genetics of bacteriophages and bacteria.

558. Advanced Genetics (3)
   Prerequisite: Biology 352.
   Current topics in molecular, organismal or population genetics. Maximum credit six units.

561. Radiation Biology (3) I, II
   Prerequisites: Biology 100 or 200B; Physics 180B and 182B. Recommended: Biology 356.
   Principles underlying radiological reactions of ionizing radiations. Effects of ionizing radiations at the biochemical, cell, organ, and organism levels.

561L. Radiation Biology Laboratory (2)
   Six hours of laboratory.
   Prerequisite: Credit or concurrent registration in Biology 561. The laboratory determination of the effects of ionizing radiation on biological systems.

563. Plant Physiology (3)
   Prerequisites: Biology 200B, Chemistry 230 or 231.
   Topics selected from plant physiology, ion transport, translocation, photosynthesis, growth and development.

563L. Plant Physiology Laboratory (1)
   Three hours of laboratory.
   Prerequisite: Credit or concurrent registration in Biology 563. Laboratory experiments designed to demonstrate principles of water movement, ion transport, energy metabolism, growth and development in plants.

564. Topics in Cellular Biology (3)
   Prerequisite: Biology 356 or Chemistry 361A-361B or Chemistry 350.
   Topics selected from chromatid structure function and regulation of cell cycle analysis and regulation of cellular membranes function and regulation.

565. Topics in Comparative Physiology (3)
   Prerequisite: Biology 356.
   Topics vary each semester and are chosen from three areas: digestion, nutrition, respiration, metabolism, and excretion; sensory, nervous and endocrine mechanisms. Maximum credit six units. See Class Schedule for specific content.

567. Molecular Endocrinology (3)
   Prerequisite: Biology 356.
   Molecular mechanisms of endocrine hormone biosynthesis, secretion, and actions.

569. Molecular Pharmacology (3)
   Prerequisite: Biology 356. Recommended: Biology 361.
   Molecular mechanisms of pharmacological agents. Emphasis on drugs that interact with nervous and endocrine systems.

576. Developmental Biology (3)
   Prerequisite: Biology 352.
   Analysis of development with emphasis on embryonic differentiation.

577. Embryology (4)
   Two lectures and six hours of laboratory.
   Prerequisite: Biology 200B.
   Studies in comparative gametogenesis, morphogenesis, and reproductive physiology.

578. Immunohematology (2) II
   Prerequisite: Biology 350. Recommended: Biology 566.
   Theory of blood grouping and typing with emphasis on recent advances. Procedures for identification of immune disorders and tests to determine compatibility.

580. Advanced Human Anatomy (4)
   Two lectures and six hours of laboratory.
   Prerequisite: Biology 150 or 522.
   Comprehensive dissection and study of human cadavers with major emphasis on the regional approach.

581. Animal Viruses (4)
   Two lectures and six hours of laboratory.
   Prerequisite: Biology 552. Recommended: Biology 552L, 585, 589.
   Animal virus identification and investigation, emphasizing cell culture, cytopathic effects and serology.

582. Hematology (4) I, II
   Two lectures and six hours of laboratory.
   Prerequisite: Biology 350.
   The study of normal and pathological blood with chemical, physical and microscopic methods.

583. Human Genetics (3)
   Prerequisite: Biology 352.
   Genetics as related to human biology. Molecular and cytogenetic causes of genetic disease and the genetics of human populations.

584. Immunochemistry (3)
   Prerequisite: Chemistry 361A.
   Structure and function of the immunoglobulins and the chemical and physical nature of the antigen-antibody reaction.

585. Immunology (2) I, II
   Prerequisites: Chemistry 361A and one upper division biological science course.
   Immunology of antigens and antibodies; their interactions in vitro and in vivo. Cellular immune mechanisms. Immunopathologies.

585L. Immunology Laboratory (2) I, II
   Six hours of laboratory.
   Prerequisites: Biology 350 and credit or concurrent registration in Biology 565. Cellular immunological techniques.

586. Medical Entomology (4)
   Three lectures and three hours of laboratory. See Class Schedule for lecture/lab format.
   Prerequisite: Biology 200B.
   The role of insects and other arthropods in the transmission and causation of human diseases and the important diseases of domesticated animals.

587. Medical Mycology (4)
   Two lectures and six hours of laboratory.
   Prerequisite: Biology 350.
   Mycotic agents of disease in human and other animals. Consideration of the biology of fungi; concepts of host-parasite relationships, including factors affecting virulence and immunity. Experience in systematic identification.

588. Parasitology (4)
   Two lectures and six hours of laboratory.
   Prerequisite: Biology 200B.
   Study of animal parasites with special reference to those of humans. Laboratory including identification of important human parasites, and collection and preservation of local forms.
589. Pathogenic Bacteriology (4) I, II
Two lectures and six hours of laboratory.
Prerequisites: Biology 350 with a minimum grade of C; Chemistry 250 or 251. Recommended: Chemistry 361A.
Bacterial and rickettsial agents of disease in man and other animals. Consideration of host-parasite relationships, the biology of the inciting agents and mechanisms of host resistance. Laboratory experience in isolation and identification of bacterial pathogens.

590. Physiology of Human Systems (4)
Three lectures and one hour of discussion.
Prerequisites: Physics 180B and 182B; Biology 200B. Recommended: Chemistry 361A and 361B or Biology 356.
Human physiology presented at cellular and organ system levels: membrane transport, nerve excitation, muscle contraction, cardiovascular physiology, kidney function, hormone function, reproduction, and digestion. For students majoring in a natural science or engineering.

591. Advanced Immunology (3) I
Prerequisites: Biology 356 or 554 and 554L; Biology 585; Chemistry 361B.
Cellular and molecular aspects of the immune response. Genetics of immunoglobulins, major histocompatibility complex, lymphocyte activation and its manifestations on the immune response, and contemporary immunological research techniques.

592. Electron Microscopy (4)
Two lectures and six hours of laboratory.
Prerequisites: Physics 180A-180B and 182A-182B; Biology 350. Recommended: Biology 474 and 552.
Principles and techniques in the biological application of the electron microscope.

593. Introduction to Scanning Electron Microscopy (2)
One lecture and three hours of laboratory.
Prerequisite: Biology 200B.
Theory and use of a scanning electron microscope for biological research. Laboratory is project oriented.

594. Radioisotope Techniques in Biology (4)
Two lectures and six hours of laboratory.
Prerequisites: Physics 180B and 182B; Biology 100 or 200B. Recommended: Biology 356 and Chemistry 250 or 251.
The principles and application of radioisotopes in biology. Radioisotope measurement, safe handling, tracer and radioautography techniques.

595. Computers in Biomedical Research (3)
Prerequisite: Biology 356 or 590. Recommended: Computer Science 107.
Application of micro- and maincomputers to tasks encountered by biomedical scientists in research laboratory (data acquisition and reduction, experiment control) and by physicians in medical care delivery (noninvasive imaging, clinical laboratory automation; patient file processing).

596. Special Topics in Biology (1-3)
Prerequisite: Consent of instructor.
Advanced selected topics in modern biology. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum combined credit of six units of 596 with three units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

597A. Univariate Statistical Methods in Biology (3)
Two lectures and three hours of laboratory.
Prerequisites: Biology 215 and 350 or 352 or 354 or 356.
Application of univariate statistical techniques to biological sciences. (Formerly numbered Biology 597.)

597B. Multivariate Statistical Methods in Biology (3)
(Same course as Mathematics 555.)
Two lectures and three hours of laboratory.
Prerequisites: Biology 215 and 350 or 352 or 354 or 356.
Application of multivariate statistical methods in biological sciences.

598. Cardiovascular Physiology (3)
Two lectures and three hours of laboratory.
Prerequisite: Biology 356. Recommended: Biology 590.
Physiology of human heart and circulatory system in health and disease; processes are considered at molecular, cellular, and systemic levels. Topics include cardiac cell ultrastructure, cell energetics, vascular and cardiac dynamics, electrophysiology, pathology, diagnosis and treatment of disease.

GRADUATE COURSES

600. Seminar (2-3)
Prerequisite: Consent of instructor.
An intensive study in advanced biology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

604. Seminar in Aquatic Ecology (2)
Prerequisite: Biology 354.
Ecological concepts as applied to the fresh water and marine environment. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

608. Seminar in Aquatic Microbiology (2)
Prerequisite: Biology 513 or 517 or 554.
May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

624. Seminar in Cellular Biology (2)
Prerequisite: Biology 356.
See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

640. Seminar in General Microbiology (2)
Prerequisite: Biology 521 or 554.
May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

644. Seminar in Genetics (2)
Prerequisite: Biology 352.
See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

647. Ecological Field Research in San Diego County (2) Cr/NC
Six hours of fieldwork.
Prerequisite: Biology 354.
Ecology of San Diego region and research questions appropriate to region. May be taken for credit only during the first or second semester as a graduate student.

648. Seminar in Immunology (2-3)
Prerequisite: Biology 585 or 591.
May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

652. Seminar in Marine Zoology (2-3)
Prerequisites: Biology 200B and consent of instructor.
Recent developments in marine zoology. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

680. Seminar in Microbial Physiology (2)
Prerequisite: Biology 554.
May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

680. Seminar in Plant Physiology (2)
Prerequisite: Biology 583.
Current investigations in one of the areas in plant physiology. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.
684. Seminar in Systematic Botany (2)
Prerequisite: Biology 530.
Current problems in the systematics of vascular plants. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

686. Seminar in Terrestrial Ecology (2)
Prerequisite: Biology 354.
Ecological concepts as applied to the terrestrial environment. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

693. Advanced Theory Scanning Electron Microscopy (3)
Prerequisite: Biology 593.
Theory and experimental approaches to study of biological structure using scanning electron microscope. Techniques in sample preparation, photography and use of scanning microscope; demonstrations of equipment use.

693L. Advanced Scanning Electron Microscope Laboratory (2)
Six hours of laboratory.
Prerequisite: Credit or concurrent registration in Biology 693.
Techniques include fixation for SEM, sample preparation by critical point drying and sputter coating, use of scanning microscope and photographic methods for SEM micrographs.

694. Seminar in Virology (2)
Prerequisite: Biology 552.
May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

696. Advanced Topics in Biology (1-3)
Prerequisite: Consent of instructor.
Intensive study in specific areas of biology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

710. Advanced Topics in Ecology (2-4)
Prerequisites: Biology 354 and consent of instructor.
Selected topics in ecology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

725. Aquatic Ecology (3)
Two lectures and three hours of laboratory.
Prerequisites: Biology 354 and consent of instructor. Application for collecting permit must be made at least six weeks before class begins at the Center for Marine Studies (AS-111). Ecological concepts as applied to benthic and pelagic populations and communities in fresh water and marine environments.

730. Behavioral Ecology (3)
Two lectures and three hours of laboratory.
Prerequisites: Biology 354, 354L and consent of instructor. Recommended: Biology 527.
Behavioral mechanisms relating animals to their physical and biotic environment.

735. Biogeography (3)
Prerequisite: Biology 354 or 532.
Concepts and principles of the distributional history of plant and animal groups, and the origins and dispersal of modern faunas and floras.

750. Molecular Biophysics (3)
Prerequisites: Biology 356, Chemistry 410A or 561.
Description and analysis of biological processes and systems in terms of properties of molecules and of basic principles.

755. Physiological Ecology (3)
Two lectures and three hours of laboratory.
Prerequisites: Biology 254 and consent of instructor.
The comparative physiological characteristics of natural plant and animal populations in relation to their habitats and environments.

765. Population and Community Ecology (3)
Two lectures and three hours of laboratory.
Prerequisite: Biology 354.
Formulation, analysis and experimental testing of the theories of the structure and dynamics of ecological systems at the population and community level.

770. Speciation (3)
Prerequisite: Biology 354.
Concepts and principles of the origin of species.

790. Bibliography (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

792. Investigation and Report (3)
Analysis and research techniques in biology.

795. Laboratory Techniques (2)
Cr/NC
Six hours of laboratory.
Prerequisite: Consent of instructor.
Current laboratory techniques and procedures in various biology disciplines. Maximum credit six units applicable to a master's degree.

797. Research (1-3) Cr/NC/SP
Research in one of the fields of biology. Maximum credit six units of 797 and 798 applicable to a master's degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff, to be arranged with department chair and instructor.
Individual study. Maximum credit six units of 797 and 798 applicable to a master's degree.

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

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

897. Doctoral Research (3-6) Cr/NC/SP
Prerequisite: Admission to the doctoral program.
Independent investigation in the general field of the dissertation.

899. Doctoral Dissertation (3-6) Cr/NC/SP
Prerequisite: An officially constituted dissertation committee and advancement to candidacy.
Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.
Molecular Biology

Faculty

- Michael T. Abbott, Ph.D., Professor of Chemistry
- Carol A. Barnett, Ph.D., Professor of Biology
- Sanford L. Bernstein, Ph.D., Professor of Biology (MBI Associate Director)
- A. Stephen Dahms, Ph.D., Professor of Chemistry (MBI Director)
- Terrence G. Frey, Ph.D., Professor of Biology
- Christopher G. Glentobski, Ph.D., Professor of Biology
- Gerald G. Johnson, Ph.D., Professor of Biology
- Kenneth D. Johnson, Ph.D., Professor of Biology
- Skaidrite Krisans, Ph.D., Professor of Biology
- Richard J. Laub, Ph.D., Professor of Chemistry
- Robert P. Metzger, Ph.D., Professor of Natural Science
- Paul U. Paolini Jr., Ph.D., Professor of Biology
- Jacques Perrault, Ph.D., Professor of Biology
- David L. Rayle, Ph.D., Professor of Biology
- Roger A. Sabbadini, Ph.D., Professor of Biology
- Charles J. Stewart, Ph.D., Professor of Chemistry
- William E. Stumph, Ph.D., Professor of Chemistry
- Richard L. Weiss, Ph.D., Professor of Biology
- Judith W. Zyskind, Ph.D., Professor of Biology
- Steven D. Close, Ph.D., Assistant Professor of Biology
- Constantine Tsakas, Ph.D., Associate Professor of Biology
- Robert J. Palub, Ph.D., Professor of Chemistry

General Information

The Molecular Biology Institute (MBI) administers the Master of Arts and Master of Science degrees in Biology with an emphasis in Molecular Biology. The MBI is currently composed of members from the Departments of Biology, Chemistry, and Natural Science and is designed to serve these departments in the coordination, support and enhancement of research and training in the molecular biological sciences. Graduate teaching assistantships in biology and chemistry are available to qualified students. Application blanks and additional information may be obtained from the Coordinator of the Biology Graduate Program.

Admission to Graduate Study

Candidates for admission may come from a variety of disciplines in the biological and physical sciences. Ultimately, the research program of individuals wishing to pursue master's degrees in Molecular Biology will be carried out under the supervision of MBI members.

Graduate standing as described in Part Two of this bulletin, a student must satisfy the following requirements before being recommended for admission with classified standing:

1. Possess a bachelor's degree with a major in a biological or physical science equivalent to that offered at San Diego State University.
2. Have a grade point average of 2.75 or better in work taken for the baccalaureate degree.
3. Supply three letters of reference that describe the applicants potential for graduate work and research capabilities.
4. Completion of one course in physical chemistry.

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

Advancement to Candidacy

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

Specific Requirements for the Master of Arts or 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 Two of this bulletin, the student must complete a graduate program of 30 units of upper division and the graduate courses selected, with the approval of the MBI graduate adviser, from the courses listed below. At least 15 units of the courses selected must be in 600- and 700-numbered courses including 799A, Thesis. The student must complete at least three units of Molecular Biology 610 and at least two units in Molecular Biology 621 and at least two units in Molecular Biology 610. With the approval of the graduate adviser of Molecular Biology, a student may substitute for Molecular Biology 610 another two units in 600- or 700-numbered course. A final oral examination on the thesis will be administered by the thesis committee; in addition, a formal public presentation of the thesis will be required.

Emphasis in Molecular Biology

Courses Acceptable for the Emphasis in Molecular Biology

<table>
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<tr>
<th>UPPER DIVISION COURSES</th>
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<td>Biology</td>
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- 550. Prokaryotic and Eukaryotic Molecular Biology (4)
- 551. Recombinant DNA (4)
- 551L. Recombinant DNA Laboratory (2)
- 552. General Virology (2)
- 552L. General Virology Laboratory (2)
- 553. Molecular Approaches in the Medical Laboratory (3)
- 556. Bacterial and Viral Genetics (2)
- 558. Advanced Genetics (3)
- 559. Immunology (3)
- 560. Immunology Laboratory (2)
- 567. Molecular Endocrinology (3)
- 569. Molecular Pharmacology (3)
- 576. Developmental Biology (3)
- 577. Embryology (4)
- 581. Animal Viruses (4)
- 583. Human Genetics (3)
- 584. Immunochemistry (3)
- 585. Immunology (2)
- 590L. Immunology Laboratory (2)
- 590. Physiology of Human Systems (4)
- 592L. Electron Microscopy (4)
- 593L. Introduction to Scanning Electron Microscopy (2)
- 594. Radioscopie Techniques in Biology (4)
- 595. Computers in Biomedical Research (3)
- 596. Special Topics in Biology (1-3)
- 597A. Univariate Statistical Methods in Biology (3)
- 597B. Multivariate Statistical Methods in Biology (3)
- 598. Cardiovascular Physiology (3)
Chemistry

500. Advanced Physical Chemistry (3)
550. Instrumental Methods of Chemical Analysis (2)
560A, 560B. General Biochemistry (3-3)
567. Biochemistry Laboratory (2)
596. Advanced Special Topics in Chemistry (1-3)

GRADUATE COURSES

Biology

600. Seminar (2-3)
624. Seminar in Cellular Biology (2)
644. Seminar in Genetics (2)
648. Seminar in Immunology (2-3)
660. Seminar in Microbial Physiology (2)
680. Seminar in Plant Physiology (2)
693. Advanced Theory Scanning Electron Microscopy (3)
694. Seminar in Virology (2)
750. Molecular Biophysics (3)
790. Bibliography (1)
792. Investigation and Report (3)
795. Laboratory Techniques (2) Cr/NC/SP
797. Research (1-3) Cr/NC/SP
798. Special Study (1-3) Cr/NC/SP

Chemistry

711. Chemical Thermodynamics (3)
712. Chemical Kinetics (3)
751. Separations Science (3)
760. Advanced Topics in Biochemistry (1-3)
762. Enzymology (2)
763. Cellular Regulation (2)
764. Membrane Biochemistry (3)
790. Seminar (1-3)
791. Research Seminar (1)
792. Bibliography (1)
797. Research (1-3) Cr/NC/SP
798. Special Study (1-3) Cr/NC/SP

GRADUATE COURSES IN MOLECULAR BIOLOGY

600. Seminar in Molecular Biology (1-3)
Pre-requisite: Consent of instructor
Evaluation of current literature in molecular biology. May be repeated with new content.
Maximum credit six units applicable to a master’s degree.

601. Colloquium in Molecular Biology Research (1) Cr/NC/SP
Pre-requisite: Graduate standing in a life or physical science.
Recent research advances in selected areas of modern molecular biology presented by faculty of the Molecular Biology Institute and established outside investigators. May be repeated with new content. Open only to students admitted to the Molecular Biology program or by permission of the graduate adviser for molecular biology. Maximum credit six units, three of which are applicable to a master’s degree.

610. Advanced Topics in Molecular Biology (1-4)
Pre-requisite: Graduate standing in a life or physical science.
Intensive study in specific areas of molecular biology. May be repeated with new content. Maximum credit six units applicable to a master’s degree. (Formerly numbered Molecular Biology 696.)

Business Administration

Business Administration/Mathematics 445N
(619) 594-6479

Assistantsships

Graduate teaching assistantships and graduate nonteaching assistantships in business administration are available to a limited number of qualified students. Application blanks and additional information may be secured from the Dean of the College of Business Administration.

General Information

The College of Business Administration offers graduate study leading to the Master of Business Administration degree, Master of Science degree in Business Administration and the Master of Science degree in Accountancy. The major goals in the master’s degree curriculum are to educate the students for general management positions, for management of the functional areas of business, and for executive responsibilities in organizations having close relationships with business activities. The College of Business Administration is a member of the American Assembly of Collegiate Schools of Business.

The Master of Business Administration degree is designed to provide a broad education in business for the student with either a business or a nonbusiness undergraduate degree. The Master of Science degree in Business Administration is designed to provide additional education and specialization in business subjects for the student who has an undergraduate degree in one of the business subject fields.

The objective of the Master of Science degree in Accountancy is to prepare students for careers as professional accountants in financial institutions, government, industry, nonprofit organizations, and public practice. The basic conceptual knowledge of accounting and business can be obtained through an undergraduate degree or by otherwise meeting the prerequisites for the M.S. degree in Accountancy. The program offers the opportunity for greater depth of education by allowing the students to concentrate their education in courses of specialized study in accounting. The master’s degree programs have been accredited by the American Assembly of Collegiate Schools of Business.

Entrance requirements for any master’s degree curricula are the same, except that minimum GMAT scores may differ from program to program. Any degree is available to any student regardless of previous education; provided the requirements of the degree are met.

Applications for admission to the College of Business Administration must be submitted to the Director of Graduate Programs in the College of Business Administration prior to applying for admission. Close contacts with large and small firms, both local and national, enhance the business student’s education. The generous cooperation of local business and government organizations provides opportunities for research and observation for graduate students. The continued professionalization of the business executives’ responsibilities has created many opportunities for the student with an advanced degree in business administration.

Bureau of Business and Economic Research

The Bureau of Business and Economic Research is an organized research activity serving the needs of the College of Business Administration and the Department of Economics. Operationally, it is a part of the College of Business Administration, with a director and a policy committee. The principal objectives of the Bureau are to (1) conduct research in the areas of economics and business, with special reference to local and regional problems; (2) facilitate cooperative arrangements with outside individuals and organizations for conducting specific research projects; (3) seek cooperation with local and regional data; (4) compile and publish the results of Bureau research investigations and aid the faculty in publication of research. Graduate students are encouraged to make use of Bureau facilities.

Admission to the Graduate Program
in the College of Business Administration

A student seeking admission to any of the master’s degree curricula offered in the College of Business Administration should make application in the manner set forth in Part Two of this bulletin.
Admission will be based upon the applicant's ranking based on the formula: 200 times the overall GPA as an undergraduate plus the Graduate Management Admission Test (GMAT) score, the quality and field of undergraduate study, and other factors.

Minimum GMAT scores, which may vary from semester to semester, have been established. In addition, the student must meet minimum University grade point requirements. Transcripts and test scores must be on file at San Diego State University sufficiently in advance of the expected date of registration for a decision to be made. For fall admission the GMAT must be taken prior to April 1 and for spring admission, prior to August 1. Details concerning the GMAT may be obtained from the Test Office, San Diego State University, or by writing to the Educational Testing Service, CN 6101, Princeton, NJ 08541.

**Master of Business Administration Degree**

**Admission to the Degree Curriculum**

Regulations governing admission to the University and to the College of Business Administration are outlined above and in Part Two of this bulletin. For admission to the curriculum for the Master of Business Administration degree a three unit course in calculus is a prerequisite.

**Advancement to Candidacy**

All students must satisfy the general requirements for advancement to candidacy, as described in Part Two 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 Two of this bulletin, the student must

1. Complete each of the following core of twelve courses for which an equivalent has not been satisfactorily completed. Satisfactory completion means that the student's grade in each equivalent course must be "B" (3.0) or better and that the course must have been completed within seven years prior to the first course completed on the master's degree program.

2. Complete 30 units in the following two categories of specialization and electives. For students that would be required to complete more than 60 units for the degree because of this requirement, up to six units of coursework will be waived. This will assure a maximum of 60 semester units for the degree.

   a. Specialization: No more than 15 units in one of the specializations listed below, three units of which must include Business Administration 799A, Thesis (Plan A), or Directed Readings in Business Administration, in the appropriate department. Students choosing the Directed Readings option must then pass a comprehensive examination in their last semester of coursework in lieu of the thesis (Plan B).

      **Specializations**

      | Major Code | Accountancy               | (05021) |
      | Financials  | (05041) |
      | Financial Services | (05034) |
      | Human Resource Management | (05151) |
      | Information Systems | (07021) |
      | International Business | (05051) |
      | Management     | (05061) |
      | Management Science | (05072) |
      | Marketing       | (05091) |
      | Production and Operations Management | (05084) |
      | Real Estate     | (05111) |

   b. Electives: At least 15 units in coursework outside the specialization and the core, no more than nine units in any one field. Additional electives may be needed to total the minimum 30 units required for the degree.

3. Not more than a total of six units in courses 797, Research, and 798, Special Study, combined, will be accepted for credit toward the degree.

4. 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 Two of this bulletin.

5. Candidates for the Master of Business Administration degree with specialization in Business Administration must complete Information and Decision Systems 280, COBOL Programming, with a grade of "C" (2.0) or better before advancement to candidacy. Units earned in Information and Decision Systems 280 or equivalent may not be counted toward the master's degree under any circumstances.

**Master of Science Degree in Business Administration**

In addition to meeting the requirements for classified graduate standing in the University and admission to the College of Business Administration, as described above, and in Part Two of this bulletin, the student must have satisfactorily completed the following courses or their equivalents before enrolling in 600- and 700-numbered courses listed on the official master's degree program:

- Accountancy 201 Financial Accounting Fundamentals (3)
- Accountancy 202 Managerial Accounting Fundamentals (3)
- Economics 101 Principles of Economics (3)
- Economics 102 Principles of Economics (3)
- Economics 201 Statistical Methods (3), or
- Mathematics 119 Elementary Statistics for Business (3)
- Finance 140 Business Law (3)
- Finance 323 Fundamentals of Finance (3)
- Information and Decision Systems 180 Principles of Information Systems (3)
- Information and Decision Systems 301 Statistical Analysis for Business (3), or
- Information and Decision Systems 302 Introduction to Production and Operations Information and Decision Systems 302 Introduction to Production and Operations
- Management 350 Management and Organization (3)
- Management 405 Business Strategy and Integration (3)
- Marketing 370 Marketing (3)
- Mathematics 120 Calculus for Business Analysis (3)
Satisfactory completion means that the student's grade in each course must be "B" (3.0) or better and that the course must have been completed within ten years prior to the first course completed on his master's degree program. In addition, the student's adviser may request satisfactory completion of additional prerequisite courses in the student's proposed field of specialization.

Notice of admission to a curriculum with classified graduate standing will be sent to the student by the Graduate Division Office only upon the recommendation of the College of Business Administration.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Two 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 Two of this bulletin, the student must complete a graduate program of 30 approved units including at least 21 units in 600- and 700-numbered courses. Business Administration 799A, Thesis, required. Finance 616, Managerial Economics, is required unless the student has completed sufficient advanced economics courses as a part of his/her undergraduate preparation. At least 24 units must be in business administration and economics. Not more than a total of six units in courses 797, Research, and 798, Special Study, may be accepted for credit toward the degree.

Candidates for the Master of Science degree with concentration in Information Systems must complete Information and Decision Systems 280, COBOL Programming, with a grade of "C" (2.0) or better before advancement to candidacy. Units earned in Information and Decision Systems 280 or equivalent may not be counted toward the master's degree under any circumstances.

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 Two of this bulletin.

Courses Acceptable on Master's Degree Programs in Business Administration

GRADUATE COURSES

Classified graduate standing is a prerequisite for all 600- and 700-numbered courses.

GENERAL

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

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

Business Administration/Mathematics 304
(619) 594-5310

Faculty
Alan R. Bailey, Ph.D., Professor of Accountancy, Dean of the College of Business Administration
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Chee W. Chow, Ph.D., The Vern Odmark Professor of Accountancy
Gary M. Grudnitski, Ph.D., Professor of Accountancy
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Kevin M. Lightner, Ph.D., Professor of Accountancy
Robert F. Meigs, Ph.D., Professor of Accountancy
Richard A. Samuelson, Ph.D., Professor of Accountancy (Graduate Adviser)
Michael D. Shields, Ph.D., Professor of Accountancy
Howard R. Toole, Ph.D., Professor of Accountancy (Graduate Adviser)
Gerald E. Whittenburg, Ph.D., The Peat Marwick/Charles W. Lamden Professor of Taxation (Graduate Adviser)
O. Ray Whittington, Ph.D., Professor of Accountancy
James D. Williamson, Ph.D., Professor of Accountancy
Sharon M. Lightner, Ph.D., Associate Professor of Accountancy
Nathan A. Oestreich, Ph.D., Associate Professor of Accountancy
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Gun-Ho Jin, Ph.D., Assistant Professor of Accountancy
Gwendolyn Torranda, Ph.D., Assistant Professor of Accountancy
Carol F. Venable, Ph.D., Assistant Professor of Accountancy
Deborah S. Chamberlain, M.S., Lecturer in Accountancy
Mary A. Meigs, M.B.A., Lecturer in Accountancy
Kimberly A. Tarantino, M.S., Lecturer in Accountancy, North County

Master of Science Degree in Accountancy

General Information
The objective of the Master of Science degree program in Accountancy is to provide students with greater breadth and depth in accounting education than is possible in the area of specialization within the field of accounting. The program allows students to focus their accounting studies in an area of specialization and to gain a greater breadth in their one's accounting knowledge, the M.S. program provides three areas of specialization: selected courses which students take upon the recommendation of their advisor. Specialization research experience is intended to advance their careers in public accounting, private accounting or government.

Admission to the Degree Curriculum
In addition to meeting the requirements for classified graduate standing in the University and admission to the College of Business Administration, as described above, and in Part Two of this bulletin, the student must have satisfactorily completed the following courses or their equivalents before enrolling in 600- and 700-numbered courses listed on the official master's degree program.

Accountancy 201 Financial Accounting Fundamentals (3)
Accountancy 202 Managerial Accounting Fundamentals (3)
Accountancy 310 Intermediate Accounting I (4)
Accountancy 311 Intermediate Accounting II (4)
Accountancy 312 Managerial Cost Accounting Systems (4)
Accountancy 320 Accounting Information Systems (4)
Accountancy 410 Federal Income Tax I (4)
Economics 101 Principles of Economics (3)
Economics 102 Principles of Economics (3)
Economics 201 Statistical Methods I & II (3)
Mathematics 119 Elementary Statistics for Business (3)
Finance 140 Business Law (3)
Finance 323 Fundamentals of Finance (3)
Information and Decision Systems 180 Principles of Information Systems (3)
Information and Decision Systems 301 Statistical Analysis for Business (3)
Information and Decision Systems 302 Introduction to Production and Operations Management (3)
Management 350 Management and Organization (3)
Management 405 Business Strategy and Integration (3)
Mathematics 120 Calculus for Business Analysis (3)

Satisfactory completion means that the student's grade in each course must be "B" (3.0) or better, and that the course must have been completed within seven years prior to the first course completed on the master's degree program. In addition, the student's advisor may request satisfactory completion of additional prerequisite courses.

Notice of admission to a curriculum with classified graduate standing will be sent to the student by the Graduate Division Office only upon the recommendation of the College of Business Administration.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy, as described in Part Two of this bulletin.

Specific Requirements for the Master of Science Degree in Accountancy
(Major Code: 05021)

In addition to meeting the requirements for classified graduate standing as described above and the general requirements for masters' degrees as described in Part Two of this bulletin, the student must complete a graduate program of 30 approved units including at least 21 units in 600- and 700-numbered courses, of which at least 15 units must be in accounting courses at San Diego State University. The accounting courses must include at least 12 units in accounting courses numbered 635 and above. Under Plan A, Business Administration in accounting courses numbered 799A, Thesis, is required. Under the optional Plan B, a comprehensive examination and three units of additional coursework may be substituted for the thesis requirement.

In the graduate and undergraduate program the student must complete at least 30 semester units beyond principles of accounting in the accounting discipline.

Finance 516, Managerial Economics; Accountancy 534, Auditing; and Accountancy 518, Macro Accounting Issues, are required unless the students have completed the equivalent course(s) as a part of their undergraduate preparation.

The program must include at least 24 units in business administration and economics. Not more than a total of six units in courses 797, Research, and 798, Special Study, may be accepted for credit toward the degree.
The following specializations are available for the Master of Science degree in Accountancy:

Corporate Accounting
Professional Accounting
Taxation

For regulations concerning grade point average, 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 Two of this bulletin.

Courses Acceptable on Master's Degree Program in Accountancy

UPPER DIVISION COURSES

511. Federal Income Tax II (3) I, II
Prerequisite: Accountancy 410.
Taxation of corporations, partnerships, estates, and trusts. Gift and estate tax. (Formerly numbered Business Administration 411.)

512. Advanced Managerial Accounting (3) I, II
Prerequisite: Accountancy 312.
Use of accounting information systems for managerial decision making. Introduction to decision making situations which use accounting information for full or partial resolution. Consideration of uncertainty, decision theory and specific decision contexts. (Formerly numbered Business Administration 412.)

514. Advanced Accounting Problems (4)
Prerequisite: Credit or concurrent registration in Accountancy 311.
Problems involved in partnerships, consolidations, reorganizations, foreign trade, and other specialized areas. (Formerly numbered Accountancy 314 and 632.)

515. Accounting for Not-For-Profit Organizations (3) I, II
Prerequisite: Accountancy 310.
Principles of fund accounting useful in state and local governmental units, hospitals, study of budgetary accounting, appropriations, encumbrances, internal checks and auditing procedures. (Formerly numbered Business Administration 415.)

516. Macro Accounting Issues (4)
Prerequisites: Accountancy 311, 320, 410; concurrent registration in Accountancy 534. Prepared: Economic consequences of financial statements are financial reporting. Objectives and economic consequences of tax policy. Regulation of firms. (Formerly numbered Business Administration 416.)

534. Auditing (4)
Prerequisites: Accountancy 311, 320; Information and Decision Systems 301.
Accounting standards and practices; auditing the auditor; internal controls; audit procedures for verification of financial statements. (Formerly numbered Accountancy 414.)

596. Contemporary Topics in Accounting (1-3) I, II
Prerequisites: Consent of Instructor, upper division or graduate standing, accounting major.
Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses. Minimum combined credit of six units of 596 applicable to a master's degree.

GRADUATE COURSES

600. Financial Accounting (3)
Basic concepts and principles of financial accounting; accounting as a data processing system; measurement of business income; financial statements.

610. Managerial Accounting (3)
Prerequisite: Accountancy 600.
Accounting in relation to the decision-making process; various cost systems; relevancy of various cost concepts; direct costing, flexible budgets, distribution costing; break-even analysis; capital budgeting; and other techniques of management planning and control.

620. Financial Accounting Practice and Theory (4)
Prerequisite: Accountancy 600.
Theories, principles and concepts underlying financial statements. Income measurement and asset valuation; special problem areas in reporting of corporate assets, liabilities, and stockholders' equity. (Formerly numbered Accountancy 630.)

622. Managerial Accounting and Decision Making (4)
Prerequisite: Accountancy 600.
Preparation and use of accounting information to support and assist management in its major responsibilities internal to the firm: planning, controlling the firm's activities, and evaluating employees. Not open to students with credit in Accountancy 312 or 610.

629. Audit Systems (4)
Prerequisites: Accountancy 610 and 620.
Design and internal control perspectives of accounting information systems. Systems analysis, decision support systems, and implementation are investigated. Duties, responsibilities, and ethics of the auditor; auditor's reports and procedures for verification of financial statements.

633. Tax for Managers (4)
Prerequisite: Accountancy 600.
Application of federal income tax laws on selected management decisions (e.g., buy/lease decisions, sell/trade decisions, current and deferred compensation planning). Recognition of tax hazards and tax savings.

635. Seminar in Taxation Topics (3)
Prerequisite: Credit or concurrent registration in Accountancy 640.
Theoretical treatment of selected topics in taxation. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

636. Seminar in Corporate Tax (3)
Prerequisite: Credit or concurrent registration in Accountancy 640.
Corporate tax problems involving distributions, liquidations, reorganizations, reorganizations, personal holding companies, accumulated earnings tax, and thin capitalization.

637. Seminar in Accounting Information Systems (3)
Prerequisites: Accountancy 610 and Information and Decision Systems 612.
Design of accounting systems. Current trends as discussed in the literature. Computerized procedures for internal and external reporting.

638. Seminar in Professional Accounting (3)
Prerequisite: Accountancy 610.
Managerial cost accounting concepts and procedures, including budgetary planning, cost control, advisory functions, measurement of divisional profitability, product pricing, and investment decisions.

639. Seminar in Accounting Theory (3)
Prerequisite: Accountancy 514.
Historical development of accounting principles and theory; problems in valuation, income determination, and statement presentation.

640. Seminar in Tax Research and Planning (3)
Prerequisite: Credit or concurrent registration in Accountancy 511.
Tax research with emphasis on solving tax planning problems. Introduction to statutory, administrative, and judicial sources of tax law.

641. Seminar in International Accounting Standards (3)
Prerequisite: Accountancy 620.
Theories, practices, and concepts which underlie development of standards of financial reporting for enterprises engaged in international trade and business.

642. Seminar in Auditing (3)
Prerequisite: Accountancy 534.
Selected conceptual issues in auditing.
Seminar in Financial Reporting (3)
Prerequisite: Accountancy 620.
Current problems in financial reporting. Analysis of cases and recent and proposed official pronouncements.

Seminar in Federal Estate and Gift Tax (3)
Prerequisite: Credit or concurrent registration in Accountancy 640.
Estate and Gift Tax problems. Income Taxation of Trust and Estates.

Seminar in Tax Practice (3)
Prerequisite: Credit or concurrent registration in Accountancy 640.
Tax practice procedures as they affect the practitioners' dealing with the IRS; statute of limitations, ethical problems, penalties, interest, tax fraud.

Seminar in Partnership Taxation (3) I, II
Prerequisite: Credit or concurrent registration in Accountancy 640.
Partnership tax problems involving partnership formation, operations, distributions and liquidations.

Seminar in Compilation and Review Services (3)
Prerequisite: Accountancy 534.
Applications cases on engagements to compile or review financial statements of nonpublic entities under accounting and review services standards.

Financial Statement Analysis (3)
Prerequisite: Accountancy 600.
Illustrative cases and problems to analyze methods for communicating information about financing and operating activities of corporate firms, and techniques for evaluating the information.

Seminar in Selected Topics (3)
Intensive study in specific areas of accountancy. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree. (Formerly numbered Accountancy 795.)

Directed Readings in Accountancy (3) Cr/NC
Preparation for the comprehensive examination for those students in the M.B.A. program under Plan B. (Formerly numbered Business Administration 790.)

Research (3) Cr/NC/SP
Prequisite: Advancement to candidacy. Research in the area of accountancy. Maximum credit six units applicable to a master's degree. (Formerly numbered Business Administration 797.)

Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with department chair and instructor. Individual study. Maximum credit six units applicable to a master's degree.

Business Administration/Mathematics 445L
(619) 594-5323

Faculty
William H. Hippakka, Jur.D., Professor of Finance
Robert C. Hutchins, D.B.A., Professor of Finance (Graduate Adviser)
William A. Nye, Ph.D., Professor of Finance
William W. Reints, Ph.D., Professor of Finance (Graduate Adviser)
Mehdi Sajjadi, Ph.D., Professor of Finance
James L. Short, Ph.D., Professor of Finance (Graduate Adviser, Real Estate)
William E. Sterk, Ph.D., Professor of Finance, Chair of Department
Peter A. Vandenberg, D.B.A., Professor of Finance
Thomas M.D. Warchauer, D.B.A., Professor of Finance (Graduate Adviser, Financial and Tax Planning), Associate Dean for Academic Affairs, College of Business Administration
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John C. Bost, J.D., Associate Professor of Finance
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Linda C. Hittle, Ph.D., Assistant Professor of Finance
Arthur L. Houston Jr., Ph.D., Assistant Professor of Finance
Joan Lenowitz, Ph.D., Assistant Professor of Finance
Moon H. Song, Ph.D., Assistant Professor of Finance
Richard R. Weaver, D.B.A., Assistant Professor of Finance

Courses Acceptable on Master's Degree Programs in Business Administration

UPPER DIVISION COURSES
(Not Acceptable toward the Master of Business Administration Degree)

Life and Health Insurance (3) II
Prerequisite: Finance 542.
Economic and social aspects of life and health insurance; nature of life and health insurance and of annuities; theory of probabilities, premiums, reserves and nonforfeiture values; company rating; insurance problems and trends; personal and business risk management. Not open to students with credit in Finance 342 or 700.
589. **Personal Financial Planning (3)**
Prerequisites: Finance 327 and credit or concurrent registration in Accountancy 410.
(Formerly numbered Finance 389)

**GRADUATE COURSES**

604. **Law for Business Executives (3)**
Law pertaining to business, ethical, social and governmental influences on domestic and foreign law.

615. **Financial Principles and Policies (3)**
Prerequisite: Accountancy 600.
Finance and financial institutions as they relate to the firm and the flow of funds. Emphasis on the supply and demand for capital; principles and tools of business finance; money and capital markets.

616. **Managerial Economics (3)**
Prerequisite: Economics 603.
Role of economic theory in management analysis and decision. Study of demand, cost, and supply theories from a business viewpoint.

650. **Seminar in Business Finance (3)**
Prerequisite: Finance 615.
Application of principles of finance to current problems in financial management, with emphasis on planning and development of tools for use in decision making. Consideration of case materials, study of the literature, and development of individual student reports.

651. **Seminar in Investments (3)**
Prerequisite: Finance 615.
Examination of firms from an investment point of view; historical and current developments affecting investment values; sources of information; techniques of analysis; measurement of risks, returns, and investment values.

652. **Seminar in Security Analysis and Portfolio Management (3)**
Prerequisites: Finance 651 and Information and Decision Systems 609.

653. **Seminar in Quantitative Analysis for Financial Decisions (3)**
Prerequisites: Finance 650, Information and Decision Systems 609 and 612.
Quantitative techniques and the computer as employed to optimize financial decisions.

654. **Seminar in International Business Finance (3)**
Prerequisite: Finance 615.
International finance applied to the business firm.

655. **Seminar in Financial Markets (3)**
Prerequisite: Finance 615.
Analysis of money and capital markets. Emphasis on factors of influence and sources and uses of data. Survey of literature in the field.

656. **Seminar in Financial Institutions (3)**
Prerequisite: Finance 615.
Change in financial institution management thought. Trends in asset management theory and liability management theory. Current events in financial institutions, changes likely to occur and proposed changes in laws and regulations.

657. **Seminar in Financial Counseling (3)**
Prerequisites: Advancement to candidacy and Finance 651.
Financial needs of the individual. The decision-making process and theory relative to those needs. Planning and implementation of programs that will aid in growth, accumulation and distribution of family assets.

696. **Seminar in Selected Topics (3)**
Intensive study in specific areas of finance. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.
(Formerly numbered Finance 795)

705. **Seminar in Estate Planning (3)**
Prerequisite: Finance 615.
The scope and nature of estate planning. Identification and analysis of the environmental factors and those aspects of federal and state law affecting estate planning and taxation. Estate taxation and social policy.

780. **Seminar in Real Estate and Urban Development (3)**
Prerequisite: Finance 616 or Economics 603.
Real estate market functions and operations. Real estate finance and appraisal theories and approaches. Models of urban land use and urban development. Issues in real estate decision making.

783. **Seminar in Real Estate Finance and Investment (3)**
Prerequisite: Finance 760.
Theories and factors governing the financial functions of lenders, business and governmental agencies in real estate lending operations. Analysis of real estate investment by financial institutions, corporations, individuals and government.

784. **Seminar in Real Property Valuation (3)**
Prerequisite: Finance 780.

785. **Seminar in Urban Land Policy (3)**
Prerequisite: Finance 780 or City Planning 610 or Economics 758 or Geography 572.
Relationship between private and public roles in land use decisions. Current and future policy alternatives such as land use controls, urban growth policies and housing programs.

790. **Directed Readings in Finance (3) Cr/NC**
Prerequisite: Advancement to candidacy.
Preparation for the comprehensive examination for those students in the M.BA program under Plan B. (Formerly numbered Business Administration 790.)

797. **Research (3) Cr/NC/SP**
Prerequisite: Advancement to candidacy.
Research in the area of finance. Maximum credit six units applicable to a master's degree. (Formerly numbered Business Administration 797.)

798. **Special Study (1-3) Cr/NC/SP**
Prerequisite: Consent of staff; to be arranged with department chair and instructor. Individual study. Maximum credit six units applicable to a master's degree.
Information and Decision Systems

Business Administration/Mathematics 128
(619) 594-5316

Faculty
James R. Beatty, Ph.D., Professor of Information and Decision Systems
Milton M. Chen, Ph.D., Professor of Information and Decision Systems (Graduate Adviser)
Marie E. Flitney, Ph.D., Professor of Information and Decision Systems
Oliver Galbraith III, Ph.D., Professor of Information and Decision Systems
Richard A. Hatcher, Ph.D., Professor of Information and Decision Systems
James R. Lackritz, Ph.D., Professor of Information and Decision Systems, Chair of Department
John M. Penrose, Ph.D., Professor of Information and Decisions Systems
William R. Sherrard, Ph.D., Professor of Information and Decision Systems (Graduate Adviser)
Norman E. Sondak, D.Eng., Professor of Information and Decision Systems
Gretchen N. Vik, Ph.D., Professor of Information and Decision Systems
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Alexis Kostar, Ph.D., Associate Professor of Information and Decision Systems (Graduate Adviser)
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Robert J. Schlesinger, Ph.D., Associate Professor of Information and Decision Systems
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Annette E. Easton, Ph.D., Assistant Professor of Information and Decision Systems
George K. Easton, Ph.D., Assistant Professor of Information and Decision Systems
Ronald J. Norman, Ph.D., Assistant Professor of Information and Decision Systems
Yeong-Ling Yang, M.S., Assistant Professor of Information and Decision Systems

Courses Acceptable on Master's Degree Programs in Business Administration

GRADUATE COURSES
(Information and Decision Systems courses previously listed under the rubric of Information Systems)

602. Statistical Analysis for Business (3)
Measure of central tendency and variation, sampling and various statistical tests such as analysis of variance, F test, t test and chi square. Simple and multiple correlation. (Formerly numbered Management 602.)

609. Management Information Systems (3)
Role of information in organizational management. Typical management information subsystems. Design and management of management information systems. 

612. Production and Operations Management (3)
Prerequisite: Information and Decision Systems 602.
Scheduling operations to include master scheduling, material requirements planning, inventory management, capacity planning, production activity control, location analysis, quality control, project planning. (Formerly numbered Management 612.)

680. Information Systems Hardware and Software (3)
Prerequisite: Information and Decision Systems 609.
Computer architecture, programming languages, programming systems, and operating systems.

683. Program, Data, and File Structures (3)
Prerequisite: Information and Decision Systems 609.
Program structures and data structures commonly used in business processing. File organization and processing strategies. Improving storage and processing efficiencies.

684. Small Computer Systems for Business (3)
Prerequisite: Information and Decision Systems 609.
Features of small computer systems, microcomputers, minicomputers, peripheral devices, small systems. Programming languages, operating systems, and software packages for small systems.

686. Database Management Systems (3)
Prerequisite: Information and Decision Systems 609.
Applications of database management systems in business. Design and administration of database processing systems applications. (Formerly numbered Information Systems 681.)

687. Data Communications and Distributed Data Processing (3)
Prerequisite: Information and Decision Systems 660.
Applications of data communications hardware, software, and services in business data processing. Design and implementation of network applications and distributed processing systems.

688. Information Systems in Organizations (3)
Prerequisite: Information and Decision Systems 609.
Organizing and administering the information systems function. Information and its relationship to business decision making. Managing the computer center and information center. (Formerly numbered Information Systems 686.)

691. Decision Support Systems (3)
Prerequisite: Credit or concurrent registration in Information and Decision Systems 688.
Design, implementation, and integration of computerized support systems into business management. Problem representation, modeling, and simulation.

695. Information Analysis (3)
Prerequisite: Information and Decision Systems 609.
System development life cycle. Life cycle methodologies with emphasis on analysis of requirements using structured methodology and automated tools. Feasibility study, developmental strategies, needs management, and prototyping. (Formerly numbered Information Systems 682.)

696. Seminar in Selected Topics (3)
Intensive study in specific areas of information systems. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 696 and 696 applicable to a 30-unit master's degree. (Formerly numbered Information Systems 795.)

697. Systems Design (3)
Prerequisite: Information and Decision Systems 609.
Business information systems design, installation, and implementation as part of the systems development life cycle. Structured design, prototyping, controls, the make vs. buy decision, selection of hardware and software. (Formerly numbered Information Systems 689.)

700. Artificial Intelligence Applications for Business (3)
Prerequisite: Information and Decision Systems 609.

740. Seminar in Operations Research: Deterministic Systems (3)
Prerequisites: Information and Decision Systems 609 and 612.
Mathematical optimization techniques for deterministic systems. Advanced topics in linear programming: nonlinear, dynamic, and integer programming; selected examples of application. (Formerly numbered Management 740.)
Prerequisite: Information and Decision Systems 612.
Use of probability and statistical decision theory for decision making under conditions of uncertainty. Markov processes, queuing theory, and the theory of games. (Formerly numbered Management 741.)

742. Seminar in Computer Simulation for Business (3)
Prerequisites: Information and Decision Systems 609 and 612.
Computer simulation techniques for analysis of complex decision problems. Implementation of optimization algorithms through use of the digital computer. (Formerly numbered Management 742.)

744. Seminar in Quality and Productivity (3)
Prerequisite: Information and Decision Systems 602 or 612.
Application of quality control, just-in-time systems, and other operations research techniques to industrial problems. Comprehensive approach formulated by current techniques in field. Cases and examples from Japanese and American companies. (Formerly numbered Management 744.)

745. Business Forecasting (3)
Prerequisite: Information and Decision Systems 612.
Forecasting for the firm. Models for forecasting short term, intermediate and long term business horizons. (Formerly numbered Management 745.)

748. Seminar in Applied Multivariate Statistics for Business (3)
Prerequisite: Information and Decision Systems 602.
Applications of various multivariate techniques such as factor analysis, multiple regression, judgment analysis, hierarchical grouping, multiple discriminant analysis, multivariate analysis variance, canonical correlation. (Formerly numbered Management 748.)

749. Seminar in Applied Behavioral Measurement (3)
Prerequisite: Information and Decision Systems 602.
Measurement procedures useful in analyzing such areas as leadership, job satisfaction, attitudes, motivation, etc. Development and use of scaling strategies including Likert, Thurstone, Guttman, paired-comparison, forced-choice, semantic-differential, and review of existing instruments used in business-related settings. (Formerly numbered Management 749.)

750. Project Management (3)
Prerequisite: Information and Decision Systems 612.
Managing projects. Includes network modeling, defining activities and events, cost estimating and reporting, single and multiple resource allocation and leveling. Computerized project management software will be used. (Formerly numbered Management 750.)

751. Seminar in Scheduling Systems (3)
Prerequisite: Information and Decision Systems 612.
Scheduling systems. Capacity requirements management, production activity control, inventory control and project management. (Formerly numbered Management 751.)

752. Seminar in Materials Requirement Planning (3)
Prerequisite: Information and Decision Systems 612.
Product structure, master scheduling and materials requirement planning (MRP). (Formerly numbered Management 752.)

754. Seminar in Production and Operations Management (3)
Prerequisite: Information and Decision Systems 612.
Integration of manufacturing and operations functions through case studies, plant visits, and class projects. Computerized simulation package used to facilitate student understanding of production scheduling systems. (Formerly numbered Management 754.)

790. Directed Readings in Information and Decision Systems (3) Cr/NC
Prerequisite: Advancement to candidacy.
Preparation for the comprehensive examination for those students in the M.B.A. program under Plan B. (Formerly numbered Business Administration 790.)
Management

Business Administration/Mathematics 403A
(619) 594-5306

Faculty
Thomas J. Atchison, Ph.D., Professor of Management (Graduate Adviser)
James A. Belasco, Ph.D., Professor of Management
F. Neil Brady, Ph.D., Professor of Management (Graduate Adviser)
Jaisingh V. Gharpade, Ph.D., Professor of Management
David R. Hampton, Ph.D., Professor of Management
Daryl G. Metten, Ph.D., Professor of Management
Lynn H. Peters, Ph.D., Professor of Management
Stephen P. Robbins, Ph.D., Professor of Management
Israel Untermaier, D.B.A., Professor of Management
Mark C. Butler, Ph.D., Associate Professor of Management (Graduate Adviser)
Alex F. De Noble, Ph.D., Associate Professor of Management (Graduate Adviser)
Michael L. Hergert, Ph.D., Associate Professor of Management (Graduate Adviser)
Kenneth E. Mann, Ph.D., Associate Professor of Management
Penny L. Wright, Ph.D., Associate Professor of Management, Chair of Department
Lawrence C. Rhine, Ph.D., Associate Professor of Management
Sanford B. Ehrlich, Ph.D., Assistant Professor of Management
Karen L. Fowler, Ph.D., Assistant Professor of Management
Mary Jo Hatch, Ph.D., Assistant Professor of Management
Mary B. Teagarden, B.S., Assistant Professor of Management (Graduate Adviser)

Courses Acceptable on Master's Degree Programs in Business Administration

UPPER DIVISION COURSE

596. Advanced Topics in Management (3)
Prerequisite: Six upper division units in management.
Advanced special topics in management. See Class Schedule for specific content. Limit of nine units of any combination of 596, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

601. Management of Organizations (3)
Role of manager in organizations including strategic management of resources and environment. Implementation of strategy through organization design and process.

611. Organizational Behavior and Human Resources Management (3)
Theories, practice, and legal considerations of dealing with people in organizations. Analysis of organizational systems and managerial actions for accomplishing work through individuals and groups.

619. Organizational Research Methods (3)
Prerequisites: Information and Decision Systems 602, Management 601 and 611. Theoretical and applied presentation of research methods in management. Development of business setting applications.

670. Seminar in Personnel Planning and Staffing (3)
Prerequisites recommended: Management 601, 611 or equivalent course in the behavioral sciences and Information and Decision Systems 602. Theories and models of manpower planning; inventorying and forecasting of manpower needs and requirements; labor force analysis; recruitment; the staffing process; measurement tools and techniques.

671. Seminar in Regulation of Employment Relationship (3)
Prerequisites: Management 601 and 611. Study of industrial relations systems in varied organizational and cultural settings. Public policy and law governing the employment relationship in both union and non-union settings. Examples from worldwide industrial societies.

672. Seminar in Compensation (3)
Prerequisites recommended: Management 601 and 611 or equivalent course in the behavioral sciences, and Information and Decision Systems 602. The organizational process of compensating employees. Compensation theory from economics, psychology, and sociology. Compensation systems and their effects on organizations and individuals.

679. Seminar in Human Resource Management Strategies (3)
Prerequisites: Credit or concurrent registration in two of the following: Management 670, 671, and 672. Current issues in human resource management to include job design, staffing, training, evaluation, and compensation. Correlations among organizational strategies, environmental pressures, and human resource strategies and practices.

696. Seminar in Selected Topics (3)
Intensive study in specific areas of management. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

710. Seminar in World Business Environment (3)
Prerequisite: Economics 603. The nature, dimensions and motives of International Business. Impact of environmental factors. The nature of the multinational corporation, the importance of national and multilateral controls and policies for International Business management.

720. Seminar in Behavioral Sciences for Management (3)
Prerequisites: Management 601 and 611. Applications of findings from behavioral sciences to management problems and decisions. Study of organization cultures and subcultures. Impact of human behavior on the enterprise.

721. Seminar in Group Processes and Leadership (3)
Prerequisites: Management 601 and 611. Perceptions and processes in work groups. Experience in interpersonal networks, influence and rewards, stereotypes; managing differences and conflicts.

722. Seminar in Business Ethics and Social Institutions (3)
Prerequisites: Management 601 and 611. Ethical and social aspects of current issues in business and society. The changing role of the business enterprise in society.

723. Seminar in International Strategic Management (3)
Prerequisites: Management 601 and 611. Strategic decision making in international environments. General management problems in directing and controlling transnational companies, including entry, acquisitions and joint ventures. Cases and readings to acquaint students with worldwide business practices.

724. Seminar in the Entrepreneur (3)
Prerequisites: Management 601 and 611. Examination of the entrepreneurial approach: concepts, theory and techniques of managerial innovation and implementation; analysis of entrepreneurial skills.

725. Seminar in Industry Analysis and Competitive Strategy (3)
Prerequisites: Management 601, Finance 615 and 616, Marketing 605. Concepts and tools for studying the structure of industries and implications for strategy formulation. Competition in different market environments: high technology, global, mature, and declining.

726. Seminar in Policy Formulation (3)
Prerequisites: Advancement to candidacy and consent of instructor. Building and maintaining enterprises in our society; determining objectives; developing policies and plans for achievement; measuring and controlling organizational activities; reappraising objectives and policies on the basis of new developments.
727. Seminar in Organizational Change and Development (3)
Prerequisites: Management 601 and 611.
Process of developing human resources and organizations. Theories of organizational development; tools and techniques; analysis of manpower and organizational development programs. (Formerly numbered Management 673.)

728. Seminar in Business Planning (3)
Prerequisites: Management 601, Finance 615, Marketing 605, and advancement to candidacy.
Strategic decision making, long-range forecasting, and corporate planning with major emphasis on product-market relationships.

729. Seminar in Organizational Issues (3)
Prerequisites: Management 601 and 611.
Issues in organizations in modern society: organization design, environmental interface, and political processes.

790. Directed Readings in Management (3) Cr/NC
Prerequisite: Advancement to candidacy.
Preparation for the comprehensive examination for those students in the M.B.A. program under Plan B. (Formerly numbered Business Administration 790.)

797. Research (3) Cr/NC/SP
Prerequisite: Advancement to candidacy.
Research in the area of management. Maximum credit six units applicable to a master's degree. (Formerly numbered Business Administration 797.)

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master's degree.

Marketing

Business Administration/Mathematics 445P
(619) 594-5317

Faculty
William F. Barber, Ph.D., Professor of Marketing, Director of Graduate Programs, College of Business Administration
George E. Belch, Ph.D., Professor of Marketing, Chair of Department
Michael A. Belch, Ph.D., Professor of Marketing
Robert W. Haas, D.B.A., Professor of Marketing
Donald A. Lindgren, Ph.D., Professor of Marketing
Donald Sciglimpaglia, D.B.A., Professor of Marketing
Ronald W. Stampp, Ph.D., Professor of Marketing
Pradeep K. Tyagi, Ph.D., Professor of Marketing
Dino T. Vanier, Ph.D., Professor of Marketing
Thomas R. Wotruba, Ph.D., Professor of Marketing
Kathleen A. Krentler, D.B.A., Associate Professor of Marketing (Graduate Adviser)
L. Eugene Apple, Ph.D., Assistant Professor of Marketing (Graduate Adviser)
Rajesh Kanwar, Ph.D., Assistant Professor of Marketing
Linda Rochford, M.B.A., Assistant Professor of Marketing
Massoud M. Saghefi, Ph.D., Assistant Professor of Marketing
Theofanis G. Varvoglis, Ph.D., Assistant Professor of Marketing

Courses Acceptable on Master's Degree Programs in Business Administration

GRADUATE COURSES

605. Marketing (3)
The marketing activities of a firm in relation to management and society. Application of economic theory to marketing institutions and functions. Not open to students with credit in Marketing 370.

620. Research and Reporting (3)
Prerequisite: Information and Decision Systems 612.
Principles of research design and data accumulation. The analysis and effective presentation of data related to business and industry. (Formerly numbered Business Administration 622.)

696. Seminar in Selected Topics (3)
Intensive study in specific areas of marketing. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree. (Formerly numbered Marketing 795.)

760. Seminar in Consumer Behavior (3)
Prerequisite: Marketing 605.
The study of consumer behavior in relation to marketing strategy and the changing environment of business.

761. Seminar in New Products Marketing (3)
Prerequisite: Marketing 605.
The study of new products management in relation to planning and implementation of marketing strategy.

762. Seminar in Advertising Management (3)
Prerequisite: Marketing 605.
Advertising and sales promotion in relation to the planning and implementation of marketing strategy.

763. Seminar in Sales Management (3)
Prerequisite: Marketing 605.
Sales management and personal selling decisions and strategies in business organizations.
764. Seminar In Marketing Price Policy (3)
   Prerequisite: Marketing 605.
   Study of pricing strategy and price determination in business organizations.

765. Seminar In Marketing Channels and Physical Distribution (3)
   Prerequisite: Marketing 605.
   Analysis of marketing channels and physical distribution systems in domestic and international trade.

766. Seminar In Market Analysis and Research (3)
   Prerequisites: Information and Decision Systems 612 and Marketing 605.
   Application of statistical and mathematical methods to market problems, consumer research, and product analysis.

767. Seminar In Industrial Market Analysis (3)
   Prerequisite: Marketing 605.
   The management of marketing decisions and strategies peculiar to the industrial market.

768. Seminar In Industrial and Government Procurement Management (3)
   Prerequisites: Management 601 and Marketing 605.
   Procurement methods used in industry and government; internal departmental operations, interrelationships with other departments; supplier selection, pricing/cost analysis; contract negotiations, special characteristics of government procurement.

769. Seminar In International Marketing (3)
   Prerequisite: Marketing 605.
   The impact of cultural, social, political, economic, and other environmental variables on international marketing systems and the decision-making process of multinational marketing operations.

770. Advanced Marketing Strategy (3)
   Prerequisites: Marketing 605 and advancement to candidacy.
   Development, implementation and evaluation of marketing strategy and planning. Role of marketing planning in overall corporate strategic planning process. Use of contemporary techniques and models in strategic planning process.

771. Directed Readings In Marketing (3) Cr/NC
   Prerequisite: Advancement to candidacy.
   Preparation for the comprehensive examination for those students in the M.B.A. program under Plan B. (Formerly numbered Business Administration 790.)

772. Research (3) Cr/NC/SP
   Prerequisite: Advancement to candidacy.
   Research in the area of marketing. Maximum credit six units applicable to a master's degree. (Formerly numbered Business Administration 797.)

773. Special Study (1-3) Cr/NC/SP
   Prerequisite: Consent of staff; to be arranged with department chair and instructor.
   Individual study. Maximum credit six units applicable to a master's degree.

Chemistry

Chemistry/Geology 305, (619) 594-5595

Faculty
Mitchel T. Abbott, Ph.D., Professor of Chemistry
Larry E. Bennett, Ph.D., Professor of Chemistry
James W. Cobble, Ph.D., Professor of Chemistry, Dean of the Graduate Division and Research

Dewitt Coffey Jr., Ph.D., Professor of Chemistry
A. Stephen Dahms, Ph.D., Professor of Chemistry
Edward J. Grubbs, Ph.D., Professor of Chemistry
Lars H. Helberg, Ph.D., Professor of Chemistry
Reilly C. Jensen, Ph.D., Professor of Chemistry
Walter D. Jones, Ph.D., Professor of Chemistry
Vincent J. Landis, Ph.D., Professor of Chemistry
Richard J. Laub, Ph.D., Professor of Chemistry
Herbert G. Lebherz, Ph.D., Professor of Chemistry
Jim G. Malik, Ph.D., Professor of Chemistry
Michael M. Malley, Ph.D., Professor of Chemistry
James H. Mathewson, Ph.D., Professor of Chemistry
H. Edward O'Neal, Ph.D., Professor of Chemistry (Graduate Adviser)
William H. Richardson, Ph.D., Professor of Chemistry
Morey A. Ring, Ph.D., Professor of Chemistry, Chair of Department
Stephen B. W. Roeder, Ph.D., Professor of Physics and Chemistry
Clay M. Sharts, Ph.D., Professor of Chemistry
Charles J. Stewart, Ph.D., Professor of Chemistry
William E. Stumpf, Ph.D., Professor of Chemistry
Earl P. Wadsworth Jr., Ph.D., Professor of Chemistry
John H. Woodson, Ph.D., Professor of Chemistry
Dale A. Chatfield, Ph.D., Associate Professor of Chemistry
Thomas E. Cole, Ph.D., Associate Professor of Chemistry
William G. Tong, Ph.D., Associate Professor of Chemistry

Assistants
Graduate teaching assistantships and graduate nonteaching assistantships in chemistry are available to a limited number of qualified students. Application blanks and additional information may be secured from the Graduate Adviser in the Department of Chemistry.

General Information
The department provides a substantial inventory of modern chemical instrumentation for support of the many active research programs. Included are systems for the performance of nearly all major types of chemical separations: moderate- and high-resolution GC-mass spectrometric systems; 90, 100 (FT) and 200 (FT) MHz nuclear magnetic resonance spectrometers; CW and FT infrared spectrometers; ultraviolet-visible spectrophotometric instruments for both atomic and molecular emission and absorption studies; electrochemical instrumentation for potentialometric, voltametric and coulometric measurements; radiocadiochemical instrumentation; laser systems for spectroscopy and a variety of microcomputers.

Section I. Master's Degree Programs

Admission to Graduate Study
All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. In addition, classified standing may be subject to satisfactory performance on orientation examinations which are administered by the Department of Chemistry. The student with a major in chemistry from another accredited institution should have met all requirements for certification of the baccalaureate degree by the American Chemical Society (statement available on request).
Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as stated in Part Two of this bulletin. In addition, the student must pass orientation examinations in chemistry. These examinations should be taken during the first semester in residence.

Specific Requirements for the Master of Arts Degree

(Major Code: 19051)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of 30 units which includes a major consisting of at least 24 units in chemistry from courses listed below as acceptable on master's degree programs. At least 15 of these units must be in 600- and 700-numbered courses, excluding Chemistry 792, 797 and 798. Chemistry 711 and 791 are required. Subject to departmental approval, the student may elect Plan A with the thesis (in which case the program must include Chemistry 792 and 799A), or Plan B with the written comprehensive examination in lieu of the thesis. A student electing Plan A must pass a final oral examination on his/her thesis.

Specific Requirements for the Master of Science Degree

(Major Code: 19051)

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 Two of this bulletin. The student must also complete a graduate program of 30 units which includes a major consisting of at least 24 units in chemistry from courses listed below as acceptable on master's degree programs. At least 15 of these units must be in 600- and 700-numbered courses, excluding Chemistry 792, 797 and 798. Chemistry 711*, 791, 792 and 799A are required. A student must pass a final oral examination on her/his thesis.

* Chemistry 762 may be substituted for Chemistry 711, with approval of the graduate adviser, by students whose thesis projects is in the area of biochemistry.

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 the student 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 integral calculus. Students should be prepared to take placement examinations which will be administered by a joint committee and will cover the fields of inorganic, organic and physical chemistry.

On admission to the program, the student is guided by Requirements for the Doctoral Degree Program given in Part Two of this bulletin. The student will normally spend his/her first year in the program completing his/her year of residency at the University of California. San Diego. It is desirable for the student to complete his/her qualifying examination by the end of his/her fifth semester and to be advanced to candidacy.

Staff

The following faculty members of the Departments of Chemistry of the cooperating institutions participate in the joint doctoral program, being available for direction of research and as departmental members of Joint Doctoral Committees.

University of California, San Diego:

Graduate Adviser: R. Paine
Committee Members: Allison, Perrin, Trappier, Weare

San Diego State University:

Graduate Adviser: H. E. O'Neal; Alternate: C. J. Stewart
Committee Members: Abbott, Bennett, Christfield, Cobble, Coffey, Dahms, Grubbs, Hellberg, Jensen, Jones, Laub, Leberner, Melley, O'Neal, Richardson, Ring, Roeder, Sharts, Stewart, Stumph, Tong

Courses Acceptable on Master's and Doctoral Degree Programs in Chemistry

UPPER DIVISION COURSES

500A-500B. Principles of Chemical Engineering (3-3)
(Same course as Mechanical Engineering 584A-584B.)
Prerequisites: Credit or concurrent registration in Mechanical Engineering 350 or Chemistry 410A.
Industrial stoichiometry; fluid flow and heat transfer as applied to unit operations such as evaporation, distillation, extraction, filtration, gas-phase mass transfer, drying, and others. Problems, reports, and field trips.

501. Chemical Oceanography (3)
Three lectures and occasional field trips.
Prerequisites: Chemistry 201 and 231. Strongly recommended: Chemistry 250 or 251.
Recommended: Chemistry 410B and Oceanography 320 or 541.
The application of the fundamentals of chemistry to the study of oceans.

510. Advanced Physical Chemistry (3)
Prerequisite: Chemistry 410B.
Mathematical tools essential to solving problems in chemical thermodynamics, statistical mechanics, chemical kinetics, quantum chemistry and molecular structure and spectroscopy, with applications.

520A. Inorganic Chemistry (3)
Prerequisite: Credit or concurrent registration in Chemistry 410B.
The physical basis of the periodic system, complex inorganic compounds; and the nature of the chemical bond.

520B. Inorganic Chemistry (3) II
Prerequisite: Chemistry 520A. An advanced systematic study of representative and transition elements and their compounds.

530. Theoretical Organic Chemistry (3)
Prerequisites: Chemistry 410A and 431. Recommended: Credit or concurrent registration in Chemistry 410B.
Electronic and physical properties of organic molecules; structure-reactivity correlations: Electronic and physical structure of molecules (qualitative molecular orbital theory); stereochemistry; and linear free energy relationships.

537. Organic Qualitative Analysis (4)
Two lectures and six hours of laboratory.
Prerequisites: Chemistry 431 and credit or concurrent registration in Chemistry 417.
Chemistry 417 and 457 recommended.
Chemical, physical, and spectral methods discussed and employed to determine structure of organic compounds. Purification and separation techniques stressed.

550. Instrumental Methods of Chemical Analysis (2)
Prerequisites: Chemistry 431 and credit or concurrent registration in Chemistry 410B;
Theory and application of those instrumental methods of chemical separation and analysis most frequently used in all subdisciplines of chemistry.

551. Advanced Analytical Chemistry (3) II
Prerequisite: Chemistry 550.
560A-560B. General Biochemistry (3-3)
Prerequisites: Chemistry 431 and credit or concurrent registration in Chemistry 410A.
The structure, function, metabolism, and thermodynamic relationships of chemical entities in living systems. Not open to students with credit in Chemistry 361A-361B.

561. Physical Biochemistry (3)
Prerequisites: Chemistry 201, 431, 361B or 560B; Physics 182B.
Fundamental principles of physical chemistry, including thermodynamics and kinetics as applied to the field of biochemistry. Not open to students with credit in Chemistry 410A-410B.

567. Biochemistry Laboratory (2)
Six hours of laboratory. Prerequisite: Credit or concurrent registration in Chemistry 361A or 560A.
Theory and practice of procedures used in study of life at molecular level. Includes purification and characterization of enzymes, isolation of cell components, and use of radioactive tracer techniques.

596. Advanced Special Topics in Chemistry (1-3)
Prerequisite: Consent of instructor.
Advanced selected topics in modern chemistry. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

710. Advanced Topics in Physical Chemistry (1-3)
Prerequisite: Chemistry 410B.
Selected topics in physical chemistry. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

711. Chemical Thermodynamics (3)
Prerequisite: Chemistry 410B.
Chemical thermodynamics and an introduction to statistical thermodynamics.

712. Chemical Kinetics (3)
Prerequisite: Chemistry 410B.
Theory of rate processes; applications of kinetics to the study of reaction mechanisms.

713. Quantum Chemistry (3)
Prerequisite: Chemistry 410B.
Quantum mechanics of atomic and molecular systems; applications to chemical bonding theory.

721. Mechanisms of Inorganic Reactions (3)
Prerequisite: Chemistry 520A.
Mechanisms in inorganic reactions with an emphasis on coordination chemistry.

722. Chemistry of the Nonmetals (3)
Prerequisite: Chemistry 520A.
An advanced systematic study of the nonmetallic elements and their compounds.

730. Advanced Topics in Organic Chemistry (1-3)
Prerequisite: Chemistry 431.
Selected topics in organic chemistry. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

731. Mechanisms of Organic Reaction (3)
Prerequisites: Chemistry 410B and 431. Recommended: Chemistry 530.
Reactivity and mechanism in organic reactions.

732. Advanced Organic Chemistry (3)
Prerequisite: Chemistry 431.
Applications and limitations of organic reactions from the viewpoint of synthesis.

750. Advanced Topics in Analytical Chemistry (1-3)
Prerequisite: Chemistry 550.
Selected topics from the field of analytical chemistry. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

751. Separations Science (3)
Prerequisites: Chemistry 550 and 711.
Theoretical bases for separation techniques important in analytical chemistry—Chemical and physical interactions between components of different classes of separation systems, including selection and optimization of operational parameters.

753. Analytical Spectroscopy (3)
Prerequisite: Chemistry 550.

760. Advanced Topics in Biochemistry (1-3)
Prerequisite: Chemistry 560B.
Selected topics in biochemistry. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

762. Enzymology (2)
Prerequisite: Credit or concurrent registration in Chemistry 410B.
Theory and techniques used in the study of the mechanism of action of enzymes.

763. Cellular Regulation (2)
Prerequisites: Chemistry 361A-361B or 560A-560B.
The biochemistry of cellular regulatory mechanisms in eukaryotic cells. The regulation of gene transcription, in mRNA translation and post-translational processes, including the mechanism and regulation of intracellular protein turnover.

764. Membrane Biochemistry (3)
Prerequisites: Chemistry 361A-361B or 560A-560B.
Membrane structure and function. Biophysical and biochemical properties of membranes from procaryotic and eucaryotic cells and animal cell viruses; biosynthesis and assembly of membrane components; molecular basis of solute transport, energy coupling, cell surface transformation, and cellular recognition, adhesion and fusion.

790. Seminar (1-3)
An intensive study in advanced chemistry. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

791. Research Seminar (1)
Prerequisite: Consent of department chair.
Discussions on current research by students, faculty, and visiting scientists. Each student will make a presentation based on the current literature.

792. Bibliography (1)
Exercises in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

797. Research (1-3) Cr/NC/SP
Prerequisite: Consent of instructor.
Research in one of the fields of chemistry. Maximum credit six units applicable to a master's degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master's degree.

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

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

Faculty

Elizabeth J. Allen, Ph.D., Professor of Communicative Disorders
Eric M. Muller, Ph.D., Professor of Communicative Disorders
Alan C. Nichols, Ph.D., Professor of Communicative Disorders
Richard M. Riedman, Ph.D., Professor of Communicative Disorders
Michael R. Seitz, Ph.D., Professor of Communicative Disorders, Graduate Coordinator
and Adviser
Edmund L. Thiele, Ph.D., Professor of Communicative Disorders
Li-Rong Cheng, Ph.D., Associate Professor of Communicative Disorders, Assistant Dean for Student Affairs, College of Health and Human Services
Kathleen Christensen, Ph.D., Associate Professor of Communicative Disorders
Barry W. Jones, Ph.D., Associate Professor of Communicative Disorders, Chair of Department
Steven J. Kramer, Ph.D., Associate Professor of Communicative Disorders
Robert E. Novak, Ph.D., Associate Professor of Communicative Disorders
Darlene G. Davies, Ed.S., Assistant Professor of Communicative Disorders
R. N. Hamilton, M.A., Assistant Professor of Communicative Disorders
Diane R. Williams, M.A., Assistant Professor of Communicative Disorders

General Information

The Department of Communicative Disorders, in the College of Health and Human Services, offers graduate study leading to the Master of Arts degree in Communicative Disorders, and to the credentials described below. The master's degree program is accredited by the Educational Standards Board of the American Speech-Language-Hearing Association; the clinical services are accredited by Professional Services Board of the American Speech-Language-Hearing Association, and the training program for teachers of the hearing impaired is accredited by the Council on Education of the Deaf. The department offers advanced study in speech and hearing science, speech-language pathology, audiology, and education of the hearing impaired (deaf). The programs utilize the facilities of the Communications Clinic and the Clinical Training Center. Observation, diagnostic and therapeutic experiences with outpatient children and adults are available. Field experience is offered in the public schools and community agencies. Practicum and observation experiences are possible at various hospitals, schools, community agencies, convalescent homes, and rehabilitation agencies.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin. Candidates for admission to classified graduate standing, including credential candidates are reviewed by the faculty as a whole, and by a faculty committee from one of the three areas of the department: speech-language pathology, audiology, and education of the hearing impaired (deaf). To initiate this review, a candidate for admission indicates which of these programs he or she intends to enter. The criteria for admission that guide the review committee are as follows:

1. In considering the candidate's statement of purpose, content, style and clarity of presentation are primary points.
2. Three letters of recommendation from appropriate persons who can and do attest to the candidate's high potential for graduate study are required by the reviewing faculty.
3. A grade point average of 3.00 overall or 3.50 during the last 60 units of college or university study will be necessary for consideration for admission.
4. A GRE General Test score of 550 (total) is a criterion for admission. Candidates with high grade point averages, 3.50 or above, may be admitted conditionally if the 550 criterion is not met. In such cases, the condition of admission is that the candidate take and pass the GRE with a total score of 550 or above during the first semester of residence in the department. Continuation in the program may be contingent upon fulfilling this condition.
In cases where these criteria are not met, exceptional strength in one area may balance a deficit in another area. Such candidates may be admitted conditionally, subject to faculty review at the end of the first semester of residence.

A postbaccalaureate level credential candidate must be reviewed for classified or conditionally classified postbaccalaureate standing prior to enrollment in clinical practicum. The following courses are controlled for this purpose: Communicative Disorders 526, 545, 546, 556.

All transfer students planning a program to include clinical practice must enroll in the appropriate practicum as specified for their field of interest (Communicative Disorders 357, 518, 526, 545, 546, 556) prior to enrollment in graduate practice.

**Advancement to Candidacy**

All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. In addition, students seeking the Master of Arts degree in Communicative Disorders are required to have completed Communicative Disorders 600.

**Specific Requirements for the Master of Arts Degree**

(Major Code: 12201)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units. A student must complete Communicative Disorders 799A, Thesis for Plan A. If Plan B is elected, the student must complete a research project as approved by the department; complete two units of Communicative Disorders 797, Research; and pass a written comprehensive examination (which may be repeated only once).

Students enrolled in Communicative Disorders 797 or 799A must participate in the Department's Professional Development Seminar unless excused by the Coordinator of the Graduate Program. No more than six units of coursework outside the Department acceptable on the graduate level may be applied to the master's degree.

The Department of Communicative Disorders offers four concentrations leading to the Master of Arts degree. Each concentration requires completion of a specific pattern of graduate units described below.

A. **Concentration in Speech-Language Pathology**

This concentration has a clinical focus and may be used to satisfy some of the academic preparation for the Certificate of Clinical Competence in Speech-Language Pathology from the American Speech-Language-Hearing Association and for licensure from the State of California.

**Undergraduate Preparation.** Communicative Disorders 106, 205, 320, 321, 322, 340.

**Graduate Program.** Required courses (20-21 units) to include: Communicative Disorders 799A-3 units or Plan B (Communicative Disorders 797-2 units and 798-1 unit).

Electives (9-10 units) selected from Communicative Disorders 500, 600 and 700 level courses. Clinic practice, i.e., 518, 519, 526, 528, 566, 568 and 646 are not part of the 30 units.

Students electing to pursue the Certificate of Clinical Competence should complete in addition to the required courses listed above: Communicative Disorders 602 (adult).

B. **Concentration in Audiology**

This concentration has a clinical focus and may be used to satisfy some of the academic preparation for the Certificate of Clinical Competence in Audiology from the American Speech-Language-Hearing Association and for licensure from the State of California.


Electives (9-10 units) selected from Communicative Disorders 500, 600 and 700 level courses. Clinic practice, i.e., 518, 519, 526, 528, 566, 568 and 646 are not part of the 30 units.

Students electing to pursue the Certificate of Clinical Competence should complete in addition to the required courses listed above: Communicative Disorders 602.

C. **Concentration in Communication Sciences**

This concentration has a research and theoretical focus in the area of communicative disorders. Students interested in study with a research environment requiring a strong scientific foundation may avail themselves of this concentration.

**Undergraduate Preparation.** Communicative Disorders 106, 205, 320, 321, 340, 340L, 512, 539, 547; Physics 201; Psychology 260, 270.

**Graduate Program.** Required courses (15 units minimum) to include: Communicative Disorders 600, 654, 657, 658, 659 and Plan A (799A-3 units), or Plan B (797-2 units and 798-1 unit).

Electives (15 units) selected from 500, 600 and 700 level courses selected with consent of the student's adviser. Minimum of nine units of electives must be selected from Communicative Disorders courses. Maximum of three units of Communicative Disorder 556 may be chosen.

Competency in communication with the hearing impaired must be demonstrated, including oral and manual modes and combinations thereof.

D. **Concentration in Communicative Sciences**

This concentration has research and theoretical focus in the area of communicative disorders. Students interested in study with a research environment requiring a strong scientific foundation may avail themselves of this concentration.

**Undergraduate Preparation.** Communicative Disorders 500, 600, 601, 604, 654, Plan A (Communicative Disorders 799A-3 units) or Plan B (Communicative Disorders 797-2 units and 798-1 unit).

Electives (15 units) selected from 500, 600 and 700 level courses with consent of the student's adviser. Recommended options include Communicative Disorders 543, 602, 603, 604, 605, 606, 607, 644, 649, 657, 798; six units from 500, 600 and 700 numbered courses from psychology, physics, linguistics, or other departments may be selected with the approval of the department's graduate committee.

**Credentials**

The Department of Communicative Disorders offers academic and practice coursework applicable to two credentials in the Ryan Credential Program. Students desiring to work in the public schools with speech, language, or hearing impaired pupils must choose the Special Education Specialist Credential for the Communication Handicapped (CH) or the Clinical-Rehabilitative Services Credential (C-RS). Each credential is competency based, that is, specified competencies have been identified as requirements for areas of specialization by the Commission for Teacher Credentialing. Candidates may satisfy institution requirements, therefore, by either satisfactory completion of required courses or their equivalency, or by demonstrating equivalent competencies by experience or examination. Candidates may enter the CH or C-RS credential programs at undergraduate or graduate levels.

Each credential has designated areas of specialization. Students wishing to prepare to be Teachers of the Deaf or Deaf-Blind are obliged to meet the requirements for the CH credential. Students preparing to serve as School Audiologists must follow the C-RS credential program.

**Special Education Specialist Credential for the Communication Handicapped**

(Credential Code: 00461)

The Special Education Specialist Credential for the Communication Handicapped prepares students for an emphasis in one or more of the following areas of handicap: Deaf and Severely Hard of Hearing, Deaf-Blind.
Admission Requirements
1. Formal application to the Department of Communicative Disorders.
2. Interview with a faculty member in the Department of Communicative Disorders.
3. Admission to the program for the Single Subject Credential (Secondary) or Multiple Subjects Credential (Elementary).

A basic teaching credential is required by the College of Education for specific requirements.

Communicative Disorders

Program

Persons interested in the Special Education Specialist Credential shall:

1. Concurrently or prior to completion of the specialist credential, complete the single subject credential (preliminary or clear) or the multiple subjects credential (preliminary or clear).
2. Pursue a departmental major; complete specified prerequisites for the College of Education professional education sequence.
3. Complete a minimum of one year of study, including:
   a. The Special Education generic coursework, Special Education 500, 501.
   b. Courses outside of the Department of Communicative Disorders, including:
      (a) Psychology 101, 260, Physics 201.
      (b) Other courses selected by the student in conjunction with an adviser.

Certificates and Licensure

Preparation Leading to the Certificate of Clinical Competence from the American Speech-Language Hearing Association

Students may complete the academic and clinical practice requirements leading to the Certificate of Clinical Competence in Language, Speech and Hearing (LSH) in conjunction with the Single Subject Credential (Secondary) or Multiple Subjects Credential (Elementary) in the following areas:

Severe Oral Language (inidudng aphasia) (Special Class Authorization) (SCA) Credential.

Clinical- Rehabilitative Services Credential

(Credential Code: 00900)

Clinical- Rehabilitative Services (C-RS) Credentials are available in the following areas:

- Language, Speech and Hearing (LSH)
- Audiology
- Severe Language Handicapped/Aphasic (SLH) (Special Class Authorization) (SCA)

A postbaccalaureate year (minimum of 30 semester units which may include courses applicable toward the master's degree if approved by the candidate's adviser) is required of all candidates. The following generic courses in Communicative Disorders are required:

101: Psychology 260 or Biology 150; Family Studies and Consumer Sciences 271 or 576; Physics 201; and Special Education 500 and 596.

The Advanced Specialization Program in Language, Speech and Hearing (LSH) requires the following additional courses:

- Communicative Disorders 422, 433, 501, 512, 513, 518, 519, 529, 546, 554, and 626. Courses from other departments include Linguistics 553.

The Severe Language Handicapped (SLH) credential requires the following courses within the department in addition to those required for the LSH credential: Communicative Disorders 529, 555, and 433 (SLH class placement). Courses in other departments include Teacher Education 410A, 430A, 431, 637, 639A, Special Education 501.

In addition to the generic program, the Advanced Specialization Program in Audiology requires the following courses within the Department of Communicative Disorders:

Communicative Disorders 358, 433 (Audiology class placement), 512, 513, 529, 542, 542L, 543, 545, 547, 550, 600*, 644, 649 (Pediatrics), 656* and 657.

* Consent of instructor.
+ See Department Credential Coordinator for options.

Clinical- Rehabilitative Services Credential

(Credential Code: 00900)

Clinical- Rehabilitative Services (C-RS) Credentials are available in the following areas:

- Language, Speech and Hearing (LSH)
- Audiology
- Severe Language Handicapped/Aphasic (SLH) (Special Class Authorization) (SCA)

A postbaccalaureate year (minimum of 30 semester units which may include courses applicable toward the master's degree if approved by the candidate's adviser) is required of all candidates. The following generic courses in Communicative Disorders are required:

101: Psychology 260 or Biology 150; Family Studies and Consumer Sciences 271 or 576; Physics 201; and Special Education 500 and 596.

The Advanced Specialization Program in Language, Speech and Hearing (LSH) requires the following additional courses:

- Communicative Disorders 422, 433, 501, 512, 513, 518, 519, 529, 546, 554, and 626. Courses from other departments include Linguistics 553.

The Severe Language Handicapped (SLH) credential requires the following courses within the department in addition to those required for the LSH credential: Communicative Disorders 529, 555, and 433 (SLH class placement). Courses in other departments include Teacher Education 410A, 430A, 431, 637, 639A, Special Education 501.

In addition to the generic program, the Advanced Specialization Program in Audiology requires the following courses within the Department of Communicative Disorders:

Communicative Disorders 358, 433 (Audiology class placement), 512, 513, 529, 542, 542L, 543, 545, 547, 550, 600*, 644, 649 (Pediatrics), 656* and 657.

* Consent of instructor.
+ See Department Credential Coordinator for options.

Liability Insurance

Students enrolled in Communicative Disorders 340L, 341, 343, 526, 545, 546, 556, 626, 645, 646, 656 are required to purchase professional liability insurance.
### Courses Acceptable on Master's Degree Programs in Speech Pathology and Audiology

**UPPER DIVISION COURSES**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>500. Language Structure (3)</td>
<td></td>
<td></td>
<td>Communicative Disorders 106 and 320</td>
<td>Systematic study of the design features of language as they relate to communication behavior. The primary focus is the role of language structure in disordered communication. (Formerly numbered Communicative Disorders 531.)</td>
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<tr>
<td>501. Voice Disorders: Children (3)</td>
<td></td>
<td>Two lectures and three hours of laboratory.</td>
<td>Communicative Disorders 321</td>
<td>Theory and practice in the remediation of voice disorders. Laboratory involves measurements of vocal dimensions and perceptual training for diagnosis and remediation of voice disorders. (Formerly numbered Communicative Disorders 401.)</td>
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<tr>
<td>511. Speech Reading and Auditory Training (3)</td>
<td></td>
<td>Prerequisites: Communicative Disorders 320 and 340; competency examination. Recommended: Communicative Disorders 357, 500 and 513</td>
<td>Theory and methods of speech reading; auditory rehabilitation methods including survey of amplification systems. (Formerly numbered Communicative Disorders 551.)</td>
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<tr>
<td>512. Articulation Disorders and Methods (3)</td>
<td></td>
<td>Prerequisites: Communicative Disorders 320, 321, 340, 500</td>
<td>Significant theories and research in prevention and remediation of articulatory disorders. Includes emphasis on speech habilitation of hearing impaired, cognitive and motor processing. (Formerly numbered Communicative Disorders 552.)</td>
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<tr>
<td>513. Language Disorders and Methods (3)</td>
<td></td>
<td>Prerequisites: Communicative Disorders 320, 321, 340, 500</td>
<td>Theories and research in language acquisition and language disorders. Assessment of, and intervention with, language impaired children, including hearing impaired individuals. (Formerly numbered Communicative Disorders 553.)</td>
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<tr>
<td>517. Diagnostic Methods in Speech-Language Pathology (3)</td>
<td></td>
<td>Prerequisites: Grade of C or better in Communicative Disorders 423, 512, 513. Credit or concurrent registration in Communicative Disorders 524.</td>
<td>Includes case histories, testing, materials, interviewing, clinical reporting and practice with selected assessment tools. Twelve hours of observation of diagnostic practicum required. (Formerly numbered Communicative Disorders 527.)</td>
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<tr>
<td>518. Diagnostic Practicum in Speech-Language Pathology (1)</td>
<td></td>
<td>Six hours of supervision.</td>
<td>Prerequisites: Grade of C or better in Communicative Disorders 517 and 526. Supervised clinical practice in diagnostic methods. (Formerly numbered Communicative Disorders 528.)</td>
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<tr>
<td>519. Diagnostic Practicum in Communicative Disorders: Multidisciplinary Assessment (1)</td>
<td></td>
<td>Prerequisites: Grade of C or better in Communicative Disorders 517; credit or concurrent registration in Communicative Disorders 526.</td>
<td>Participation in central intake process of SDSU Interdisciplinary Center for Health and Communicative Disorders.</td>
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<tr>
<td>524. Clinical Procedures in Communicative Disorders (2)</td>
<td></td>
<td>Prerequisites: Grade of C or better in Communicative Disorders 322, 423, 512, 513; credit or concurrent registration in Communicative Disorders 517.</td>
<td>Remediation models and laboratory. Laboratory experience in administering audiometric test batteries and in calibrating acoustical hearing aid analyses (2 units). Students may elect Module I (1 unit) or Modules I and II (3 units).</td>
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<tr>
<td>525. Clinical Practice in Speech-Language Pathology (1)</td>
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<td>Prerequisites: Consent of department, Communicative Disorders 110, and grade of C or better in Communicative Disorders 512, 513, 517, and 524.</td>
<td>Supervised practice with representative speech and language problems. Up to three units may be taken concurrently; maximum credit three units. One unit represents 26 hours of direct clinical practice. Transfer students must enroll in at least one unit of 525 prior to 526.</td>
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<tr>
<td>529. Orientation to Public School Practicum (1)</td>
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<td>Prerequisites: Communicative Disorders 517 and 524. Minimum of 100 hours of supervised clinical practicum, and departmental approval. Concurrent registration in Communicative Disorders 433 or 453.</td>
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<tr>
<td>530. Family Communication Dynamics (3)</td>
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<td>Prerequisites: Communicative Disorders 322 and 526. The communication environment in the home and family, including family dynamics and systems.</td>
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<tr>
<td>533. Neuropathologies of Speech, Hearing and Language (3)</td>
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<td>Prerequisites: Communicative Disorders 321 and 340. Recommended: Communicative Disorders 423. Research and theory concerning the nature, etiologies and principles of treatment of disorders of speech, hearing and language resulting from pathologies of the nervous system.</td>
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<tr>
<td>540. Hearing Conservation and Audiology for School Nurses (3)</td>
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<td>Prerequisites: Registered nurse. Builds on registered nurse's knowledge of anatomy, physiology, and medical-surgical care of the hearing impaired.</td>
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<tr>
<td>542. Audiology: Application (3)</td>
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<td>Prerequisites: Communicative Disorders 340L and concurrent registration in 542L. Three hours of laboratory.</td>
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<td>543. Hearing Amplification (1 or 3)</td>
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<td>Prerequisites: Module I: Communicative Disorders 340. Module II: Communicative Disorders 542. Module I includes hearing aid components, functions, problem solving and client orientation. Module II includes hearing aid evaluations, fittings, and electro-acoustic hearing aid analysis (2 units). Students may elect Module I (1 unit) or Modules I and II (3 units).</td>
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<tr>
<td>545. Clinical Practice in Audiology Assessment (1)</td>
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<td>Prerequisites: Grade of C or better in Communicative Disorders 542 and 542L. Supervised practice with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special audiologic testing and with supervised practicum with pure tone, speech, and special aud plications.</td>
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</table>

**Prerequisites:** Communicative Disorders 517 and 524. Minimum of 100 hours of supervised clinical practicum, and departmental approval. Concurrent registration in Communicative Disorders 433 or 453.
547. Hearing Conservation (2-3) II
Prerequisite: Communicative Disorders 340L.
Module I: Core information (noise measurement, analysis, reduction; its effect on hearing conservation); application to school hearing conservation programs. (2 units.)
Module II: Damage risk criteria and methods of hearing protection; application of core information to industrial settings. (1 unit.)
Students may elect Module I (2 units) or Modules I and II (3 units).

550. Education of the Hearing Impaired (3) II
Prerequisite: Communicative Disorders 105.
Educational programs, services and resources for hearing impaired; historical background, philosophy, sociological and psychological problems.

554. School Age Language: Development and Disorders (3)
Prerequisite: Communicative Disorders 526.
Contrastive study of normal and disordered language development in children five years through adolescence, including syntax, semantics, pragmatics, figurative language and metalinguistics. Integration of assessment and intervention for language disorders and associated speech and language based reading and writing disorders. Not open to students with credit in Communicative Disorders 554A, 554B, 554C.

555. Curriculum for the Communicatively Handicapped (3)
Prerequisites: Communicative Disorders 512 and 513, 526 or 556.
Application of cognitive processing theory to the development and evaluation of curriculum, materials, and programs; selection of learning modalities and appropriate modification of curriculum. (Formerly numbered Special Education 575.)

556. Clinical Practice with the Deaf (1) I, II, S
Three hours of laboratory.
Prerequisites: Communicative Disorders 357, 358; credit in two of the following and concurrent registration in the third: Communicative Disorders 511, 512, 513. Admission to clinical practicum includes successful completion of competency examination.
Supervised therapy with representative problems found in the hearing impaired population. Maximum one unit first semester; maximum credit two units.

558. Advanced Sign Language (2) I, II
Prerequisite: Communicative Disorders 458.
Theory of sign language for the classroom interpreter. Emphasis on conceptual sign, signed idioms and appropriate usage for the academic setting.

560. Motor Speech Disorders (3)
Prerequisite: Communicative Disorders 539.
Dysarthrias and apraxia of speech. Techniques of differential diagnosis and treatment of these motor speech disorders.

562. Oral Communication for the Hearing Impaired (3)
Prerequisites: Communicative Disorders 512 and 550.
Current methods for developing oral/aural communication skills with hearing-impaired children and youth. Differential problems of acquisition of communicative competence. Assessment and intervention procedures for classroom and clinical settings.

565. Augmentative Communication (3)
Prerequisites: Communicative Disorders 500 and 526 or 556 or 12 units of upper division coursework in major and approval of instructor.
Communication needs of severely physically impaired. Nonvocal communication, alternative approaches and assistive devices. Criteria for assessing communication needs and competencies: selecting and evaluating appropriate systems. Project required.

566. Assistive Device Assessment Program for Communicatively Handicapped (2) I, II
Prerequisite: Communicative Disorders 518.
Assessment of communication skills of disabled individuals, environmental needs and Maximum credit four units.

568. Spanish and Sign Language (2)
Prerequisite: Demonstrate competence at the intermediate level in either Spanish or sign language.
Rudiments of sign language taught to Spanish speakers and the basics of Spanish to users of sign language. Emphasis on communication needs within health care setting, public school setting and informal social setting.

571. Assessing the Bilingual Child with Communicative Disorders (3)
Prerequisites: Communicative Disorders 500 and Linguistics 553.
Assessment procedures applicable for bilingual child with communicative disorders. Consideration of available instruments, appropriateness for target populations and validity of adaptations.

572. Remediation of Communicative Disorders in the Bilingual Population (3)
Prerequisite: Communicative Disorders 571.
Prerequisites: Communicative Disorders and science courses.
Specialized study of selected topics from the area of speech-language pathology, audiology, education of the hearing impaired, and speech and hearing science. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to specific content.

596. Selected Topics in Communicative Disorders and Science (1-4) I, II, S
Prerequisites: Twelve upper division units in an appropriate major.
Prerequisite: Twelve units in communicative disorders and science courses.
Prerequisites: Undergraduate major or equivalent in Communicative Disorders or other comparable computer workshop. Bibliographic techniques. Methods and exposition of research in the fields of speech and language, and physiological changes; speech and language pathologies; hearing problems and rehabilitation, including hearing aids, psychosocial aspects of communication, family dynamics, and resources available within the community. Open to majors and nonmajors.

596. Selected Topics in Communicative Disorders and Science (1-4) I, II, S
Prerequisites: Undergraduate major or equivalent in Communicative Disorders or other comparable computer workshop. Bibliographic techniques. Methods and exposition of research in the fields of speech and language, and physiological changes; speech and language pathologies; hearing problems and rehabilitation, including hearing aids, psychosocial aspects of communication, family dynamics, and resources available within the community. Open to majors and nonmajors.

600. Research and Bibliography (3)
Two lectures and three hours of laboratory.
Prerequisites: Undergraduate major or equivalent in Communicative Disorders or other comparable computer workshop. Bibliographic techniques. Methods and exposition of research in the fields of speech and language, and physiological changes; speech and language pathologies; hearing problems and rehabilitation, including hearing aids, psychosocial aspects of communication, family dynamics, and resources available within the community. Open to majors and nonmajors.

601. Seminar in Speech and Hearing Science (3)
Prerequisite: Classified graduate standing.
Instrumentation and measurement techniques in communicative disorders and sciences. Techniques applied to the specific clinical and research areas of speech, hearing and language disorders.

602. Seminar in Language Disorders (3)
Prerequisites: Undergraduate major or equivalent in Communicative Disorders or other comparable computer workshop. Bibliographic techniques. Methods and exposition of research in the fields of speech and language, and physiological changes; speech and language pathologies; hearing problems and rehabilitation, including hearing aids, psychosocial aspects of communication, family dynamics, and resources available within the community. Open to majors and nonmajors.

603. Seminar in Neuromotor Disorders (3)
Prerequisites: Undergraduate major or equivalent in Communicative Disorders or other comparable computer workshop. Bibliographic techniques. Methods and exposition of research in the fields of speech and language, and physiological changes; speech and language pathologies; hearing problems and rehabilitation, including hearing aids, psychosocial aspects of communication, family dynamics, and resources available within the community. Open to majors and nonmajors.

603. Seminar in Neuromotor Disorders (3)
Prerequisites: Undergraduate major or equivalent in Communicative Disorders or other comparable computer workshop. Bibliographic techniques. Methods and exposition of research in the fields of speech and language, and physiological changes; speech and language pathologies; hearing problems and rehabilitation, including hearing aids, psychosocial aspects of communication, family dynamics, and resources available within the community. Open to majors and nonmajors.

603. Seminar in Neuromotor Disorders (3)
Prerequisites: Undergraduate major or equivalent in Communicative Disorders or other comparable computer workshop. Bibliographic techniques. Methods and exposition of research in the fields of speech and language, and physiological changes; speech and language pathologies; hearing problems and rehabilitation, including hearing aids, psychosocial aspects of communication, family dynamics, and resources available within the community. Open to majors and nonmajors.
604. Seminar In Craniofacial Disorders (3)
Prerequisites: Communicative Disorders 321, 340; and 50 hours of supervised practicum. Recommended: Concurrent registration in Communicative Disorders 626.
Review of research in diagnosis and therapy for persons with cleft palate and other craniofacial disorders.

605. Seminar In Fluency Disorders (3)
Prerequisite: Communicative Disorders 322. Recommended: Concurrent enrollment in Communicative Disorders 626.

606. Seminar In Voice Pathology (3)
Prerequisite: Communicative Disorders 512, 526, and 524. Concurrent registration in Communicative Disorders 626.

607. Phonological Disorders (3)
Prerequisites: Communicative Disorders 512, 526, 527. Recommended: Concurrent registration in Communicative Disorders 626.
Applications of phonological principles and procedures for evaluation and remediation of unintelligible speech patterns in children.

629. Advanced Clinical Practice In Speech-Language Pathology (1) Cr/NC
Three hours of supervision.
Prerequisites: A minimum of three units of Communicative Disorders 526 and/or 546; Communicative Disorders 340; departmental approval; credit or concurrent registration in seminar associated with clinical assignment.
Supervised work with representative advanced speech and language disabilities. Twenty-six hours practicum required per unit. Maximum credit four units. Up to three units may be taken concurrently. Students must have completed or be currently enrolled in the seminar associated with the categories (A-G) that follow in order to register for this course; otherwise, students should register for a unit of Communicative Disorders 526. Transfer students must enroll in one unit of Communicative Disorders 526 prior to 626.
A. Aphasia: Communicative Disorders 602 (Adult).
B. Cerebral Palsy and Neuromotor Anomalies: Communicative Disorders 603.
C. Cleft Palate and Cranio-Facial Anomalies: Communicative Disorders 604.
D. Stuttering: Communicative Disorders 605.
E. Articulation: Communicative Disorders 607 or 654.
F. Language Disorders: Communicative Disorders 602 (Child).
G. Voice Pathologies: Communicative Disorders 606.

627. Advanced Field Clinical Practice In Speech-Language Pathology (1) Cr/NC
Three hours of laboratory.
Prerequisite: Communicative Disorders 626.
Supervised practice with representative speech and language problems. One unit represents 26 hours of clinical practice. Qualified transfer students must enroll in at least one unit of Communicative Disorder 626 prior to 627.

640. Seminar In Psychoaesthetics (3)
Prerequisites: Communicative Disorders 542 and credit or concurrent registration in Communicative Disorders 600.
Psycho-physical concepts underlying clinical audiology. Relationship of audiological test results to the conditions under which they were obtained.

644. Medical Audiology (3)
Prerequisites: Communicative Disorders 545 and credit or concurrent registration in Communicative Disorders 600. Recommended: Communicative Disorders 640.
Problems of diagnosis, referral, and report writing. Testing in medical setting and medically significant hearing pathologies.

645. Advanced Clinical Practice In Audiolologic Assessment (1) Cr/NC
Three hours of laboratory.
Prerequisite: Communicative Disorders 545.
Advanced casework in hearing evaluation. Maximum credit four units. Up to two units may be taken concurrently.

646. Advanced Clinical Practice With Hand of Hearing (1) Cr/NC
Three hours of laboratory.
Prerequisites: A minimum of two units in Communicative Disorders 526, 546 and/or 626. Recommended: Credit or concurrent registration in Communicative Disorders 512, 513, and 543 (Module I).
Supervised practice with problem hearing cases. Maximum credit four units. Up to two units may be taken concurrently.

649. Seminar In Major Research In Diagnostic Audiology (3)
Prerequisites: Communicative Disorders 512 and 626. Recommended: Communicative Disorders 644 and concurrent registration in Communicative Disorders 645.
Consideration of research in clinical audiology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

654. Seminar In Physiological Phonetics (3)
Prerequisite: Communicative Disorders 512.
Physiology underlying the production of continuous speech, including transitional movements, based on a syllabic concept.

656. Advanced Clinical Practice With the Deaf (1) Cr/NC
Three hours of laboratory.
Prerequisites: Communicative Disorders 511, 512, 513, 556. Recommended: Concurrent registration in Communicative Disorders 626, 646, or 656.
Supervised clinic practicum at an advanced level with representative deaf cases. Maximum two units per semester; maximum credit four units.

657. Seminar In Differential Diagnosis of the Hearing Impaired (3)
Prerequisites: Communicative Disorders 511, 512, 513, 556, 646. Recommended: Concurrent registration in Communicative Disorders 656.
Diagnosis of multiple-handicapped, hearing impaired children; including clinical teaching, critical overview of assessment methods, materials and equipment, prognosis, current philosophies and trends.

658. Seminar In Problems of Deafness (3)
Prerequisites: Communicative Disorders 546 or 556. Recommended: Communicative Disorders 543, 557.
Problems of deafness, evaluation of research, interdisciplinary approach to aural habilitation. Offered every other year. See Class Schedule for specific content and semester offered.

659. Seminar In Education of Deaf-Blind Children and Youth (3)
Prerequisite: Communicative Disorders 656.
Prerequisite: Communicative Disorders 656.
Development of interdisciplinary approach to education of deaf-blind children and youth. Development of communicative competence. Offered in alternate years. See Class Schedule for specific content and semester offered.

696. Selected Topics in Communicative Disorders and Sciences (1-3)
Prerequisite: Graduate standing.
Prerequisite: Graduate standing.
Intensive study in specific areas of audiology, education of hearing impaired, speech and hearing science, and speech-language pathology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 598 applicable to a 30-unit master's degree.

797. Research (2) Cr,NC,SP
Prerequisite: Communicative Disorders 600. Recommended: Communicative Disorders 545.
Research in speech-language pathology, deaf education or audiology. Maximum credit two units applicable to a master's degree. Participation in the department's Professional Development Seminar is required unless waived by the coordinator of the graduate program.

798. Special Study (1-3) Cr,NC
Prerequisites: Communicative Disorders 600 and consent of staff, to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master's degree.
799A. Thesis or Project (3) Cr/NC/SP
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master’s degree. Participation in the department’s Professional Development Seminar is required unless waived by the coordinator of the graduate program.

799B. Thesis or Project Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval. Participation in the department’s Professional Development Seminar is required unless waived by the coordinator of the graduate program.

Drama

Dramatic Arts 204, (619) 594-6363

Faculty
Alicia M. Annas, M.F.A., Professor of Drama, Chair of Department
Anna-Charlotte Harvey, Ph.D., Professor of Drama, Assistant Dean for Curriculum, College of Professional Studies and Fine Arts
Michael L. Harvey, Ph.D., Professor of Drama
Margaret McKerrow, Ph.D., Professor of Drama
Terry L. O’Donnell, D.M.A., Professor of Drama
Mack Owen, Ph.D., Professor of Drama
Bebe Salzer, M.F.A., Professor of Drama
Clarence E. Stephenson, Ph.D., Professor of Drama
Peter F. Larrison, Ph.D., Associate Professor of Drama
William N. Reid, M.F.A., Associate Professor of Drama
R. Craig Wolf, M.F.A., Associate Professor of Drama
Joseph J. Bellinghieri, Ph.D., Assistant Professor of Drama, Graduate Coordinator
Robert Chapel, Ph.D., Assistant Professor of Drama

Assistantships
Graduate teaching assistantships and graduate nonteaching assistantships are available to a limited number of qualified students. Application forms and further information may be obtained from the department.

General Information
The Department of Drama, in the College of Professional Studies and Fine Arts, offers graduate study leading to the Master of Arts degree and the Master of Fine Arts degree. The Master of Arts degree may be completed in any one of the following areas: acting, theatre history, directing, children’s drama, and theatre research. The Master of Fine Arts degree is offered in the areas of costume design, lighting design, scenic design, technical theatre, and musical theatre. The M.A. is a 30-unit program; the M.F.A. a 60-unit program. San Diego State University has one of the best equipped educational theatre plants in the United States. The Dramatic Arts building contains a proscenium-style University Theatre seating 500, with state-of-the-art computer lighting control, and a flexible Experimental Theatre seating 200, rehearsal and recording areas, a scene design drafting room, paint shop, wagon house, spacious scene shop, and fully equipped costume laboratory. The Department of Drama is a member of the National Association of Schools of Theatre (N.A.S.T.).

Master of Arts Degree in Drama

Admission to Graduate Study
General requirements for admission to the University with classified graduate standing are described in Part Two of this bulletin. In addition, the Graduate Coordinator, along with the specific recommendation of the Area adviser, must judge the applicant capable of graduate work in Drama. The judgment will be based on (1) the applicant’s transcripts of prior academic work, (2) three current and relevant letters of recommendation from individuals familiar with the applicant’s academic ability; (3) the applicant’s scores on the GRE General Test, and (4) an interview, when appropriate, revealing the applicant’s ability to succeed in the chosen area.

Advancement to Candidacy
All students in the Master of Arts program must meet the general requirements for advancement to candidacy, as described in Part Two of this bulletin. In addition, students seeking the Master of Arts degree in Drama (regardless of area of specialization) are required to have completed Drama 600, and to have removed any deficiencies assigned. It is recommended that all graduate students take Drama 600 during their first semester.
Specific Requirements for the Master of Arts Degree

(Major Code: 10071)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Two of this bulletin, the student must complete a graduate program of a minimum of 30 units. Eighteen of the 30 units must be in 600- and 700-numbered courses in Drama; an additional 6 units must be from 500-, 600-, or 700-numbered courses in Drama or outside departments. PLEASE NOTE: Drama 600, 610, 621, 647A or 647B, and 799A are required courses for all Master of Arts candidates, regardless of area of specialization.

Master of Fine Arts Degree in Drama

Admission to Graduate Study

In addition to meeting the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, a student must satisfy the following requirements before being recommended for classified graduate standing:

1. Achieve a score of not less than 1000 on the GRE General Test.
2. Possess a baccalaureate degree in drama or an approved affiliated field with a grade point average of not less than 3.5 overall in the last 60 units of study attempted, with a 3.0 average in those theatre classes considered prerequisites for the M.F.A. emphasis in design, technical theatre, or musical theatre.
3. Complete undergraduate requirements commensurate with the proposed concentration in the M.F.A. program.
4. Complete a minimum of six units of theatre history.
5. Satisfy additional special emphasis requirements listed below.

Students who have not met certain criteria or demonstrate deficiencies in undergraduate standing that remedial coursework, in addition to the 60-unit M.F.A. program, will be completed an M.F.A. degree will not automatically be considered for an M.A. degree. A student holding an M.A. degree in Drama from San Diego State University or any other institution of higher learning M.F.A. degree from an accredited institution may transfer up to 30 units upon review and approval of the Graduate Coordinator of the Department. Students already accepted into the program who request a change of specific concentration at a later date, will be required to meet the admission requirements for the new concentration.

Concentration in Design and Technical Theatre

In addition to meeting the admission requirements listed above, a student must demonstrate outstanding abilities in a particular area of dramatic arts by submitting the following items:

1. Those students primarily interested in design must submit a design portfolio which swatches, and photographs of productions, revealing the applicant’s creative ability in the chosen area or areas of design.
2. Those students primarily interested in technical theatre must submit a portfolio which contains evidence of technical direction and management experiences in areas of design, lighting, costuming, and scenic design.
3. A resume which contains documentation of participation in not less than five full-length theatrical productions.
4. Three letters of recommendation attesting to the candidate’s academic, professional and personal qualifications from academic or professional theatre sources.

Concentration in Musical Theatre

In addition to meeting the admission requirements listed above, a student must demonstrate unusual artistic talent in the musical theatre area by providing:

1. A résumé of musical theatre accomplishments.
2. An audition, either in person or via videotape, which would include two contrasting vocal selections, two contrasting monologues, and a dance/movement piece.
3. Three letters of recommendation attesting to the candidate’s academic qualifications, and level of competence in musical theatre performance in the areas of acting, singing, and dancing.

Specific Requirements for the Master of Fine Arts Degree

(Major Code: 10072)

Concentration in Design and Technical Theatre

Candidates for the M.F.A. with a concentration in Design and Technical Theatre, in addition to meeting the requirements for classified graduate standing, must complete a 60-unit graduate program which includes a core of courses totaling 30 units as follows: Drama 600, 610, 621, 643, 645, 646A, and 646B. Of these 30 units, 3 units of Drama 643 (Collaborative Studies in Design) must be taken each semester up to the maximum of 12 units. The student must complete 15 units of practicum, internship, and thesis/project under the course numbers: Drama 642, 746, 795, and 799A.

Fifteen elective units are to be selected from additional courses acceptable for graduate credit in the following areas: art, drama, education, English and comparative literature, family studies and consumer sciences, history, Industrial studies, linguistics, mass communication, speech communication, telecommunications and film. In special circumstances courses acceptable for graduate credit in other departments may be selected with the approval of the student’s adviser and the Drama Department graduate coordinator.

Candidates will prepare a production thesis project approved by their thesis committee. This project will be supported by a written analysis/apologia. Forty-five of the sixty units required for this program must be completed in courses numbered 600 or above. The remaining units may be selected from 500-, 600-, or 700-numbered courses in drama or outside departments.

At least 30 units of the student’s program must be completed in residence at San Diego State University, and the student must be in residence no less than two semesters. No more than six units in 798 will be accepted for credit toward the degree.

Concentration in Musical Theatre

Candidates for the M.F.A. with a concentration in Musical Theatre, in addition to meeting the requirements for classified graduate standing, must complete a 60-unit graduate program which includes a core of courses totaling 23 units as follows: Drama 620, 625, 655, 659, 600, 610, 621, 623, and 660. The student must complete 29 units of studio, voice, internship, practicum, and thesis/project under the course numbers: Drama 627, 746, 795, 799A, and Music 650D. Of these 29 units, 4 units of Drama 627 and 1 unit of Music 650D (Voice) must be taken each semester.

Eight additional units are to be selected from courses acceptable for graduate credit in the following areas: art, drama, education, English and comparative literature, history, linguistics, mass communication, music, physical education, speech communication, telecommunications and film. In special circumstances courses acceptable for graduate credit in other departments may be selected with the approval of the student’s adviser and the Drama Department graduate coordinator.

Advance to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. Candidates for the M.F.A. must have completed 30 units within their official program with a minimum grade point average of 3.0. A minimum of 24 units in the official program must be enrolled in and completed concurrently with or after advancement to candidacy. Students in each concentration must have successfully completed Drama 600 and removed any deficiencies noted by the faculty.

Specific Requirements for the Master of Fine Arts Degree

(Major Code: 10072)
may be selected with the approval of the student’s adviser and the Drama Department graduate coordinator.
Candidates will prepare an adjudicated performance thesis project established and approved by their thesis committee. This project will be supported by a written analysis/apologia.

Courses Acceptable on Master’s Degree Programs
in Drama

UPPER DIVISION COURSES

511. Styles in Creative Drama (3)
Prerequisite: Drama 310.
Advanced techniques and procedures in the teaching of creative drama. Lectures and reading on the application of creative drama with emphasis on the different styles of creative drama available to the practitioner. Practical experience through work with children.

515. Directing for Children’s Theatre (3) II
Prerequisite: Drama 315.
Staging and technical problems related to the production of plays for children; casting procedures, blocking and characterization principles, rehearsal and scenic techniques.

520. History of Musical Theatre (3) I
Prerequisite: Drama 463A.
Musical theatre from early Viennese operettas to musicals of modern times; representative works.

532. Advanced Acting and Directing (3) I
Prerequisite: Drama 251. Acting students admitted by audition only; directing students by interview.
Problems in characterization in contemporary drama, and in plays of Ibsen, Strindberg, Chekhov, and Shaw.

533A-533B. Theory and Styles in Acting and Directing (3-3)
Prerequisite: Drama 231.
Acting and directing problems in theory and style related to the production of plays from great periods in theatre history, with attention to characterization, dramatic values, creative melodrama, and farce. Semester I: Shakespearean tragedy and history, Greek tragedy, Shakespearean comedy.

540. Styles in Scenic Design (3) II
Prerequisites: Drama 420 and 440.
History of scenic design and the application of contemporary styles to various types of dramatic production for stage, television and cinema.

545A-545B. Stage Lighting (3-3) I, II
Two lectures and three hours of laboratory.
Prerequisites: Drama 245. Drama 545A is prerequisite to 545B.
Light, color, lighting instruments, and control equipment, including the design and planning of lighting for plays.

546. Computer Systems and Special Effects Techniques in Stage and Television

Lighting (3)
Two lectures and three hours of laboratory.
Prerequisite: Credit or concurrent registration in Drama 545B.
Functional study of computer systems in stage and television lighting with emphasis on realizing effective methods of using such systems in production.

551. Costume, Movement, and Manners (3) I
Prerequisite: Drama 130 or 250.
Interrelationship of period costumes and the movement and manners of the time; and their application on the stage.

552. Costume History and Design for the Theatre (3) II
Two lectures and three hours of laboratory.
Prerequisite: Drama 452.
A continuation of Drama 452 to include chronological study of clothing and theatrical dress costume design for the theatre.

554. Costume Construction Techniques (3)
Two lecture-demonstrations and three hours of laboratory.
Prerequisite: Drama 250.
Period pattern drafting, draping, cutting, construction. Wig, millinery, armor, mask, accessory construction. Costume paint and dye techniques.

555. Musical Theatre Dance Repertory (2) I, II
Four hours of activity.
Prerequisite: By audition only prior to beginning of semester.
Musical theatre dance repertory styles and forms for actor-singer-dancer-director as they pertain to arranged composition of a musical theatre production. Maximum credit six units.

559. Musical Theatre Stage Direction (3) II
One lecture and four hours of activity.
Prerequisite: Drama 459.
Experience and group evaluation in performance and direction of musical theatre scenes; auditioning in musical theatre; and other selected musical presentations. Problems confronting a musical theatre stage director.

560. Rendering for Theatrical Designer (1)
Prerequisites: Drama 250, 440.
Development of skills necessary for theatrical designer to complete successful set and costume renderings. Techniques, media, and portfolio presentation. Maximum credit three units.

596. Selected Topics in Drama (1-3) I, II
Prerequisite: Twelve units in drama.
A specialized study of selected topics from the areas of drama. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 496, 596, 598 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 and 598 applicable to a bachelor’s degree. Maximum combined credit of six units of 596 and 598 applicable to a 30-unit master’s degree.

GRADUATE COURSES

600. Research and Bibliography (3)
Basic reference works, scholarly and critical journals; introduction to bibliographical techniques; exercises and problems in methods and exposition of research as it relates to the various areas of theatre. Recommended for first semester of graduate work, and prerequisite to advancement to candidacy.

610. Aesthetics for the Stage (3)
Selected aesthetic theories (i.e., aesthetic distance, empathy, illusion) and their significance in contemporary theatre. Class presentations in techniques of conceptual thought including stylistic approaches, unity of design, and textual communication.

621. Seminar in Theories of the Theatre (3)
Prerequisites: Drama 420, 600.
Theories of dramatic literature and performance, reflecting major stylistic movements and aesthetic philosophies of the stage from the classical Greeks to today (e.g., Aristotle, Lessing, Apoll, Brecht, and Grotowski).

623. Seminar in Musical Theatre Script and Score Analysis (3)
Prerequisite: Credit or concurrent registration in Drama 420.
Representative works from the musical theatre spectrum analyzed in terms of dramatic and musical content, environment, action, character and style.

627. Musical Theatre Studio (4)
Eight hours of activity.
Prerequisite: Entry by audition only.
The integration of acting, singing, and dancing skills with emphasis on individual problems. Maximum credit sixteen units.

635. Seminar in Children’s Dramatics (3)
Prerequisites: Drama 310 and 515.
Modern developments and trends in children’s theatre and creative drama in educational, civic and professional programs in the United States and England.
642. Theatre Practicum Skills (3) Cr/NC
Prerequisite: Admission to the M.F.A. program.
Twelve hours per week in laboratory and workshop experience in three design areas
(lightning, scene design, costume).
Investigation and application of those skills necessary to the function of a theatrical design
artist in theatrical scene design, lighting design or costume design.
Experience and instruction in drafting, painting, color mixing, costume and pattern cutting,
lighting and projection techniques, slide preparation, construction and use of equipment and
materials. (Formerly numbered Drama 746A.)

643. Collaborative Studies in Design (3)
Prerequisite: Admission to M.F.A. program in Design. This course must be repeated each
semester by the M.F.A. Design student for a maximum of 12 units.
Design of theatrical productions with emphasis on artistic collaboration and integration of
scenery, costumes and lights. Attention to graphic presentation techniques as well as design
produced.

644. Seminar in Stage Direction (3)
Prerequisite: Drama 457.
Research projects in the aesthetic principles and practices of stage direction with an
emphasis on theory, technique and historical development.

645. Seminar in Lighting for Stage and Television (3)
Prerequisite: Drama 452 or 552.
Projects concerned with the aesthetic and technical problems of stage lighting.

646. Seminar in Design for Stage and Television (3)
The principles of design in the theatre with an emphasis on the historical development
of theatrical costume or scenic environment. The investigation of recent tendencies in style
and their evolution. Each section may be taken once for credit.
A. Costume Design
Prerequisite: Drama 452 or 552.
B. Scenery Design
Prerequisite: Drama 448 or 540.

647. Seminar in History of Theatre and Drama (3)
Prerequisites: Drama 420, 460A and 460B.
A. British and Continental Theatre
B. American Theatre

648. Seminar in Producing the European Play (3)
Prerequisites: Drama 420, 460A, 460B, and 600.
Problems in producing works of such playwrights as Ibsen, Strindberg, Chekhov, Shaw.
Maximum credit six units applicable to a master's degree.

649. Topics in World Theatre (1-3)
Prerequisite: Admission to M.A. or M.F.A. program in drama.
Intensive study in specific areas of world theatre. Forms, technologies, genres, cultural
expressions, and contemporary developments. See Class Schedule for specific content. May
be repeated with new content. Maximum credit six units applicable to the M.A. or M.F.A. degree.

650. Seminar in Theories of Dance Repertory for Musical Theatre (3)
Prerequisites: Drama 555, 623.
Dance repertory related to particular requirements for the actor-singer-dancer-director;
movement for expression of character, conflict, plot, and development of dramatic story line
within the disciplined framework of a musical theatre production.

746. Theatre Internship (3) Cr/NC
Prerequisites: Drama 600 and consent of Graduate Coordinator and Program Director.
Twenty-four hours per week in laboratory and workshop field experience in one of three
professional theatre. (Formerly numbered Drama 746B.)

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Project assignment to be arranged with Graduate Coordinator and instructor.
Individual study. Maximum credit six units applicable to a master's degree.

799A. Thesis or Project (3) Cr/NC/SP
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Drama 795 (Practicum in Theatre Arts) is a prerequisite if the student elects the preparation of a
project.
Preparation of a project or thesis for the master's degree.

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

Nasatir Hall 304, (619) 594-1675

Faculty

George Babriot, Ph.D., Professor of Economics
Raford D. Boddy, Ph.D., Professor of Economics
Norris C. Clement, Ph.D., Professor of Economics
Roger S. Frantz, Ph.D., Professor of Economics
Adam Giord, Ph.D., Professor of Economics, Chair of Department
Louis C. Green, Ph.D., Professor of Economics
Renatae K. Hageman, Ph.D., Professor of Economics
Arthur E. Kartman, Ph.D., Professor of Economics
J. William Leasure, Ph.D., Professor of Economics
Muriqappa C. Madhavan, Ph.D., Professor of Economics
Woo Hyun Nam, Ph.D., Professor of Economics
Dean O. Popp, Ph.D., Professor of Economics, Acting Associate Vice President for Faculty Affairs
Mark A. Trauer, Ph.D., Professor of Economics
Yiannis P. Venieris, Ph.D., Professor of Economics
Shoshana A. Grossbard-Shechtman, Ph.D., Associate Professor of Economics
John W. Hamilton, Ph.D., Associate Professor of Economics
Douglas B. Stewart, Ph.D., Associate Professor of Economics
James V. Gerber, Ph.D., Assistant Professor of Economics
Michael C. Naughton, Ph.D., Assistant Professor of Economics
Robert L. Seidman, Ph.D., Assistant Professor of Public Health and Economics
Harinder Singh, Ph.D., Assistant Professor of Economics (Graduate Adviser)
Kim C. Thomas, M.S., Assistant Professor of Economics
Walter H. Vogt, Ph.D., Assistant Professor of Economics

Assistantships

Graduate assistantships in economics are available to a limited number of qualified students. Application blanks and further information may be obtained from the Chair of the Department of Economics.

Scholarships

Annually the Center for Public Economics with the advice of the Department’s Scholarship Committee awards the $500 Walter Weiss scholarship, the $400 Henry Springer scholarship, the $200 Sidney Evans scholarship, a general $300 scholarship to students in economics, and a $100 Henry George Scholarship.

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. Students may focus on public economics, or general economics. Research facilities include for Public Economics, the Institute of Labor Economics and the Center for Economic Development. Within these research activities and in the economics department in specific problem areas, but rather a wide range of microeconomic and macroeconomic topics necessary research skills to further career or educational opportunities. Research assistantships, available to qualified applicants.

Admission to Graduate Study

General requirements for admission to the University with classified graduate standing are described in Part Two of this bulletin. In addition, the Graduate Committee of the Department must judge the applicant capable of graduate work in Economics. The Committee’s judgment will be based on (1) the applicant’s transcripts of prior academic work; (2) three letters of recommendation from individuals familiar with the applicant’s academic ability; and (3) the applicant’s scores on the GRE General Test. Item (2) should be addressed directly to the Department of Economics. Official transcripts must be received by the Admissions Office directly from the institutions attended. All documents should be on file by March or early April for fall admission and by late November for spring admission.

Applicants whose preparation in economics and mathematics is judged inadequate by the Graduate Committee may be admitted with Conditional Graduate Standing (classified). The Committee may require students so admitted to remove the deficiency by satisfactory performance on placement exams administered by the Department or in additional coursework within a specified amount of time.

Advancement to Candidacy

In addition to the general requirements for advancement to candidacy described in Part Two of this bulletin, the student must have satisfactorily completed Economics 541, 620 and 621.

Specific Requirements for the Master of Arts Degree

(Major Code: 22041)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Two of this bulletin, the student must complete an approved graduate program of at least 30 units. Each program must include Economics 541 (if not previously completed with a grade of C (2.0) or better), 620 and 621. No program may contain more than six units from Economics 741A, 741B, 797, 798, and 799A; and no more than 6 units of 500-level courses. Normally a program may contain up to six units of approved courses outside of economics. Students selecting Plan A must include Economics 799A in their programs and complete a thesis.

Students selecting Plan B must take Economics 741A, 741B, and may focus on Public Economics of the Urban Sector by including Economics 756 and either 701 or 702 in their programs, or a focus on the Economics of International Development by including Economics 660 and either 665 or 728 in their programs, or may select a program in General Economics by including at least nine additional units from the list of acceptable courses below. Students selecting Plan B must take written comprehensive examinations. Consult with departmental graduate adviser for dates of examinations.

Courses Acceptable on Master’s Degree Programs in Economics

502. Public Economics (3)
Prerequisite: Economics 321.
General equilibrium. Externalities of consumption and production, their impact on allocative efficiency. Theory of social supports and public goods. Theoretical treatment of individual and community preference ordering and decision making. Proposals for improving the allocation of resources.

505. Welfare Economics (3)
Prerequisites: Economics 102 and 321.
Theories of individual and social well-being. Economic and ethical bases of optimum welfare arrangements; individual values and social decision making; tests of improvement; interdependence and externalities; public and private sectors; properties of social welfare functions.

520. Advanced Economic Theory (3)
Prerequisite: Economics 320.
Recent contributions to the advanced theory of the firm, consumer demand, employment, and growth.

541. Econometrics (3)
Prerequisites: Economics 201, and 307 or Mathematics 141.
Measurement and testing of simple economic hypotheses. Use of economic models involving multiple-regression analysis. Not open to students with credit in Economics 341.
555. Economic Analysis of Environmental Quality (3)
Prerequisites: Economics 321 and Mathematics 121 or 141 or 150.
Examination of materials balance, interface between economic and ecological systems, and coupling of economic and ecological processes. Economic analysis of population growth and environmental degradation, preservation vs. development issues, global environmental problems and international law.

561. International Trade Theory (3)
Prerequisites: Economics 320 and 321.
The pure theory of international trade and commercial policy.

562. International Economic Expansion and Dependence (3)
Prerequisites: Economics 320, 321, or 355.
Explores various theories of imperialism and dependence, the behavior of multinational corporations, and the role of state from Marxian and other perspectives. Theories examined in terms of experience of specific countries (e.g., Mexico).

565. U.S.-Mexico Economic Relations (3)
Prerequisites: One course in economics.
Mexico's socioeconomic development since World War II. Problem areas affecting the U.S. including foreign trade, multinational corporations, energy, migration patterns and border relations.

592. International Monetary Theory and Policy (3)
Prerequisites: Economics 320 or 490.
Balance of payments, international capital movements and foreign exchange in relation to current theories and policies.

596. Experimental Topics (3)
Prerequisite: Consent of instructor.
Intensive study in specific areas of economics. See Class Schedule for specific content.
Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

603. Economic Analysis (3)
Prerequisite: Classified graduate standing.
Economic analysis of the firm in a market economy and the economics of national income determination. Not open to students with credit for Economics 320 or 321. Not applicable toward a master's degree in economics.

620. Seminar in Advanced Economic Theory (3)
Prerequisites: Economics 307, 320 and 321.
Theory of money, employment, and income determination. Alternative theories of consumption, investment, price level and rate of interest. Causes of instability in short and long run.

621. Seminar in Advanced Economic Theory (3)
Prerequisites: Economics 307, 320 and 321.
Theory of consumer and producer behavior. Determination of prices and resource allocation patterns in a market economy; partial and general equilibrium.

635. Seminar in Economic History (3)
Prerequisite: Economics 338.
Individual study and discussion on selected topics in economic history.

660. Seminar in International Economics (3)
Prerequisites: Economics 541 and 620.
Resource allocation, income distribution, commercial policies, capital movements, balance of payments, and international monetary institutions.

665. Seminar in the Economics of Underdeveloped Countries (3)
Prerequisites: Economics 541 and 620.
Theories regarding underdevelopment and policies for development of economically underdeveloped countries.

680. Seminar in Labor Economics (3)
Prerequisite: Economics 380 or 482.
Individual study and group discussion of selected topics in labor economics.

696. Experimental Topics (3)
Prerequisite: Consent of instructor.
Intensive study in specific areas of economics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

701. Seminar in Tax Policy (3)
Prerequisites: Economics 541 and 621 or consent of instructor for accounting students.
Advanced study of public finance problems with emphasis on theory of taxation and its applications.

702. Seminar in Public Expenditure Analysis (3)
Prerequisites: Economics 541 and 621.
Theory of social wants and public goods supply. Theoretical treatment of individual community preference orderings. Evaluation of public expenditures, including the use of cost-benefit analysis.

728. Seminar in Development Planning (3)
Prerequisite: Economics 541.

741A. Seminar in Economic Research (3)
Prerequisites: Classified standing and 15 units from the approved program including Economics 541, 620, and 621. Concurrent registration in Economics 741B.
Advanced treatment of research design and methodology. Application of empirical techniques to selected problems. (Formerly numbered Economics 741.)

741B. Economic Research Workshop (3)
Prerequisites: Classified standing and 15 units from the approved program including Economics 541, 620, and 621. Concurrent registration in Economics 741A.
Application of economic research techniques. Each student will choose, develop, and present an original research project. ( Formerly numbered Economics 741.)

758. Seminar in Urban and Regional Economics (3)
Prerequisites: Economics 541 and 621.
Urban and regional economics; individual research and reports.

777. Seminar in Utilities and Energy Resources (3)
Prerequisite: Economics 452 or 477.
Selected topics in public utility economics and regulation, and the economics and energy resource development.

790. Seminar in Monetary Economics (3)
Prerequisite: Economics 490.
Analysis of theoretical issues associated with the demand for money, the money supply and process of money creation. Emphasis upon interaction of monetary and real factors in domestic-international money and financial markets.

795. Internship in Economics (3) Cr/NC
Prerequisites: Economics 541, 620, and approval of graduate adviser.
Students will be assigned to various jobs in which economics theory can be applied to decision making. Supervision will be shared by the graduate adviser and on-the-job supervisor.

797. Research (3) Cr/NC/SP
Prerequisites: Classified graduate standing and consent of instructor.
Independent research project in an area of economics.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master's degree.

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

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

The College of Education offers graduate study leading to the Master of Arts degree in Education with concentrations in the following: community college curriculum and instruction, counseling, educational technology, elementary curriculum and instruction, reading education, secondary curriculum and instruction, administration and supervision, special education, educational research, and policy studies in language and cross-cultural education. Some of these concentrations are designed to permit concurrent completion of the requirements for the correspondingly named advanced credentials.

Graduate study is also offered leading to the Master of Science degree in Counseling and the Master of Science degree in Rehabilitation Counseling.

The Ph.D. degree in Education with a Multicultural Component is offered cooperatively with The Claremont Graduate School. Inquiries concerning this program should be addressed to the Director of Doctoral Programs, College of Education.

Section I: Joint Doctoral Program

Admission to Doctoral Study

To be considered for admission to the joint SDSU/CGS program, students must meet the general requirements for admission to both institutions with classified (full) graduate standing as outlined in the current respective bulletins. These include a baccalaureate degree from an accredited institution, good academic standing in the last institution attended, and an acceptable score on the Graduate Record Examination. Normally, applicants are expected to hold a master's degree in education from an acceptable accredited institution. Experience in the field is desirable. Students are admitted only in the fall of each academic year. Applicants must submit copies of all transcripts of previous college work, three letters of recommendation, a 1000-word personal statement and results of the Graduate Record Examination. Personal interviews are conducted for the most promising applicants.

Specific Degree Requirements for the Doctor of Philosophy Degree in Education

(Major Code: 08011)

The cooperating faculties at San Diego State University and The Claremont Graduate School represent diverse research and teaching interests. Under their stewardship, students may prepare themselves for qualifying examinations and for dissertation research in many learning theory, human growth and development, applied linguistics reading and higher education. In addition to the traditional concerns of advanced study in education, the program seeks to explore the effects of culture on learning and teaching and to investigate ways to meet the needs of all students in a pluralistic society.

A minimum of 48 semester units of residency at each institution is required before a student is eligible to take qualifying examinations. In addition to these residency units, additional coursework may be needed before the student is competent to conduct dissertation research. After successful completion of the qualifying examinations, the student is advanced to candidacy and enters the dissertation phase of the program.

Upon admission to the program, the student is guided by the requirements for the doctoral program given in Part Two of this bulletin and those listed under Education in The Claremont Graduate School Bulletin.

For further information write: The Claremont Graduate School, 7895 Via Foro, Claremont, CA 91711

Section II. Master's Degree Programs

Master of Arts Degree in Education

Admission to Graduate Study

The student must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. In addition, the student must have completed a minimum of 12 units in professional education courses, and 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/she will be recommended by the school for classified graduate standing. (This is not applicable to students in the Departments of Administration, Rehabilitation and Postsecondary Education, Counselor Education, and Educational Technology.)

Advancement to Candidacy

A student desiring a Master of Arts degree in Education with a concentration in community college curriculum and instruction, counseling, educational research, educational technology, elementary curriculum and instruction, reading education or secondary curriculum and instruction may be advanced to candidacy upon completion of the basic requirements as described in Part Two of this bulletin. A student desiring a concentration in administration and supervision 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 counseling, policy studies, or in special education must also meet specific admission requirements. (For further information, refer to the College of Education, Office of Graduate Programs, Room Education 100B, or to the coordinators of the respective programs. Students in Counselor Education should go directly to the department for further information.)

Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for admission to the University with classified graduate standing and the credential requirements as applicable, the student must satisfy the basic requirements for the master's degree described in Part Two of this bulletin. In addition, the student must meet the requirements specified for one of the concentrations in Education (described below). Courses common to all concentrations are Education 690 and Plan A, which requires Education 790A, or Plan B in which two options are available, Education 791A-791B or Education 795A-795B. All applicants for the Master of Arts degree in Education must pass a comprehensive examination.

The Comprehensive Examination

This examination, designed to evaluate the achievement in the specific area of the student's concentration, is required of all candidates for the master's degree in education. A student is eligible to take the comprehensive examination only after advancement to candidacy.

The examination is offered near the midpoint of each semester. Reservation must be made at least one week in advance of the examination. For information on exact dates, and for a reservation, check with the Office of Graduate Programs, College of Education, Room Education 100B, or with the coordinators of the respective programs.

Selection of Plan A or Plan B

In general, applicants will be programmed for Plan B, the seminar plan. After the student is approximately halfway through the program, has secured an advisor and established a thesis plan, permission to transfer to Plan A may be requested. Plan A is designed for students who have a particular research problem they wish to investigate in some detail. Requests for transfer to Plan A must be prepared as an official change in program for the master's degree, countersigned by the faculty adviser, and submitted to the Office of Graduate Programs in the College of Education.

Both Plan B options provide students the opportunity (1) to have two experiences which emphasize research or evaluation and writing, (2) to participate actively in the projects of the
other members of the seminar, and (3) to subject their own work to critical evaluation by the other seminar members. Both plans require the ability to formulate and define research or evaluation problems, to assemble data pertinent to the problem, to draw conclusions, and to present the study in acceptable written form. It is expected that the two seminars will be at least as demanding as the thesis with respect to the difficulty and quantity of work required. Selection of one of the Plan B options must be made with the approval of the departmental faculty adviser.

**Course Requirements**

**Note:** Students are requested to consult with the appropriate master's degree adviser prior to taking any coursework leading to the master's degree. Students are urged to take Education 490 (3 units) as early as possible in their first graduate year.

**Concentrations**

**Administration and Supervision**  
(Major Code: 08271)

The Master of Arts degree in Education with a concentration in educational administration and supervision is designed to provide increased knowledge and skill for the prospective administrator or supervisor. The program is intended for those who wish to pursue administrative or supervisory positions in schools or training programs. In order to apply for this concentration, a student will complete an application for admission to both the University and the Educational Administration program. All applications should include two letters of recommendation from school district or agency where employed. All applicants should note that academic degree and experience required varies with the career goal of the student. All students will discuss the degree curriculum with the graduate adviser during the first semester in the program.

Students in this concentration may earn a degree without an Administrative Credential or in combination with the California Preliminary Administrative Services Credential. The degree without the credential is designed for foreign school administrators, school business managers, administration of technical and vocational programs, or those who have other administrative objectives in educational fields. Candidates who intend to pursue administrative careers in the California public schools, grades K-12, will need to obtain the Preliminary Administrative Services Credential and the Professional Administrative Services Credential. Credential candidates are advised to satisfy the requirements for the master's degree in conjunction with the credential.

**Specialization in the Administration of Occupational and Technical Education:**

Students specializing in the Administration of Occupational and Technical Education should complete a core sequence of Administration, Rehabilitation and Postsecondary Education 600, 651, Educational Technology 544, Recommended electives to be approved by the Educational Technology 572, 684, 775 and Industrial Arts 721, 723, 729. Postgraduate prerequisites include Educational Technology 540, and teaching experience or other related experience with the approval of the adviser.

**Requirements for the Master of Arts degree in Education with a Concentration in Educational Administration and Supervision:**

1. Core program (6 units)
   - ARP 600 Principles of Educational Administration (3)
   - ARP 610 Educational Leadership (3)
2. Electives selected with approval of the graduate adviser (12-15 units)
3. ED 690 Procedures of Investigation and Report (3)
4. ARP 651 Administering Educational Organizations (3)
5. Research (3-6 units)
   - ED 791A-791B Evaluation (3-3 units) or ED 795A-795B Seminar (3-3 units) or
   - ED 799A Thesis (3 units)

**Units**

**Requirements for the Preliminary Administrative Services Credential (Credential Code: 00501)** (Academic coursework and experience required vary with the career goal of the student — see adviser):

1. **Prerequisites:**
   a. An application for admission to the Educational Administration program.
   b. Basic Skills Examination (CBEST).
   c. Two letters of recommendation from school district or agency where employed and last two annual performance reviews.
   d. A counseling interview with a program area faculty.
   e. Valid California credential for teaching, pupil personnel services, school nursing, speech pathology, or librarianship.
   f. Three years of successful, appropriate, full-time school experience.
   g. Students must have completed at least 1 unit (or the equivalent) of coursework dealing with computers in education.

2. **Possession of a master's degree in Educational Administration or another field related to educational practice.**

3. **ARP 600 Principles of Educational Administration**  
   - 3

4. **ARP 610 Educational Leadership**  
   - 3

5. **ARP 630 Curriculum Design and Management**  
   - 3

6. **ARP 651 Administering Educational Organizations**  
   - 3

7. **ARP 652 Seminar in Instructional Improvement and Evaluation**  
   - 3

8. **ARP 660 Field Experience in Educational Administration**  
   - 10

9. Electives selected with approval of adviser  
   - 9

10. **ARP 720 Educational Personnel Management and Practices**  
    - 3

11. **ARP 730 Supervision**  
    - 3

12. **ARP 740 School Finance and Fiscal Management**  
    - 3

13. **ARP 750 School Law and Legal Issues for Administrators**  
    - 3

14. **ARP 760 Field Experience in Educational Administration**  
    - 12

15. **ARP 795A-795B Seminar**  
    - 3

16. **ARP 799A Thesis**  
    - 3

**Requirements for the Professional Administrative Services Credential (Credential Code: 00502)** Candidates pursuing the Professional Administrative Services Credential can complete up to one-half of their program of study prior to employment in a credentialed administrative position. The remaining half of the credential must be completed both while holding an administrative position and within a three year period of time of starting the program. Prerequisites to the credential program:

1. Admission to graduate status at SDSU.
2. Admission to the Educational Administration program.
3. Possession of a valid Preliminary Administrative Services Credential or a Clear Administrative Service Credential.
4. Two letters of recommendation from knowledgeable field references.
5. Two most recent performance evaluations.
6. Letter of recommendation from superintendent or designee, and formal commitment of participating school district to provide release time for internship requirement.
7. Minimum grade point average of 3.25 in graduate study.

**Program**

Successful completion of a program of studies consisting of 24-30 units which includes the following courses or approved equivalents:

**Units**

- ARP 701 School Law and Legal Issues for Administrators  
  - 3
- ARP 715 School Finance and Fiscal Management  
  - 3
- ARP 720 Educational Personnel Management and Practices  
  - 3
- ARP 747 Instructional Leadership in a Multicultural Society  
  - 3
- Administrator Competency Evaluation and Assessment requirement:  
  - 12
- Field Experience Requirement:  
  - 4
- ARP 760 Internship in Educational Administration  
  - 8-12

**Total**  
- 24-30
Notes:

1. The program of study leading to this credential is the result of collaborative planning among the candidate, candidate's school district representative, Administrative Services Credential Coordinator, and faculty adviser.

2. This professional education activity will result in forming the framework for an individualized course of study for the internship experience.

3. Upon faculty advisement, students may be required to complete an additional 6 units of coursework.

**Community College Curriculum and Instruction**

(Major Code: 08061)

The Master of Arts degree in Education with a concentration in Community College Curriculum and Instruction is designed as the base for applicants to increase professional competence in the form of more breadth, depth and technical skill in curriculum and instruction; either generally or in selected subject areas of specialization in the Community College. The program is intended for those educators who wish to develop their own professional competence as well as those who wish to become instructional supervisors, department chairpersons or other supervisory instructional personnel in postsecondary education or in other settings involved with adult education.

1. Prerequisites:
   a. A basic background in education (B.A., B.V.Ed. or teaching credential).
   b. Experience in the community college setting.
2. Community College Core Program (12 units)
   3. Electives (5-12 units) selected with advisement. 6 units may be in cognate area.
3. Core program (15 units): The core is composed of courses in education and related fields, selected with the approval of the adviser on the basis of the student's interests and goals. A minimum of nine units must be taken in courses at the 600 and 700 level.
4. Research (3-6 units)

**Counseling**

(Major Code: 08261)

The Master of Arts degree in Education with a concentration in Counseling provides a sequential and integrated program of study in the theories, research, and practice of counseling. The program, usually with Plan A, is designed to provide the student with the education and Plan B, is intended for those individuals who seek to increase their understanding of human behavior does not lead to credentials or licensure in counseling. Students may be required to complete an additional 6 units of coursework.

1. Prerequisite: Admission to the Department of Counselor Education (see Counselor Education section of this bulletin). For further information, see the Coordinator of Counselor Education.

2. Education 690 Procedures of Investigation and Report (3 units).
3. Core program (minimum of 15 units):
   a. Common Core (3 units):
      - CNED 600 Counseling Communication Skills (2)
      - CNED 600L Counseling Prepracticum (1) Cr/Nc
   b. Foundations (minimum of 6 units):
      - CNED 610A Determinants of Human Behavior: Personality (3)
      - CNED 610B Determinants of Human Behavior: Social and Cultural (3)
      - CNED 610C Determinants of Human Behavior: Development (3)

**Educational Research**

(Major Code: 08241)

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. ED 690 Procedures of Investigation and Report (3 units).
3. Core program (9 units): Teacher Education 546, Quantitative Methods in Educational Research (3 units); Teacher Education 646, Seminar in Educational Measurement (3 units); and 3 units of educational research design selected with the approval of the adviser.
4. Electives (15 units) selected with adviser's approval.
5. ED 799A, Thesis (3 units)

**Educational Technology**

(Major Code: 08992)

The Master of Arts degree in Education with a concentration in educational technology enables students to prepare for careers as instructional technologists, educational specialists, instructional designers, trainers, and experts in educational computing. State-of-the-art coursework and internships in companies, agencies and schools prepare candidates to analyze performance problems and design, develop and evaluate instructional strategies and products. Students graduate with a portfolio including educational computer software, instructional print materials, video, and interactive video programs. For further information, see the Coordinator of Educational Technology. Course requirements follow:

1. Prerequisite: Varies with the career goal of the student. Students use educational technology skills in settings as diverse as the San Diego Zoo, UCSD Medical Center, and IBM. For most students, Educational Technology 540 and 541 are prerequisites. See adviser.
2. ED 690 Procedures of Investigation and Report (3 units).
3. Core program (15 units): The core is composed of courses in education and related fields, selected with the approval of the adviser on the basis of the student's interests and goals. A minimum of nine units must be taken in courses at the 600 and 700 level.
4. Electives (6-9 units) selected with the approval of the adviser.
5. Research (3-6 units)

   a. ED 791A Evaluation Techniques (3) or ED 791A-791B Seminar (3-3)
   b. ED 799A Thesis (3) or ED 791A-791B Seminar (3-3) or ED 791A Evaluation Techniques (3).
   c. ED 791B Practicum: Evaluation (3 units)
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Specialization in Educational Computing within Educational Technology Concentration: Students specializing in Educational Computing must include among their 15 core units Educational Technology 544 and 572. Recommended electives to be approved by the program adviser include Educational Technology 553, 596, 644, 670, 671, 675, 684, 775, and Special Education 650. Specialization prerequisites are Educational Technology 540 and 541.

Elementary Curriculum and Instruction (Major Code: 08021)

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.

1. Prerequisite: A basic background in education (minimum of 12 units) to include curriculum and methods, growth and development, educational psychology, and history and philosophy of education.
2. Education 690, Procedures of Investigation and Report (3 units).
3. Core program (15 units): The core is composed of courses in education and related fields, selected with the approval of the adviser on the basis of the student's interests, professional needs and goals. The core will include:
   a. Teacher Education 650, Curriculum Development in Education (3 units).
   b. Teacher Education 626, Advanced Educational Psychology; or Teacher Education 655, Social Foundations of American Education; or Teacher Education 656, Comparative Education; or Teacher Education 657, Philosophy of Education (3 units).
   c. Teacher Education 610A, Seminar in Mathematics Education - Elementary School; or Teacher Education 610C, Seminar in Science in Elementary Education; or Teacher Education 630, Seminar in Reading Education; or Teacher Education 631, Seminar in Language Arts in Elementary Education; or related courses with approval of the adviser (3 units).
   d. 500/600/700-numbered courses in Teacher Education with the approval of the adviser (3-6 units).
   e. 500/600/700-numbered courses in education or related fields selected with the approval of the adviser (up to 6 units).
4. Electives (6-9 units) selected with the approval of the adviser.
5. Special Study and Research (3-6 units): Education 791A-791B, Evaluation (3-3 units); or Education 795A-795B, Seminar (3-3 units); or Education 799A, Thesis (3 units).

The program of study must include at least 15 units of 600- and 700-level courses.

Policy Studies in Language and Cross-Cultural Education (Major Code: 08994)

The Master of Arts degree in Education with a concentration in Policy Studies in Language and Cross-Cultural Education is designed to provide special knowledge and training for those who are or wish to become reading specialists in public or private schools and clinics. The program prepares candidates to teach, tutor, develop curriculum, offer in-service instruction and administer reading centers for students ranging from kindergarten through college community, university, and adult levels. This degree is often earned concurrently with a California Reading Specialist Credential, which has a number of common requirements.

1. Prerequisite: Completion of a minimum of 12 units of professional coursework in education, including a basic course in methods and materials for teaching reading.
2. ED 690 Procedures of Investigation and Report (3 units).
3. Core program (15 units):
   a. TE 536 Reading Diagnosis (3 units)
   b. TE 533 Seminar in Research in Reading (3 units)
   c. TE 636 Advanced Diagnosis in Reading (3 units)
   d. TE 637 Reading Clinic (3 units)
   e. TE 638 Topics in Reading Education (minimum of 3 units)
4. Electives (6-9 units) selected with the approval of the adviser.
5. ED 791A-791B Evaluation (3-3 units); or ED 795A-795B Seminar (3-3 units); or ED 799A Thesis (3 units)

Reading Education (Major Code: 08301)

The Master of Arts degree in Education with a concentration in Reading Education is designed to provide increased knowledge and skill for those who are or wish to become reading specialists in public or private schools and clinics. The program prepares candidates to teach, tutor, develop curriculum, offer in-service instruction and administer reading centers for students ranging from kindergarten through college community, university, and adult levels. This degree is often earned concurrently with a California Reading Specialist Credential, which has a number of common requirements.

1. Prerequisite: Completion of a minimum of 12 units of professional coursework in education, including a basic course in methods and materials for teaching reading.
2. ED 690 Procedures of Investigation and Report (3 units).
3. Core program (15 units):
   a. TE 536 Reading Diagnosis (3 units)
   b. TE 533 Seminar in Research in Reading (3 units)
   c. TE 636 Advanced Diagnosis in Reading (3 units)
   d. TE 637 Reading Clinic (3 units)
   e. TE 638 Topics in Reading Education (minimum of 3 units)
4. Electives (6-9 units) selected with the approval of the adviser.
5. ED 791A-791B Evaluation (3-3 units); or ED 795A-795B Seminar (3-3 units); or ED 799A Thesis (3 units)

Prerequisites: PLC 602 (3) and PLC 653 (3)
M.A. Plans 9 Units Total
Plan I: PLC 612 (3), 613 (3), 650 (3)
Plan II: PLC 612 (3), 614 (3), 623 (3)
Plan III: PLC 612 (3) and 6 units from: PLC 553, 613, 614, 623, 650 with approval of adviser.

Research: 6-9 Units Total
ED 520 Procedures of Investigation and Report (3) and ED 791A-791B Evaluation Techniques (6) or ED 791A-791B Seminar (6) or ED 799A Thesis (3)

Electives: 3-6 units selected with approval of adviser.

Specializations: Select 9 units from one of the following areas with consent of adviser:
1. Curriculum of Education:
   a. PLC 555 Teaching Writing in Multilingual Settings (3 units)
   b. PLC 575 Computer Applications in the Bilingual Classroom (3 units)
   c. PLC 596 Special Topics in Bilingual and Multicultural Education (3 units)
   d. PLC 651 Multicultural Methods and Curriculum in Content Areas (3 units)
   e. PLC 652 Language Arts in the Multicultural Education Curriculum (3 units)
   f. PLC 655 Social Foundations of American Education (3 units)
   g. PLC 656 Philosophy of Education (3 units)
   h. PLC 657 Social Foundations of American Education (3 units)
2. Research and Policy:
   a. PLC 596 Special Topics in Bilingual and Multicultural Education (3 units)
   b. PLC 613 Organizational Strategies and Staff Development for the Multicultural School-Community (3 units)
   c. PLC 670 Analysis and Issues in Race and Ethnic Relations: Theory, Research, and Action (3 units)
   d. PLC 672 Seminar in Multicultural Education (3 units)
   e. PLC 798 Special Study (1-6 units)
3. Outside Specialization
   a. With consent of department adviser and a cooperating department or program

Language and Cross-Cultural Education Department. All students will also take a comprehensive examination. *It is recommended that students enroll in PLC 666 in preparation for the comprehensive examination.
Secondary Curriculum and Instruction
(Major Code: 08031)

The Master of Arts degree in Education with a concentration in Secondary Curriculum and Instruction, is designed as the base for applicants to increase professional competence in any of the fields typically taught in secondary schools, and for obtaining those competencies and technical skills in curriculum and instruction either generally, or in selected areas of specialization.

1. Prerequisite: A basic background in education (12 units)
2. ED 690 Procedures of Investigation and Report (3 units)
3. Core program (6 units): to include TE 600, Curriculum Development in Education (3 units) and 3 units from TE 604, Advanced Problems in Instruction; or TE 607, Seminar in Research in Curriculum Problems.
4. Electives (15 units) selected with the approval of the graduate adviser on the basis of the student's interests, goals and needs. A minimum of 3 units must be in 600- or 700-numbered courses. A maximum of 6 units may be selected from cognate fields outside the College of Education.
5. ED 791A-791B Evaluation (3-3 units) or
   ED 795A-795B Seminar (3-3 units) or
   ED 799A Thesis (3 units)

A Master of Arts degree in Education with a concentration in curriculum and instruction in the area of occupational or adult education is also offered. Each student is urged to consult with the program adviser as to the specific course content of the program. With the adviser's fields related to the major occupational field.

Special Education
(Major Code: 08081)

The Master of Arts degree in Education with a concentration in Special Education provides degree is often earned concurrently with a California Specialist Credential in Special Education include specialization in the areas of Learning Handicapped, Severely Handicapped, Physically or Emotionally Disturbed. These programs of study are individually planned with the approval in this 30-unit program, up to 12 units of electives may be selected in the appropriate fields related to the major occupational field.

1. Prerequisites:
   a. Admission to the appropriate program within the Department of Special Education.
      (1) Complete application to department as well as to the University.
      (2) Complete GRE General Test (a minimum verbal and quantitative score total of 1400 is required).
      (3) A minimum GPA of 2.5 for the last 60 undergraduate units attempted.
      (4) Admissions interview with faculty;
   b. A basic California Teaching Credential or a minimum of 12 units of Education coursework completed as part of the Specialist Credential Requirements.
   c. Completion of prerequisite coursework: For Gifted Education, Special Education 502 and 508. For all other programs, Special Education 500, 501.
2. Core program (15-18 units)
   SPED 644 The Gifted Student (3); or
   SPED 650 Special Topics in Special Education (3) or
   SPED 677 Educational Management of Severe Behavior Disorders (3) or
   SPED 696 Advanced Topics in Special Education (3) (see adviser).
   SPED 670 Seminar in Education of Exceptional Children (3)
   SPED 681 in area of specialty (3) (SPED 644 meets this requirement for students in the Gifted Specialization).
Specific Requirements for the Master of Science Degree in Rehabilitation Counseling

(Major Code: 12221)

In addition to meeting the requirements for classified graduate standing, and the basic requirements for the master's degree, as described in Part Two of this bulletin, the student must complete a minimum of 60 graduate units of 500-, 600- and 700-numbered courses, to include:

40 units of required courses:
- ARP 645 Assessment and Vocational Development (3)
- ARP 646 Group Dynamics in Rehabilitation (3)
- ARP 648 Introduction to the Rehabilitation Process (3)
- ARP 650 Medical and Psychological Aspects of Disability (3-3)
- ARP 657 Placement of the Disabled (3)
- ARP 710A-710B Seminar in Rehabilitation (3-3)
- CNED 610A Determinants of Human Behavior (3)
- CNED 615 Seminar in Multicultural Dimensions in Counseling (3)
- CNED 660 Theory and Process of Counseling (3)
- CNED 665L Counseling Practicum Laboratory (1) Cr/NC
- ED 690 Procedures of Investigation and Report (3)

12-15 units selected from the following:
- ARP 743 Fieldwork in Rehabilitation (3-6) Cr/NC
- ARP 744 Practicum in Rehabilitation (3-9) Cr/NC
- ARP 745 Internship in Rehabilitation (2-6) Cr/NC

5-8 units of electives as determined by consent of the faculty advisor.

Comprehensive Examination

A written comprehensive examination is required. The student must demonstrate satisfactory performance on a written comprehensive examination, in lieu of a thesis, prepared by the Rehabilitation Counselor Program. Reservations for the examination must be made in advance in the Rehabilitation Counselor Program Office, North Education Building, Room 279.

Program Structure

The Rehabilitation Counselor Program offers a two-year, full-time format that leads to the Master of Science in Rehabilitation Counseling. Students are also accepted on a part-time basis.

Master of Science Degree in Counseling

General Information

The Department of Counselor Education offers graduate study leading to either the 30-unit Master of Arts degree in Education with a concentration in Counseling or the 60-unit Master of Science degree in Counseling.

The Master of Science degree in Counseling provides an integrated sequence of study in the theories, research, and practice of counseling. This program prepares the student for the profession of counseling as applied in the students, human services agencies, and industry. The appropriate for counseling in a variety of settings with specialized study and experiences offered in Marriage, Family, and Child Counseling; School Counseling; and School Psychology. Initiated seminars and independent study. Students not seeking a defined specialty are encouraged to organize their course selections thematically to support such professional roles as college counseling, community counseling, career counseling, and human resource development.

The Department of Counselor Education offers courses which may be applied to either the regular program and full-time in the Community Based Block.

Within the regular program the majority of courses are available in the late afternoons or evenings thus accommodating students who intend to work or who have fieldwork placements. With careful planning and possible summer session courses, full-time students can complete the Master of Science degree in Counseling in two years. Part-time students who take at least two courses a semester and in summer session may expect to double the time needed to complete the degree. Student planning must be done with the advisor and should take into account the following guidelines: Education 690 should be taken as early as possible and must be completed prior to counselor education 640, 640 prior to 650; counselor education 600 and 600L are to be completed prior to 660, 670 prior to 700, and 740 prior to 700L.

The Community Based Block (CBB) is a special unit within the Department of Counselor Education. The CBB is community based in two senses of the word “community.” The basic approach to learning is the development of a total, self-contained “learning community” - a group of approximately 30 full-time graduate students and at least three core faculty members committed to working and learning together. The word “community” also refers to the locale of the program (virtually all of the program is off-campus) and to its special focus on the inner-city, people of difference, and the culture of poverty. The CBB deliberately recruits an extremely diversified group of students. Although the CBB places special emphasis on working in inner-city settings with multiethnic populations, admission to the program is not limited to students committed to working with these populations. The program is designed for students who intend to work in a variety of settings and includes appropriate fieldwork placements.

Financial Assistance

The department sponsors the Counselor Education Loan Fund honoring Professors Leonard Strom and John Schmidt which along with other university-wide programs, is administered by the Financial Aid Office of the university. Other forms of financial assistance administered by the University are presented elsewhere in this bulletin.

Accreditation

The National Council for the Accreditation of Teacher Education (NCATE) has accredited the specialization in school counseling and, in conjunction with the National Association of School Psychologists (NASP), in school psychology. These national accreditations, however, do not guarantee certification or credentialing as school counselors or school psychologists outside of California. It is the student’s responsibility to be aware of other state's requirements, and to arrange adjustment in the program accordingly if credentials are to be sought elsewhere.

Admission to Graduate Study

In seeking admission to graduate study in counseling, the student should write directly to Dr. Gordon M. Thompson, Chair, Department of Counselor Education, requesting appropriate application materials. Degree, program, and specialization information and detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms. All application materials become the property of the department and will not be returned to the applicant.

In addition to application with the Department of Counselor Education, the student must file an application for admission to San Diego State University with the Office of Admissions. It is essential that the following application materials be submitted to the Department of Counselor Education by March 1 for fall admission or October 1 for spring admission. Applicants for the Community Based Block are considered only in the spring for admission in the fall.

1. Completed application form.
2. At least four letters of recommendation.
3. Transcripts of all collegiate work (official copies to the Graduation, photocopies to the department).
4. Graduate Record Examination (GRE) scores – Aptitude portion (official copies to the department).
5. Applicants whose GRE scores and/or grade point average fall below the University standard must supply additional data to support consideration for admission.

Recommendations are made by the Admissions Committee to the department faculty and chair who make the final recommendation for admission to the University.
Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, as described in Part Two of this bulletin and be recommended by the faculty. A student may be advanced to candidacy if the official program has been filed and after having earned a minimum grade point average of 3.0 in at least 24 units listed on the official program. A minimum of 18 units listed on the official program must be completed prior to advancement; coursework in progress at time of advancement can count as part of these 18 units.

Specific Requirements for the Master of Science Degree in Counseling

(Major Code: 08261)

In addition to meeting the requirements for admission to the University with classified graduate standing, the student must satisfy the basic requirements for the master's degree specified below.

Selection of Plan A or Plan B

The selection of Plan A, the thesis or project or Plan B, the comprehensive examination plan, is made in consultation with the adviser at the time the official program is filed. Plan A thesis is designed for students who have a particular research problem they wish to investigate in some detail. The Plan A project is expected to be a rigorous application of research and theory in a professional endeavor, e.g., designing an elementary school counseling program. The comprehensive examination option for Plan B requires demonstration of the integration and application of theory, research, and techniques. It is expected that the student will take the examination at the end of each semester. Information is available from the Counselor Education office.

Course Requirements

Students are expected to consult with their adviser prior to taking any coursework leading to the master's degree. Selections of courses have been designated for the specializations and specialization in School Counseling. The student must complete a minimum of 60 units (62 units for the Specialization in School Counseling) of 500-, 600-, and 700-numbered courses, including:

1. Common Core (6 units):
   - ED 650: Procedures of Investigation and Report (3)
   - CNED 600: Counseling Communication Skills (2)
   - CNED 600L: Counseling Prepracticum (1) CR/NC

2. Foundations (a minimum of 9 units):
   - CNED 610A: Determinants of Human Behavior: Personality (3)
   - CNED 610B: Determinants of Human Behavior: Social and Cultural (3)
   - CNED 610C: Determinants of Human Behavior: Development (3)
   - CNED 610D: Determinants of Human Behavior: School Learning (3)
   - CNED 615: Seminar in Multicultural Dimensions in Counseling (3)

3. Theory, Research, and Techniques (a minimum of 12 units):
   - CNED 640: Theory and Process of Appraisal (3)
   - CNED 650: Theory and Process of Career Development (3)
   - CNED 651: Counseling for Sex Roles in Transition (3)
   - CNED 660: Theory and Process of Counseling (3)
   - CNED 662: Counseling Interventions with Children and Adolescents (3)
   - CNED 670: Theory and Process of Group Counseling (3)
   - CNED 680: Theory and Process of Consultation (3)
   - CNED 685: Theory of Marriage and Family Counseling (3)

4. Integration and Application of Theory, Research, and Techniques (a minimum of 6 units):
   - CNED 730: Fieldwork in Counseling (2-6)
   - CNED 740: Practicum: Individual Counseling (3)
   - CNED 741: Practicum: Group Counseling (3)
   - CNED 750: Advanced Seminar and Practicum: Individual Counseling (3-6) CR/NC
   - CNED 780: Internship (2-6) CR/NC

5. Research (a minimum of 3 units):
   - CNED 795A: Thesis (3) CR/NC/SP
   - CNED 795B: Professional Seminar (3)
   - CNED 795C: Professional Seminar (3)

6. Electives: 24 units selected with adviser's approval.

Specialization in Marriage, Family, and Child Counseling

The Master of Science in Counseling with a specialization in Marriage, Family, and Child Counseling, is designed to satisfy the coursework requirements for the California License for Marriage, Family, and Child Counselors. The student must design the sequencing of the degree program in consultation with the adviser, and must complete a minimum of 60 units of 500-, 600-, and 700-numbered courses, including:

1. Prerequisite: Admission to the University and the Department of Counselor Education for specialized study in marriage, family, and child counseling.
2. Common Core (6 units):
   - Education 690, Counselor Education 600 and 600L.
3. Foundations (12 units):
   - Counseling Education 610A, 610B, 610C, and 615.
4. Theory, Research, and Techniques (minimum of 12 units):
   - Counseling Education 640, 660, 662, 670, 685, 770.
5. Integration and Application of Theory, Research, and Techniques (9 units):
   - Counseling Education 730, 740, 750.
6. Additional requirements for the specialization (minimum of 12 units):
   - CNED 585A: Human Sexuality for Counselors (3)
   - CNED 585B: Dynamics of Adjustment Behavior (3)
   - CNED 695: Seminar in Ethical and Legal Issues for Counselors (3)
   - HS 574: Habit-Forming Substances (3)
7. Research (3 units):
   - Counseling Education 710A or 710B or 799A.
8. Electives (6 units):
   - Selected with approval of adviser.

For additional information related to the Marriage, Family, and Child Counselor Specialization and licensure, contact the Department of Counselor Education or the Director of the Specialization.

Specialization in School Counseling

The Master of Science in Counseling with a specialization in School Counseling includes coursework and experiences designed to meet the competencies required for the California Pupil Personnel Services Credential (Credential Code: 00800). This credential authorizes the holder to function as a counselor or other pupil personnel specialist in grades K through 12. Additional information may be obtained from the Department of Counselor Education office or the Director of the School Counseling Specialization. The student must design the sequencing of the degree program in consultation with the adviser, and must complete a minimum of 60 units of 500-, 600-, and 700-numbered courses, including:

1. Prerequisites:
   - a. Admission to the University and the Department of Counselor Education for specialized study in school counseling.
   - b. California Basic Educational Skills Test (CBEST) scores to be reported to the Department prior to beginning this sequence of study. A photocopy will suffice.
   - c. The student should apply for a Certificate of Clearance prior to beginning the sequence of study. A photocopy will suffice.

2. Common Core (6 units):
   - Education 690, Counselor Education 600 and 600L.
3. Foundations (a minimum of 9 units):
4. Theory, Research, and Techniques (a minimum of 18 units):
   Counselor Education 640, 650, 660, 662, 670, 680.

5. Integration and Application of Theory, Research, and Techniques (a minimum of 9 units):
   Counselor Education 730, 740, 790.

6. Additional Requirements for Specialization (a minimum of 3 units):
   Counselor Education 620, 745.

7. Research (a minimum of 3 units):
   Counselor Education 710A or 710B or 799A.

8. Electives (12 units):
   Selected with approval of adviser.

Students must receive a grade of B or better (C or credit/nc for credit/noncredit) in every course to document attainment of the competencies required for the Pupil Personnel Services Credential. Students not meeting this requirement must immediately consult the adviser or director of the specialization regarding application or declaration procedures. Students must follow the regular application procedures and requirements. An individualized program of study may be designed on approval of the School Counseling Committee.

Specialization in School Psychology

The Master of Science in Counseling with a specialization in School Psychology includes coursework and experiences designed to meet the competencies leading to the California Pupil Personnel Services Credential (Credential Code: 00800) and the credential in School psychologist or other pupil personnel specialist in grades K through 12. Additional director of the School Psychology Specialization. The student should design the following sequence of study, the adviser, and must complete a minimum of 82 units.

1. Prerequisites:
   a. Admission to the University and the Department of Counselor Education for special education in school psychology.
   b. California Basic Educational Skills Test (CBEST) scores must be reported to the
      department prior to beginning this sequence of study. A photocopy will suffice.

2. Common Core (6 units):
   Education 690, Counselor Education 600 and 600L.

3. Foundations (a minimum of 12 units):
   Counselor Education 610B, 610C, 610D, 615.

4. Theory, Research, and Techniques (a minimum of 15 units):
   Counselor Education 640, 660, 680, 662, 670, 690.

5. Integration and Application of Theory, Research, and Techniques (6 units):
   Counselor Education 730, 740.

6. Additional Requirements for Specialization (a minimum of 14 units):
   CNED 642A and 642B (individualized Appraisal of Learning Characteristics (4-4)
   CNED 752 (Seminar and Practicum: School Psychology (3-6) Cr/NC

7. Research (a minimum of 9 units):
   Counselor Education 710A, 760, and 710B or 799A.

In addition to the courses required for the Master of Science in Counseling with a
California School Psychology Credential, the following courses or equivalents are required for the
Special Education: Exceptional Individuals (3)
CNED 753 Advanced Seminar in School Psychology (3)

Students must receive a grade of B or better (C or credit/nc for credit/noncredit) in every course to document attainment of the competencies required for the Pupil Personnel Services and School Psychology credentials. Students not meeting this requirement must immediately consult with the adviser or director of the School Psychology Specialization. In addition to the required courses and experiences, the student must pass all components of the CBEST for eligibility for the credential.

The school psychology program, including degree and credentials requirements, requires three years of full-time study (or expanded time for part-time study). The final year, Counselor Education 760, 780, and 710B or 799A, is strongly recommended as a full-time experience. Students will be eligible for the Pupil Personnel Services Credential immediately preceding this final year of study.

Students already holding a master's degree in counseling, psychology, or a related area may apply for non-degree credential preparation in School Psychology. These students must follow the regular application procedures and requirements. An individualized program of study may be designed on approval of the School Psychology Committee.

Selecting a Specialization

Students intending to pursue one of the three defined specializations should consult with the director of the specialization regarding application or declaration procedures. Students must declare their intent to specialize prior to filing the official program of study.

Teaching/Service Credentials and Certificates

The College of Education offers programs which lead to teaching, specialist, and services credentials. Students who desire to seek a credential should consult with departmental advisors in order to determine their status and needed requirements. Information on these credentials is available in the offices of the several departments of the College of Education and in the Credentials Office, College of Education.

The College of Education has obtained approval for programs leading to the following credentials:

Approved Credential Programs

<table>
<thead>
<tr>
<th>School Service Authorized</th>
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<tbody>
<tr>
<td>*1. Multiple subject credential</td>
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<tr>
<td>*2. Single subject credential</td>
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<tr>
<td>*3. Community college instructor credential</td>
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* Refer to the General Catalog for a description of this program.

Specialist Credentials

Bilingual/Cross-cultural
Reading Specialist
Special Education:
Communication Handicapped (Dept. of Communicative Disorders)
Physically Handicapped
Learning Handicapped
Severely Handicapped
Gifted

Service Credentials

Administrative Services
Clinical Rehabilitative Services (Dept. of Communicative Disorders)
Pupil Personnel
School Psychology
Health - School Nurse (School of Nursing)

Specialist Credentials

Language Development Specialist
Resource Specialist
Bilingual/Cross-Cultural Specialist Credential

(Credential Code: 00440)
Candidates in the credential program must possess a valid California Teaching Credential, must have completed Policy Studies in Language and Cross-Cultural Education 451 or equivalent, and must successfully complete the following 24 units and a comprehensive examination. Also, oral and written proficiency in English and in a second language must be demonstrated prior to completion of the credential program. Candidates must have approval of their adviser for their course of study, and must apply for the credential through the Credentials Office upon successful completion of program.

PLC 553 Oral Language Assessment Techniques ................. Units 3
PLC 602 Cross-Cultural Experience in Classroom Interaction ..... 3
PLC 613 Organizational Strategies and Staff Development for the Multicultural School-Community .................. 3
PLC 650 Bilingual/Cross-Cultural Curriculum Development and Teaching Strategies .................. 3
PLC 651 Multicultural Methods and Curriculum in Content Areas .... 3
PLC 652 Language Arts in the Multicultural Education Curriculum .... 3
ED 880 Procedures of Investigation and Report .................. 3
Linguistics 550 Theory and Practice of English as a Second Language ... 3

Community College Instructor Credential

Specific Requirements
1. An associate degree and four years of occupational experience in a subject matter area plus 12 units in designated courses on the community college.
2. A baccalaureate degree and two years of occupational experience in a major or minor in a subject matter area related to this occupational experience plus six units in designated courses on the community college.
3. A master's degree in a subject matter area designated in Title 5, Section 5, #52210 (subjects commonly taught at a community college).

Baccalaureate Degree Candidates
Administration, Rehabilitation and Postsecondary Education 301, 302, 303, 312, 314, 315, 320, or 565 are offered to students who have had experience in an occupational program taught in a community college. Students may also enroll if they presently hold a California partial credential recommended.

Master's Degree Candidates
Community college teachers of academic subjects (e.g., biology, English, or psychology) are not required to take any specific education courses. However, most community colleges require some professional preparation or experience. The professional education courses in the community college program enhance a student's employability and competence; master's degree in the subject are required to take some professional education courses.

Most departments on the San Diego State University campus have developed programs concurrently as little as one year of full-time study. The courses in education are typically offered three o'clock in regular semesters.

Special Education Specialist Credentials
San Diego State University offers programs leading to the following Special Education Specialist Credentials: Learning Handicapped (Major Code: 00464), Severe Handicapped (Major Code: 00466), Physically Handicapped (Major Code: 00465), and Gifted (Major Code: 00465).申请者必须持执《特殊教育专家证书》才能在各种特定教育设置下教学，必须具有完成三学年的教学任务，包括专业领域和特殊教育领域，必须满足《三特别专家证书》课程要求。除此之外，还必须完成专业领域和特殊教育领域教学任务。
Requirements for Admission

1. Admission to the appropriate program within the Department of Special Education.
   a. Complete application to department as well as the University.
   b. Complete GRE General Test (a minimum verbal and quantitative score total of 950 is required).
   c. A minimum grade point average of 2.5 for the last 60 undergraduate units attempted.
   d. Admissions interview with faculty.
   e. A basic California Teaching Credential.
2. Completion of prerequisite coursework: For Gifted Education, Special Education 502 and 506. For all other programs, Special Education 500 and 501 (6 units).
3. Evidence of successful experiences in educational settings with handicapped children and youth.

Program

1. Core Course
   Special Education 553 (3) (Not required for the Gifted Specialization.)
2. Specialization Courses
   a. Learning Handicapped – Special Education 480A (4-6 units), 524, 534, 544, 547, and six units from the following: 527, 529, 560, 562, 563 (22-24 units).
   b. Severely Handicapped – Special Education 480B (4-6 units), 526, 528, 536, 545, 560, 564 (25-27 units).
   c. Physically Handicapped – Special Education 480C (4-6 units), 526, 534, 544, 547, 560, 562 (22-24 units).
   d. Gifted – Special Education 542, 644, three units of Special Education 650 (approved by adviser), 771 (2-4 units), and four units of approved electives (15-17 units).

Administration of Deafness Rehabilitation Certificate

The purpose of this certificate program is to provide the holder with administrative knowledge and skills needed to develop and supervise rehabilitation programs and services for deaf and hearing impaired clients. This academic training is designed for individuals currently working in government agencies or affiliated programs which serve deaf and hearing impaired clients.

This is an advanced academic certificate at the postbaccalaureate level. Admission requirements are a bachelor's degree in rehabilitation or a related field and relevant work experience in rehabilitation programs which serve deaf and hearing impaired clients. A master's degree in Rehabilitation Counseling, as well as leadership experience in rehabilitation programs is strongly encouraged. Relevant work or academic training in program director, except that a bachelor's degree is required. Students who do not have a GPA of at least 2.5 in the last 60 semester units attempted must also have a GPA of at least 2.5 in the last 60 semester units attempted.

1. Summer, On-Campus Study Experience
   ARP 660 Seminar in Educational Administration (6)
   ARP 710B Seminar in Rehabilitation (3)
2. Fall, Fieldwork Experience
   ARP 745 Internship in Rehabilitation (3) OR NC
   ARP 798 Special Study in Rehabilitation Administration (3)
3. Spring, Fieldwork Experience
   ARP 745 Internship in Rehabilitation (3) OR NC
   ARP 798 Special Study in Rehabilitation Administration (3)
   Contact the Director of Deafness Rehabilitation programs at (619) 594-6406 (VTTY) for further information.

Bilingual (Spanish) Special Education Certificate

This certificate program provides specialized preparation for teachers of learning handicapped children whose primary language is Spanish.

Prerequisites for admission include the following:

1. Completion of, or admission to, the departmental program for the Specialist Credential in Special Education (Learning Handicapped).
2. Special Education 527.
3. Spanish language proficiency at the S-3 (FSI 3) level.

Proficiency may be demonstrated by passing the "Test of Culture and Teaching" used by the College of Education bilingual emphasis programs.

Certificate program requirements include the following: Policy Studies in Language and Cross-Cultural Education 553, 602, Special Education 546, and demonstration of competence in teaching learning handicapped students whose primary language is Spanish.

A grade point average of 3.0 must be obtained in the four courses. Contact the Department of Special Education for further information.

Instructional Microcomputer Software Design Certificate

The purpose of this certificate is to prepare specialists who can develop or assist in the development of microcomputer software to meet specific instructional, training or management needs in the education of the language development specialist.

There are two competency areas incorporated in the certificate: instructional and educational computing. Students must complete a minimum of 18 units with a 3.0 (B) grade point average and no less than a "C" in any course. For application or further information, see the Director of the program in the Department of Educational Technology.

Prerequisites: A bachelor's degree from an accredited institution with a grade point average of at least 2.5 (when A equals 4) in the last 60 semester (90 quarter) units attempted. A combined score of at least 950 on the verbal and quantitative sections of the GRE General Test, and a grade point average of 3.0 must be obtained in the eight courses. Students who complete the program are eligible for the Language Development Specialist Certificate.

Requirements to exit the program:

1. Valid California teaching credential.
2. Six units of an appropriate foreign language at the college level.

Language Development Specialist Certificate

The Language Development Specialist Certificate provides an interdisciplinary approach in linguistics and policy studies to train teachers in theory and application of English as a second language methodology for linguistically diverse students in grades K–12.

Requirements to exit the program:

1. Valid California teaching credential.
2. Six units of an appropriate foreign language at the college level.

Students who complete the program are eligible for the Language Development Specialist examination and Commission on Teacher Credentialing certification.

* Prerequisites waived for students in this program.
Supported Employment and Transition Specialist Certificate

The purpose of this certificate is to prepare specialists who can develop and implement programs in supported employment and adult community living for youth and young adults with handicaps. A student may elect to emphasize programs for moderately and mildly handicapped youth, or programs for severely and multiply handicapped youth. Students must complete a minimum of 21 units with a 3.0 (B) grade point average. For application or further information, see the Program Advisers for the Supported Employment and Transition Certificate program in the Department of Special Education.

Prerequisites: A bachelor's degree from an accredited institution with a grade point average of at least 2.5 (when A equals 4) in the last 60 semester (90 quarter) units attempted. A total of at least 950 (verbal and quantitative) on the Graduate Record Examination. Special Education 471 and 600.

Required courses (21 units)

- SPED 501 Special Education Procedures and Interpersonal Processes (3) or ARP 684 Introduction to the Rehabilitation Process (2)
- SPED 583 Career and Vocational Education for Exceptional Youth (3)
- SPED 584 Supported Employment: Training and Placement Techniques (3)
- SPED 771 Directed Internship: Special Education (3) Cr/NC or ARP 744 Practicum in Rehabilitation (3) Cr/NC
- CNED 730 Fieldwork in Counseling (3) Cr/NC

Nine units from the following:

- SPED 545 Curriculum and Instruction for Severely Handicapped Students (3)
- SPED 547 Adaptive School Behavior Instruction for Low Achieving Students (3)
- SPED 650 Special Topics in Special Education (3)
- SPED 790 or ARP 790 Special Study (3)
- ARP 645 Assessment and Vocational Development (6)
- ARP 687 Placement of the Disabled (3)
- CNED 650 Theory and Process of Career Development (3)
- TE 522 Substance Abuse in the Schools (3)

Program advisers will meet with each certificate student to design an Individualized Teaching Plan (X) on the student's educational background and professional experience. Student may enroll in certificate program and master's degree program concurrently. No more than 3 units of the certificate program may be applied to a master's degree.

Teaching the Emotionally Disturbed/Behaviorally Disordered Certificate

This certificate provides specialized preparation for teachers of children with severe emotional disturbance who have been labeled as severely emotionally disturbed/behaviorally disturbed. A student may elect to emphasize programs for moderately and mildly handicapped youth, or programs for severely and multiply handicapped youth. Students must complete a minimum of 21 units with a 3.0 (B) grade point average. For application or further information, see the Program Advisers for the Supported Employment and Transition Certificate program in the Department of Special Education.

Prerequisites: A bachelor's degree from an accredited institution with a grade point average of at least 2.5 (when A equals 4) in the last 60 semester (90 quarter) units attempted. A total of at least 950 (verbal and quantitative) on the Graduate Record Examination. Special Education 471 and 600.

Program requirements for the Certificate in Teaching the Emotionally Disturbed/Behaviorally Disordered (or approved section), and demonstrated competence in teaching emotionally disturbed/behaviorally disordered students. A grade point average of 3.0 is required for certificate coursework. Contact the Department of Special Education for further information.

Courses Acceptable on Master's and Doctoral Degree Programs in Education

GRADUATE COURSES

Students without classified graduate standing are not admitted to 600- and 700-numbered courses in Education. Twelve units of professional education are prerequisite for enrollment in all graduate courses.

GENERAL

625. Instruction in Mathematical Problem Solving (3)
- Two lectures and three hours of laboratory. Prerequisite: Teaching Credential.
- Methods of instruction, implementation, and evaluation of mathematical problem-solving programs in elementary and secondary grades. Use of microcomputers and hand-held calculators to solve mathematical problems.

690. Procedures of Investigation and Report (3)
- Research methods in education. Location, selection and analysis of professional literature. Methods of investigation, data analysis and reporting. Required of all applicants for advanced degrees in education.

696. Selected Topics in Community Influences on Learning and Curriculum Planning (1-3)
- Prerequisite: Teaching experience. Intensive study in specific areas of education. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit six units of any 596 or 696 offered by the College of Education applicable to a master's degree. (Formerly numbered Education 687, Elementary Education 687, Secondary Education 687, and Teacher Education 687.)

791A. Evaluation Techniques (3)
- Prerequisites: Education 690 and advancement to candidacy for the master's degree. Theory and practice of instructional program and product evaluation.

791B. Practicum: Evaluation (3)
- Prerequisites: Education 690 and advancement to candidacy for the Master of Arts degree in Education. Supervised experience in conducting a program or product evaluation, strategy selection, procedures, reporting methods, culminating in a written project.

795A-795B. Seminar (3-3)
- Prerequisites: Education 690 and advancement to candidacy for the Master of Arts degree in education. An intensive study in selected areas of education culminating in a written project. Limited to students following Plan B for the Master of Arts degree in education.

797. Research (1-3) Cr/NC/SP
- Prerequisites: Education 690 and advancement to candidacy for the master's degree. Research in one of the fields of education. Maximum credit six units applicable to a master's degree.

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

799B. Thesis Extension (0) Cr/NC
- Prerequisites: Prior registration in Thesis 799A with an assigned grade symbol of SP. Preparation of a project or thesis for the master's degree.

For application or further information, contact the Program Advisers for the Supported Employment and Transition Certificate program in the Department of Special Education.
DOCTORAL COURSES

801. Seminar on Social and Cultural Foundations of Multicultural Education (3-4)
Prerequisite: Admission to the doctoral program or consent of the Graduate Coordinator. Students are required to have a background in the social sciences or humanities relevant to such educational issues as social behavior and minority cultures. Social and cultural parameters that have contributed to the shaping of American society and affected developments in education in the last two decades. Emphasis on the impact on multicultural education and human social behavior in pluralistic societies.

804. Bilingual Education: Models and Current Research Trends (3-4)
Prerequisites: Education 801, a background in sociolinguistics or social anthropology and admission to the doctoral program or consent of Graduate Coordinator. Analysis of existing models of bilingual education based on previously identified needs of linguistic minority students. Demonstrated needs from current research in classrooms by ethnographers. Significance of linguistic/cultural competencies for academic performance and validity of existing impact studies.

805. Practicum in Education of Ethnically Diverse Learners (1) Cr/NC
Two hours of activity. Prerequisite: Concurrent registration in Education 806. Culturally defined variables such as styles of communication, interaction, values, cognition and learning. Case studies, simulations and field experience.

806. Ethnically Diverse Learners: Public Policy and Classroom Practice (3-4)
Prerequisites: Education 801 and admission to the doctoral program or consent of the Graduate Coordinator. Background in psychological foundations of education and educational policy is required. National, state and school policy directed at providing the minority learner with equal educational opportunity. Discussion of legislation for desegregation, bilingual education, school implementation cases and classroom practices as these relate to equal educational opportunity.

810. Seminar in Curriculum Development (3-4)
Prerequisites: Administration, Rehabilitation and Postsecondary Education 630, Policy Studies in Language and Cross-Cultural Education 650, Teacher Education 600 and consent of Graduate Coordinator. Examination of curricular issues with emphasis on the processes of decision making, curricular development, implementation and evaluation. Attention given to innovative programs and to role and process of legislation in curricular change.

Prerequisite: Admission to the doctoral program or consent of the Graduate Coordinator. Issues relating to handicapped individuals in society. Current and historical practices in education and treatment and impact of public policy on service systems. Maximum credit four units.

812. Planning and Supervising Programs for Persons with Special Needs (3)
Prerequisites: Admission to doctoral program or consent of Graduate Coordinator. Education 811 or extensive background in special education or related field. Program planning and development in settings serving special populations. Policy analysis, supervision, manpower and resources development. Emphasizing services to the handicapped, adjustment to family living.

820. Advanced Educational Statistics (3-4)
Prerequisites: Education 690, Teacher Education 546, 646, or equivalent graduate level courses and consent of Graduate Coordinator. Theory and practice of statistical inference for research in education. Probability and sampling theory, data collection and organization, computer applications in educational libraries.

825. Reading Research (3)
Prerequisites: M.A. in reading or related language area, and two years of teaching experience. Analysis of existing literature in reading research and its application to the field. Exploration of areas of research need.

830. Advanced Seminar: Processes of Reading (3)
Prerequisite: Admission to doctoral program or consent of Graduate Coordinator and Education 825. Linguistic, cognitive and affective factors that influence a reader while processing texts. Models of reading process, discourse analysis of written text, and models of reading instruction.

835. Seminar (1-8)
Prerequisite: Admission to the doctoral program or consent of the Graduate Coordinator. Investigation of a particular topic or issue, emphasis on empirical research in education. See Class Schedule for specific content. Maximum credit eight units applicable to an advanced degree.

837. Doctoral Research (1-3) Cr/NC/SP
Prerequisite: Admission to the doctoral program, independent investigation in the general field of the dissertation.

839. Doctoral Dissertation (3-6) Cr/NC/SP
Prerequisites: An officially constituted dissertation committee and advancement to candidacy. Preparation of the dissertation for the doctoral program. Enrollment is required during the term in which the dissertation is approved.
Administration, Rehabilitation and Postsecondary Education

North Education 279, (619) 594-6115

Faculty

Community College/Vocational Education
Robert J. Behm, Ph.D., Associate Professor of Administration, Rehabilitation and Postsecondary Education
William E. Pitland, Ed.D., Associate Professor of Administration, Rehabilitation and Postsecondary Education, Program Coordinator

Educational Administration
Raymond F. Latta, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education
Alfred Merino, Ed.D., Professor of Administration, Rehabilitation and Postsecondary Education
Larry E. Frase, Ed.D., Associate Professor of Administration, Rehabilitation and Postsecondary Education
Carolyn Downey, Ph.D., Assistant Professor of Administration, Rehabilitation and Postsecondary Education
Larry P. Stevens, Ed.D., Assistant Professor of Administration, Rehabilitation and Postsecondary Education

Rehabilitation Counseling
L. Ronald Jacobs, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education
Richard D. Jones, Ed.D., Professor of Administration, Rehabilitation and Postsecondary Education
Fred R. McFarlane, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education, Chair of Department

General

UPPER DIVISION COURSE

596. Topics in Administration, Rehabilitation and Postsecondary Education (1-3)
Selected problems in administration, rehabilitation and postsecondary education. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 bachelor's degree. Maximum credit of six units of 596 applicable to a unit master's degree. (Formerly numbered Education 596, Educational Technology and Librarianship 596, and Development, Administration and Technology 596.)

GRADUATE COURSES

696. Advanced Topics in Administration, Rehabilitation and Postsecondary Education (1-3)
Prerequisite: Twelve units in Administration, Rehabilitation and Postsecondary Education. Intensive study in specific areas of Administration, Rehabilitation and Postsecondary Education. May be repeated with new content. See Class Schedule for specific content. (Formerly numbered Development, Administration and Technology 596.)

798. Special Study (1-4) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with department chair and instructor. May involve fieldwork.
Individual study: Maximum credit six units applicable to a master's degree. (Formerly numbered Development, Administration and Technology 798.)

Economic Administration

GRADUATE COURSES

600. Principles of Educational Administration (3)
Educational administration and leadership as a profession. Related organizational concepts and management theories, Principles and competencies for leadership and administrative practice as each relates to the aspiring school administrator.

610. Educational Leadership (3)
Concepts and techniques of leadership, analysis of the factors and practice in the procedures of individual and group leadership as applied to educational environments.

630. Curriculum Design and Management (3)
Prerequisites: Administration, Rehabilitation and Postsecondary Education 610 and classified graduate standing.
Administrator's role in curriculum leadership and management in elementary, middle, and secondary school; emphasis on interrelationships within levels; supervision of curricular and secondary school; emphasis on interrelationships within levels; supervision of curricular and secondary school; emphasis on interrelationships within levels; supervision of curricular and secondary school; emphasis on interrelationships within levels; supervision of curricular and secondary school; emphasis on interrelationships within levels; supervision of curricular and secondary school; emphasis on interrelationships within levels; supervision of curricular and secondary school; emphasis on interrelationships within levels; supervision of curricular and secondary school; emphasis on interrelationships within levels; supervision of curricular and secondary school; emphasis on interrelationships within levels; supervision of curricular and secondary school; emphasis on interrelationships within levels; supervision of curricular and secondary school; 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652. Seminar in Instructional Improvement and Evaluation (3)
Prerequisites: Administration, Rehabilitation and Postsecondary Education 630 and classified graduate standing.
Improvement of instruction through application of principles and practices in assessment of teaching competency; development of teaching profiles; leadership skills in working with teachers to improve performance.

660. Field Experience in Educational Administration (1-6) Cr/NC/SP
Prerequisites: Nine units of required coursework in Administration, Rehabilitation and Postsecondary Education; classified graduate standing in the Educational Administration program.
Supervised field experience in schools or other educational settings. Monthly sessions with university faculty. Application to take this course must be made during preceding semester. Maximum credit 12 units, of which 4 units are applicable to a master's degree. (Formerly numbered Educational Administration 660A and Development, Administration and Technology 660.)

680. Seminar in Educational Administration (1-6)
Prerequisite: Consent of instructor.
Study of educational administration in a specialized field, such as community college, school district, a subject field, or designated services. Field experience when appropriate. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. (Formerly numbered Educational Administration 660 and Development, Administration and Technology 660.)

701. School Law and Legal Issues for Administrators (3)
Prerequisites: Completion of a graduate degree and approval of department.
Impact of school law on administrative roles and processes including due process for policy formation in educational personnel, student, and instructional areas.

715. School Finance and Fiscal Management (3)
Prerequisites: Completion of a graduate degree and approval of department.
Financial practices and problems including state and federal support plans, school plant management, resource allocation, and budgeting and educational accountability...

720. Educational Personnel Management and Practices (3)
Prerequisites: Completion of a graduate degree and approval of department.
Human resource management in educational administration including selection and evaluation, leadership and motivation, techniques as to morale and productivity. Analysis of educational personnel systems and employee assistance programs.

740. Advanced Seminar in Educational Administration (3)
Prerequisite: Consent of instructor.
Study of a selected area in educational administration, such as educational law, finance, supervision, personnel procedures, etc. May be repeated with new content. See Class Schedule for specific content. Maximum credit nine units applicable to a master's degree. (Formerly numbered Educational Administration 740 and Development, Administration and Technology 740.)

747. Instructional Leadership in a Multicultural Society (3)
Prerequisites: Completion of a graduate degree and approval of department.
Current theory and practice in meeting needs of diverse learners. Leadership and administrative dynamics in a multicultural society.

750. Educational Organizational Behavior and Development (3)
Prerequisites: Completion of a graduate degree and approval of department.
Organizational theory and research; educational leadership; improvement of educational organizational efficiency and effectiveness.

755. Educational Governance and Policy Development (3)
Prerequisites: Completion of a graduate degree and approval of department.
Development of educational policy and impact of politics in governance and administration; control functions of federal, state, and local agencies; influence of lay citizens and special interest groups; roles of judiciary, employee organizations and students.

760. Internship in Educational Administration (2-6) Cr/NC/SP
Prerequisite: Consent of instructor.
Internship for prospective educational administrators. Application to take this course must be made in the preceding semester by preregistration with the credential program coordinator. Released time may be required. May be repeated. Maximum credit 12 units applicable to the Professional Administrative Services Credential. (Formerly numbered Educational Administration 760 and Development, Administration and Technology 760.)

Rehabilitation Counseling

GRADUATE COURSES

645. Assessment and Vocational Development (6)
Four lectures and six hours of laboratory.
Prerequisite: Admission to graduate program in Rehabilitation Counseling.
Rehabilitation assessment, labor market information, and vocational planning implications. Current assessment approaches and vocational theories related to the disabled. (Formerly numbered Development, Administration and Technology 645.)

684. Group Dynamics in Rehabilitation (3)
Prerequisite: Admission to graduate program in Rehabilitation Counseling.
Theory, dynamics, process and leadership function as applied to group work in rehabilitation. Development and application of group leadership skills/techniques for adjustment, support, skill training, organizational problem solving and team-building groups in rehabilitation. (Formerly numbered Development, Administration and Technology 684.)

684A. Introduction to the Rehabilitation Process (3)
Two lectures and three hours of laboratory.
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. (Formerly numbered Counselor Education 680A and Development, Administration and Technology 684.)

685A-685B. Medical and Psychological Aspects of Disability (3-3)
Prerequisite: Open to rehabilitation graduate students and practitioners.
Disabling conditions, covering disabilities from perspective of medical and psychological implications for successful rehabilitation. Each disability is viewed in terms of functional limitations imposed and rehabilitative services needed. Administration, Rehabilitation and Postsecondary Education 685A not open to students with credit in Administration, Rehabilitation and Postsecondary Education 685B; Administration, Rehabilitation and Postsecondary Education 685B not open to students with credit in Administration, Rehabilitation and Postsecondary Education 685A. (Formerly numbered Counselor Education 680A and Development, Administration and Technology 684A.)

685A-685B. Medical and Psychological Aspects of Disability (3-3)
Prerequisite: Open to rehabilitation graduate students and practitioners.
Disabling conditions, covering disabilities from perspective of medical and psychological implications for successful rehabilitation. Each disability is viewed in terms of functional limitations imposed and rehabilitative services needed. Administration, Rehabilitation and Postsecondary Education 685A not open to students with credit in Administration, Rehabilitation and Postsecondary Education 685B; Administration, Rehabilitation and Postsecondary Education 685B not open to students with credit in Administration, Rehabilitation and Postsecondary Education 685A. (Formerly numbered Counselor Education 680A and Development, Administration and Technology 684A.)

686. Internship in Educational Administration (2-6) Cr/NC/SP
Prerequisite: Consent of instructor.
Internship for prospective educational administrators. Application to take this course must be made in the preceding semester by preregistration with the credential program coordinator. Released time may be required. May be repeated. Maximum credit 12 units applicable to the Professional Administrative Services Credential. (Formerly numbered Educational Administration 760 and Development, Administration and Technology 760.)

Rehabilitation Counseling

GRADUATE COURSES

645. Assessment and Vocational Development (6)
Four lectures and six hours of laboratory.
Prerequisite: Admission to graduate program in Rehabilitation Counseling.
Rehabilitation assessment, labor market information, and vocational planning implications. Current assessment approaches and vocational theories related to the disabled. (Formerly numbered Development, Administration and Technology 645.)

684. Group Dynamics in Rehabilitation (3)
Prerequisite: Admission to graduate program in Rehabilitation Counseling.
Theory, dynamics, process and leadership function as applied to group work in rehabilitation. Development and application of group leadership skills/techniques for adjustment, support, skill training, organizational problem solving and team-building groups in rehabilitation. (Formerly numbered Development, Administration and Technology 684.)

684A. Introduction to the Rehabilitation Process (3)
Two lectures and three hours of laboratory.
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. (Formerly numbered Counselor Education 680A and Development, Administration and Technology 684.)

685A-685B. Medical and Psychological Aspects of Disability (3-3)
Prerequisite: Open to rehabilitation graduate students and practitioners.
Disabling conditions, covering disabilities from perspective of medical and psychological implications for successful rehabilitation. Each disability is viewed in terms of functional limitations imposed and rehabilitative services needed. Administration, Rehabilitation and Postsecondary Education 685A not open to students with credit in Administration, Rehabilitation and Postsecondary Education 685B; Administration, Rehabilitation and Postsecondary Education 685B not open to students with credit in Administration, Rehabilitation and Postsecondary Education 685A. (Formerly numbered Counselor Education 680A and Development, Administration and Technology 684A.)

685A-685B. Medical and Psychological Aspects of Disability (3-3)
Prerequisite: Open to rehabilitation graduate students and practitioners.
Disabling conditions, covering disabilities from perspective of medical and psychological implications for successful rehabilitation. Each disability is viewed in terms of functional limitations imposed and rehabilitative services needed. Administration, Rehabilitation and Postsecondary Education 685A not open to students with credit in Administration, Rehabilitation and Postsecondary Education 685B; Administration, Rehabilitation and Postsecondary Education 685B not open to students with credit in Administration, Rehabilitation and Postsecondary Education 685A. (Formerly numbered Counselor Education 680A and Development, Administration and Technology 684A.)

687. Placement of the Disabled (3)
Two lectures and three hours of laboratory.
Prerequisite: Admission to Rehabilitation Counselor Program.
Determination of employment needs of disabled clients, case study method. Follow-through to placement. Continuous survey of employment needs and opportunities in the wider community. (Formerly numbered Counselor Education 680D and Development, Administration and Technology 684D.)

710A-710B. Seminar in Rehabilitation (3-3)
Prerequisite: Completion of at least 24 units leading to Master of Science in Rehabilitation Counseling.
Selected areas with emphasis in research in rehabilitation counseling. See Class Schedule for specific content. (Formerly numbered Development, Administration and Technology 710A-710B.)

743. Fieldwork in Rehabilitation (3-6) Cr/NC
Prerequisite: Admission to graduate program in Rehabilitation Counseling.
Orientation to the rehabilitation process including agency goals, operating strategies, rehabilitation counseling, and role expectations, and nature of rehabilitation client needs. Maximum credit six units applicable to a Master of Science degree in Rehabilitation Counseling. (Formerly numbered Development, Administration and Technology 743.)
744. Practicum in Rehabilitation (3-9) Cr/NC
Prerequisite: Admission to graduate program in Rehabilitation Counseling.
Clinical supervision of the rehabilitation process as it relates to outreach and referral, job
development, placement, counseling, and caseload management. Maximum credit nine units
applicable to a Master of Science degree in Rehabilitation Counseling. (Formerly numbered
Development, Administration and Technology 744.)

745. Internship in Rehabilitation (2-8) Cr/NC
Prerequisite: Admission to graduate program in Rehabilitation Counseling.
Supervised internship during final semester in rehabilitation setting which involves applica-
tion of rehabilitation counseling experiences. Maximum credit six units applicable to a Master
of Science degree in Rehabilitation Counseling. (Formerly numbered Development, Administra-
tion and Technology 745.)

746. Seminar in Vocational Rehabilitation with Severely Handicapped Deaf Clients (3)
Prerequisite: Consent of instructor.
Characteristics and needs of severely handicapped deaf rehabilitation clients. Procedures
for coordinating and providing rehabilitation services including vocational and psychological
diagnosis, supported employment, independent living and cross-cultural counseling through
American sign language. (Formerly numbered Development, Administration and Technology
746.)

North Education 179, (619) 594-6109

Faculty
James P. Carnevale, Ph.D., Professor of Counselor Education
John D. Chamley, Ed.D., Professor of Counselor Education, Associate Dean of the
College of Education
Emery J. Cummins, Ph.D., Professor of Counselor Education
Lawrence B. Feldberg, Ph.D., Professor of Counselor Education, Associate Dean of the
Graduate Division and Research
Ralph Llewellyn Miller, Ph.D., Professor of Counselor Education
Jean C. Ramage, Ph.D., Professor of Counselor Education
Maria Niel-Senour, Ph.D., Professor of Counselor Education
Valerie J. Cook, Ph.D., Associate Professor of Counselor Education
Raymond C. Howard, Ed.D., Associate Professor of Counselor Education
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Gordon M. Thompson, Ph.D., Associate Professor of Counselor Education (Graduate
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Sharon Grant-Henry, Ph.D., Assistant Professor of Counselor Education
Colette L. Ingraham, Ph.D., Assistant Professor of Counselor Education
Roberto Velasquez, Ph.D., Assistant Professor of Counselor Education

Courses Acceptable on Master's Degree Programs
in Counseling

UPPER DIVISION COURSES

585A. Human Sexuality for Counselors (3)
Prerequisite: Upper division course in human sexuality.
Dimensions of human sexuality that bear directly on the role and function of helping
professions. Human sexual development, sexual variations, sexual dysfunctions, intimate life
styles, treatment modalities and sexual ethics. Fulfills MFC license requirements.

585B. Dynamics of Adjustment Behavior (3)
Prerequisite: Upper division course in abnormal psychology.
Philosophies and dynamics of adjustment behavior, patterns and types of abnormal behav-
ior, and treatment modalities. Fulfills MFC license requirement.

596. Selected Studies (1-3)
Prerequisite: Consent of instructor.
A series of lecture and discussion sessions centering on current problems in counseling
and guidance. Designed to serve the needs of any person desiring to keep informed of
developments in this area. May be repeated with new content. See Class Schedule for specific
content. Maximum credit of six units of 596 applicable to a master's degree. Maximum
combined credit of six units of 596 and 696 applicable to a 30-unit master's degree. (Formerly
numbered and entitled Counselor Education 506, Guidance Conference.)

GRADUATE COURSES

600. Counseling Communication Skills (2)
Prerequisite: Concurrent registration in Counselor Education 600L.
Introduction to counseling. Fields utilizing discipline, and concepts underlying effective
counseling practice and interpersonal communication.

600L. Counseling Prepracticum (1) Cr/NC
Three hours of practicum.
Prerequisite: Credit or concurrent registration in Counselor Education 600.
Development of self-understanding. Communication skills needed for becoming an effec-
tive counselor.
Education/Counselor Education

610. Determinants of Human Behavior (3)
Implications of theory and research in behavioral sciences for the understanding of human behavior.
A. Personality
B. Social and Cultural
C. Development
D. School Learning

615. Seminar in Multicultural Dimensions in Counseling (3)
Issues, insights and techniques for improving effectiveness in working with culturally different populations.

620. Guidance Services in Public Education (3)
Historical, philosophical and legal bases of pupil personnel services; staff roles and relationships in a variety of organizational patterns.

621. Introduction to School Psychology (3)
Introduction to school psychology: roles (assessing, counseling, consulting); skills (innovative techniques, consultation); and issues (modifying the system, multicultural impact).

640. Theory and Process of Appraisal (3)
Prerequisite: Education 690.
Measurement theory and procedures, including interpretation of test results. Not open to students with credit in Counselor Education 645.

640L. Appraisal Laboratory (1) Cr/NC
Three hours of laboratory.
Prerequisite: Credit or concurrent registration in Counselor Education 640.
Directed laboratory activity focusing on topics presented in Counselor Education 640.

642A-642B. Individualized Appraisal of Learning Characteristics (4-4)
Three lectures and three hours of laboratory.
Prerequisite: Counselor Education 640. Counselor Education 642A is prerequisite to 642B.
Administration and interpretation of instruments and techniques for assessing learning characteristics of children from multicultural settings.
642B: Scholastic status, learning aptitudes, social maturity, interpersonal relations and behavioral adjustment.

650. Theory and Process of Career Development (3)
Vocational choice theory, occupational and educational materials used in career planning. Not open to students with credit in Counselor Education 645.

650L. Career Development Laboratory (1) Cr/NC
Three hours of laboratory.
Prerequisite: Credit or concurrent registration in Counselor Education 650.
Directed laboratory activity focusing on materials and processes used in career planning and other topics presented in Counselor Education 650.

651. Counseling for Sex Roles in Transition (3)
Development of counseling skills in career development, educational, psychological and social forces affecting contemporary women and men. Impact of these forces upon relationships between the sexes and personal definitions of femininity/masculinity.

660. Theory and Process of Counseling (3)
Counseling theories, processes and approaches appropriate to children and adolescents in multicultural school and community settings. Application of theories and research for individual, group, and systems interventions.

670. Theory and Process of Group Counseling (3)
Prerequisites: Counselor Education 600, 600L, and 610A or 610B.
Group process and individual growth, theories of group interaction, sensitivity training and group leadership techniques. Not open to students with credit in Counselor Education 667.

670L. Group Counseling Laboratory (1) Cr/NC
Three hours of laboratory.
Prerequisite: Credit or concurrent registration in Counselor Education 670.
Supervised practice in group counseling, group leadership, and other topics presented in Counselor Education 670.

680. Theory and Process of Consultation (3)
Prerequisites: Counselor Education 600 and 600L.
Consultation theory, process, and research for counselors and school psychologists. Emphasis on mental health and problem-solving consultation in education and mental health settings. (Formerly numbered Counselor Education 616.)

685. Theories of Marriage and Family Counseling (3)
Prerequisite: Counselor Education 660.
Counseling modalities, family intervention strategies and techniques of co-counseling in marriage and family therapy. Systems approaches and behavioral contracting. Fulfills MFCC licensing requirement.

696. Selected Topics in Counselor Education (1-3)
Prerequisite: Consent of instructor.
Intensive study in specific areas of counselor education. May be repeated with new content.
See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree. (Formerly numbered Counselor Education 630.)

710A-710B. Professional Seminar (3-3)
Prerequisites: Education 660. Six units from Counselor Education 640, 650, 660, and 670.
Counselor Education 710A and 740 are prerequisite to 710B.
Study of selected areas in counseling culminating in a written project with emphasis on counseling as a profession. See Class Schedule for specific content.

730. Fieldwork in Counseling (2-6) Cr/NC
Prerequisite: Counselor Education 660 or 662 or 670.
Application of concepts and procedures of counseling or school psychology services in appropriate school or agency setting. Daily observation and practice. Weekly seminar sessions with university staff. Application to take the course must be made early during the preceding semester. May be repeated with new content. Maximum credit six units applicable to a master's degree in counseling.

740. Practicum: Individual Counseling (3) Cr/NC
Prerequisite: Counselor Education 660.
Supervised experience in individual counseling and career planning. May be repeated with new content. Maximum credit six units applicable to a master's degree in counseling.

741. Practicum: Group Counseling (3) Cr/NC
Prerequisite: Counselor Education 670.
Supervised experience in group counseling and career planning. May be repeated with new content. Maximum credit six units applicable to a master's degree.

745. Program Development for Pupil Services (3)
Prerequisites: Counselor Education 620, 730, and Education 690.
Development, management, and evaluation of pupil services in schools. Analysis of models and practice in planning.
UPPER DIVISION COURSES

532. Production of Instructional Materials (3) I, II
Nine hours of laboratory. Instructional media production for professionals in organizational settings such as hospitals, law offices, accounting firms, publishing companies. Use of videotape, laser disc, multi-image and digital telecommunications for training. Not open to students in educational technology degree and certificate programs or to students with credit in Educational Technology 541. (Formerly numbered Development, Administration and Technology 532.)

540. Instructional Technology (3) I, II, S
Six hours of activity. Role of instructional systems development in education and training. Issues in instructional technology, self-instructional programs, competency-based instruction, new technologies of instruction and training. (Formerly numbered Development, Administration and Technology 540.)

541. Media Production (3) I, II
Nine hours of laboratory. Prerequisite recommended: Educational Technology 404. Design and production of instructional materials. Use of computers for graphics, scriptwriting, production management, and control systems for media presentations. Audio recording techniques with digital control. Not open to students with credit in Educational Technology 532. (Formerly numbered Development, Administration and Technology 541.)

544. Instructional Design (3) I, II
Six hours of activity. Prerequisite recommended: Educational Technology 540. Systematic approach to instructional design. Review of research and theory in instructional design and development, analysis, design and development of instructional and training products and programs. (Formerly numbered Development, Administration and Technology 544.)

553. Workshop In Educational Television (3) I, S
Nine hours of laboratory. Prerequisite: Educational Technology 541. The procedures and theories of television production as it pertains to closed circuit and instructional use of television. The selection and utilization of program content and the method of presenting material through the television medium will be discussed and demonstrated. Not open to students with credit in Telecommunications and Film 320. (Formerly numbered Development, Administration and Technology 553.)

572. Computer Solutions to Instructional Problems (3) I, II
One lecture and six hours of laboratory. Prerequisites: Educational Technology 541; admission to a credential program or a teaching credential or experience in teaching. Using the computer, especially the microcomputer, as an instructional tool.

596. Topics In Educational Technology (1-3)
Selected problems in educational technology. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree. (Formerly numbered Development, Administration and Technology 596.)

Educational Technology

North Education 280, (619) 594-6718

Faculty
Sally M. Anthony, Ed.D., Professor of Educational Technology
Patrick J. Harrison, Ph.D., Professor of Educational Technology
Allison Rossett, Ed.D., Professor of Educational Technology, Chair of Department
Brockenbrough S. Allen, Ph.D., Associate Professor of Educational Technology
Bernard J. Dodge, Ph.D., Associate Professor of Educational Technology
Farhad Saba, Ph.D., Associate Professor of Educational Technology
Michael D. Williams, M.A., Assistant Professor of Educational Technology
GRADUATE COURSES

644. Advanced Instructional Design (3)
Two lectures and three hours of laboratory. Prerequisites recommended: Educational Technology 540 and 544. Examination of roles and concerns of persons in instructional design. Problem solving on current design issues. Instructional product development, use and evaluation. (Formerly numbered Educational Technology and Librarianship 676 and Development, Administration and Technology 675.)

653. Interactive Video Instruction (3)
Six hours of activity. Prerequisites: Educational Technology 544, 553 and 572. Interactive video as a training and educational medium. Design and production principles appropriate to interactive video. Review of present research and applications. (Formerly numbered Development, Administration and Technology 653.)

670. Simulation and Games (3)
Prerequisites: Educational Technology 540 and 541. Design, evaluation and use of simulations and games for education and training. Instructional applications of computer-based simulations, interactive fiction, board games and role play. (Formerly numbered Development, Administration and Technology 670.)

671. Advanced Instructional Software Design (3)
Prerequisite recommended: Educational Technology 572. Strongly recommended: Educational Technology 544. Advanced techniques for designing computer-assisted instruction, screen design, user friendliness, graphics, animation, instructional and motivational strategies. (Formerly numbered Development, Administration and Technology 671.)

675. Computer Managed Instruction (3)
One lecture and six hours of laboratory. Prerequisites: Educational Technology 572; experience in programming and consent of instructor. Design, implementation and field testing of software to manage data for computer-based education and training. (Formerly numbered Development, Administration and Technology 675.)

684. Seminar in Management of Educational Technology (3)
Prerequisite recommended: Educational Technology 544. Research reviewed and findings related to current practices. Relationships of educational technology to educational philosophies and current issues. Recent trends evaluated. (Formerly numbered Development, Administration and Technology 675.)

700. Seminar in Educational Technology (1-3)
Prerequisite: Educational Technology 540. Selected areas, topics in educational technology. May be repeated with new content. See class schedule for specific content. Maximum credit six units applicable to a master's degree. (Formerly numbered Development, Administration and Technology 700.)

775. Directed Internship in Educational Technology (2-6) Cr/NC
Supervised internship in an educational setting. (Application to take course must be made during preceding semester.) (Formerly numbered Development, Administration and Technology 775.)

798. Special Study (1-6) Cr/NC/SP
Prerequisites: Consent of staff; to be arranged with department chair and instructor. Individual study. Maximum credit six units applicable to a master's degree. (Formerly numbered Development, Administration and Technology 798.) May involve fieldwork.

UPPER DIVISION COURSES

515. Bilingual Teaching Strategies (3)
Prerequisite: Teaching experience or enrollment in the bilingual emphasis credential program. Legal and historical developments leading to bilingual teaching in the United States. Interactive and individualized techniques appropriate for bilingual students. Language assessment methods for grouping and evaluating bilingual students. Fieldwork required. Taught in Spanish.

552. Teaching Writing in Multilingual Settings (3)
Methodologies in teaching primarily expository writing to students from various language backgrounds, focusing on skills such as those needed to avoid syntactic, semantic and stylistic language interference.

553. Oral Language Assessment Techniques (3)
Theoretical and applied linguistics: language functions in the bilingual classroom; implications of sociolinguistics for diagnosis and classification of bilingual children; analysis and application of language assessment instruments; comparison of diverse linguistic systems associated with different cultures.

575. Computer Applications in the Bilingual Classroom (3)
Two lectures and three hours of laboratory. Prerequisite: Educational Technology 471. Computer applications for bilingual instructional setting including examination and evaluation of instructional software and authoring systems for developing curriculum for limited English proficiency (LEP) students.

596. Special Topics in Bilingual and Multicultural Education (1-3)
Prerequisite: Consent of instructor. Selected topics in bilingual, cross-cultural education and policy studies. See class schedule for specific content. Maximum credit six units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

602. Cross-Cultural Experience in Classroom Interaction (3)
Prerequisite: Consent of instructor. Analysis of teacher's verbal and nonverbal communicative strategies; teacher's classroom management style; and children's sociolinguistic repertoire within learning situation.
612. Ethnographic Approach to Classroom Interaction (3)
Prerequisite: Policy Studies in Language and Cross-Cultural Education 602.

terges social, political, economic, and educational factors that hinder or promote cultural relativism and intercultural harmony, domestically and internationally.

Prerequisite: Education 690.

Policy research aimed at educational reform for the poor and ethnic minority child; major issues including school segregation, school finance and bilingual-bicultural education. Offers writing and computer skills to critically conduct action-oriented policy research.

650. Bilingual/Cross-Cultural Curriculum Development and Teaching Strategies (3)
Prerequisite: Policy Studies in Language and Cross-Cultural Education 602.

Bilingual/cross-cultural teaching materials and methodologies for implementation in the multicultural classroom.

651. Multicultural Methods and Curriculum in Content Areas (1-3)
Prerequisite: Policy Studies in Language and Cross-Cultural Education 650.

Variety of instructional areas (mini-courses), each focusing on a single topic dealing with multicultural education. Of three required units at least one must be taken from basic content areas, such as social studies, science or mathematics. See Class Schedule for specific content. Maximum credit three units applicable to a master's degree.

652. Language Arts in the Multicultural Education Curriculum (3)
Prerequisite: Policy Studies in Language and Cross-Cultural Education 650.

Research and teacher curricular strategies related to English literacy and oral language development for bilingual and limited English proficient student.

653. Language Policies and Practices (3)
Prerequisite: Policy Studies in Language and Cross-Cultural Education 602.

Historical and present day analysis of how non-English speakers have been educated, including methodologies, relevant legislation, formal and informal policies, teaching practices, and the implications for schools and society.

686. Seminar in Multicultural Education (1-6)
Prerequisite: Policy Studies in Language and Cross-Cultural Education 602.

Topics dealing with current issues in multicultural education. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

798. Special Study (1-6) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with department chair and instructor.

Individual study. Maximum credit six units applicable to a master's degree. May involve fieldwork.

Special Education

North Education 70, (619) 594-6665

Faculty
Patricia T. Cegelka, Ed.D., Professor of Special Education, Chair of Department
Donald H. Doorlag, Ph.D., Professor of Special Education
Shirley E. Forberg, Ed.D., Professor of Special Education
Margie K. Kitero, Ph.D., Professor of Special Education, Associate Dean for Faculty Development and Research, College of Education
Rena B. Lewis, Ph.D., Professor of Special Education (Graduate Adviser)
Eleanor W. Lynch, Ph.D., Professor of Special Education
Patricia L. Patton, Ed.D., Professor of Special Education
Anita L. Archer, Ph.D., Associate Professor of Special Education
Richard C. Brady, Ph.D., Associate Professor of Special Education
Ian R. Pumplin, Ph.D., Associate Professor of Special Education

Adjunct Faculty
W. Dru Stainback, M.A., Special Education

UPPER DIVISION COURSES

All 500-level courses in Special Education, with the exception of Special Education 500 and 501, are reserved for students officially admitted to one of the programs in Special Education.

500. Exceptional Individuals (3) I, II, S
Prerequisites: Consent of staff; to be arranged with department chair and instructor. Historical and philosophical foundations of education for the gifted, including review of research on characteristics of the gifted. Three lectures/fieldwork. Principles, procedures and techniques in identifying and programming for exceptional individuals. Historical, philosophical and legal background which affect current special education practices. Historical and philosophical perspectives of programs related to learning handicapped students including review of research, educational programs, curricular approaches and the implications for schools and society.

501. Special Education Procedures and Interpersonal Processes (3) I, II, S
Prerequisites: Credit or concurrent registration in Special Education 500 and 501. Principles, procedures, and techniques for identifying and educating gifted individuals who may have handicapping conditions. Not open to students who have credit in Special Education 500 and 501.

502. Exceptionality and Giftedness (3) I, II
Prerequisite: Twelve units in education or any upper division course in teaching reading or mathematics.

508. Characteristics and Identification of the Gifted (3) I, II, S
Prerequisites: Credit or concurrent registration in Special Education 502 and 12 additional units in education. History and philosophical foundations of education for the gifted, including review of research on characteristics of the gifted. Three lectures/fieldwork. Principles, procedures, and techniques in identifying and educating gifted individuals who may have handicapping conditions. Not open to students who have credit in Special Education 500 and 501.

524. Characteristics and Education of Learning Handicapped Students (3) I, II, S
Prerequisites: Credit or concurrent registration in Special Education 500 and 501. Historical and philosophical perspectives of programs related to learning handicapped students including review of research, educational programs, curricular approaches and characteristics of learning handicapped individuals. Three lectures/fieldwork.

525. Characteristics and Education of Severely Handicapped Students (3) I, II, S
Prerequisites: Credit or concurrent registration in Special Education 500 and 501. Historical and philosophical perspectives of programs related to severely handicapped students including review of research, educational programs, curricular approaches and characteristics of severely handicapped individuals. Three lectures/fieldwork.
526. Characteristics and Education of Physically Handicapped Students (3) I, II, S
Prerequisites: Credit or concurrent registration in Special Education 500 and 501.
Historical and philosophical perspectives of programs related to physically handicapped students including review of research, educational programs, curriculum approaches and characteristics of physically handicapped individuals. (Formerly numbered Special Education 505C.)

527. Characteristics and Education of Multicultural Learning Handicapped Students (3) I, II, S
Prerequisites: Credit or concurrent registration in Special Education 500 and 501.
Historical and philosophical perspectives of programs related to multicultural learning handicapped students including review of research, educational programs, curriculum approaches and characteristics of multicultural learning handicapped individuals. (Formerly numbered Special Education 505P.)

528. Early Intervention for Handicapped Infants, Children, and Their Families (3)
Prerequisites: Special Education 500 and 501 or equivalent coursework in another discipline.
Historical and philosophical perspectives of programs related to handicapped infants and preschool students including review of research, educational programs, curriculum approaches and characteristics of handicapped infants and preschooler individuals. (Formerly numbered Special Education 505H.)

529. Characteristics and Education of Seriously Emotionally Disturbed Students (3) I, II, S
Prerequisites: Special Education 500 and 501.
Historical and philosophical perspectives of programs related to emotionally disturbed/behaviorally disordered students including review of research, educational programs, curriculum approaches, and characteristics. (Formerly numbered Special Education 505E.)

534. Assessment and Evaluation of Learning Handicapped Students (3) I, II, S
Prerequisite: Special Education 524.
Tests and procedures for assessing, evaluating and monitoring progress of learning handicapped individuals to meet their physical, intellectual, social, and emotional needs. Psychoeducational diagnosis, appraisal, and assessment procedures. (Formerly numbered Special Education 510A.)

535. Assessment and Evaluation of Severely Handicapped Students (3) I, II, S
Prerequisite: Special Education 525.
Tests and procedures for assessing, evaluating and monitoring progress of severely handicapped individuals to meet their physical, intellectual, social, vocational and emotional needs. Psychoeducational diagnosis, appraisal and assessment procedures. (Formerly numbered Special Education 510B.)

542. Curriculum and Instruction for the Gifted (3) I, II
Prerequisites: Special Education 502 and 506.
Current practices, research, issues and trends regarding development of programs and curricula appropriate for gifted and talented learners. (Formerly numbered Special Education 511D.)

544. Basic Skill Instruction for Low Achieving Students (3) I, II
Prerequisite: Special Education 524.
Application of systematic instruction to the unique academic needs of learning handicapped and low achieving students in basic skill areas. Emphasis on program planning and implementation. (Formerly numbered Special Education 511A.)

545. Curriculum and Instruction for Severely Handicapped Students (3) I, II, S
Prerequisite: Special Education 526.
Utilization of data for determining general and specific objectives to meet the needs unique to severely handicapped individuals. Developing and selecting materials and establishing procedures for monitoring and evaluating pupil progress. (Formerly numbered Special Education 511B.)

546. Curriculum and instruction for Multicultural Learning Handicapped Students (3) I, II, S
Prerequisite: Special Education 500.
Utilization of data for determining general and specific objectives to meet needs unique to multicultural learning handicapped individuals. Developing and selecting materials and multicultural learning handicapped individuals. Developing and selecting materials and establishing procedures for monitoring and evaluating pupil progress. (Formerly numbered Special Education 511C.)

547. Adaptive School Behavior Instruction for Low Achieving Students (3) I, II
Prerequisites: Special Education 500 and 501.
Instructional strategies in adaptive school behaviors, social skills, study skills; learning strategies for low achieving students. Focus on systematic instruction in these areas for low achieving students.

553. Dynamics of Behavior Change of the Exceptional Individual (3) I, II, S
Prerequisite: Special Education 500 and 501.
Management and treatment of individuals with exceptional needs. Current theories and techniques in decision making models, team function, collaboration models for working with aides, parents, administrative, and other professionals. (Formerly numbered Special Education 505D.)

560. Applications of Technology for Exceptional Learners (3) I
Prerequisite: Special Education 500.
Educational applications of current technologies for handicapped and gifted learners. Educational applications of current technologies to improve or bypass physical, intellectual, social, and emotional needs. (Formerly numbered Special Education 505A.)

562. Teaching Partnerships in Special Education (3) I, II, S
Prerequisites: Special Education 500 and 501.
Theory and process of school-based collaborations for the special education teacher and student. Theory and process of school-based collaboration for the special education teacher and student. Not open to students with credit for Special Education 513A, 513B, or 513C.

563. Career and Vocational Education for Exceptional Youth (3) I, II, S
Prerequisite: Special Education 471 or 500.
Current and historical perspectives on vocational development for handicapped youth; current theories and practices regarding strategies in assessing and teaching vocational and life skills. Intervention strategies for handicapped youth. Not open to students with credit for Special Education 500.

564. Supported Employment: Training and Placement Techniques (3) I, II, S
Prerequisites: Special Education 500 and 501.
Theory and process of supported employment programs for handicapped students. Theory and process of supported employment programs for handicapped students. Specialized study of supported employment programs in the mainstream. Not open to students with credit for Special Education 500.

571. Assessment and Programming: Handicapped Infants and Preschoolers (4) I, II, S
Prerequisite: Special Education 501 and 528.
Tests, techniques, and procedures for assessing handicapped infants and preschoolers including review of research, educational programs, curriculum approaches and characteristics. (Formerly numbered Special Education 505I.)

596. Selected Topics in Special Education (1-4) I, II, S
Prerequisites: Special Education 500 and 506.
Specialized study of selected topics in special education. May be offered as either a workshop or lecture/discussion. See Class Schedule for specific content. Maximum credit of six units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

644. The Gifted Student (3)
Prerequisites: Special Education 502 and 508.
The abilities and characteristics of the intellectually gifted or talented including review of research, educational programs, curriculum approaches and characteristics. (Formerly numbered Special Education 622.)
650. Special Topics in Special Education (1-4)
Prerequisites: Special Education 471, 500, 501.
Instructional sequences (mini-courses) focusing on a single topic or competency dealing with special education. Topics differ each semester to adjust to current literature in the field, training needs, and resource availability. Maximum combined credit of nine units for Special Education 650A, 650B, 650C, 650D applicable to a master's degree. Offered in four categories:
A. Consultant Skills/Multidisciplinary Teams
B. Affective and Social Development

651. Legislation and Management of Special Education Services (3)
Prerequisites: Special Education 500 and 501, and 15 additional units of coursework in special education. Implementation of laws, regulations, and compliance requirements in special education. Requirements to and approaches for managing school and delivery of school and related services within a multidisciplinary context. Meets competencies for Resource Specialist Certificate. Offered in four categories.

652. Parent Education and Staff Development in Special Education (3)
Prerequisites: Special Education 500 and 501, and 15 additional units of coursework in special education. Issues relating to and development of skills for working with parents and school staff to develop skills and competencies needed to optimize the educational progress of handicapped students. Meets competencies for Resource Specialist Certificate.

653. Advanced Programming and Consultation in Special Education (3)
Prerequisites: Special Education 500, 501, a course in Special Education Curriculum and Instruction and Behavior Management, and 15 additional units of coursework in special education. Education programming and consultation for working with teachers in instructional delivery and for handicapped students. Skills in behavior management, assessment, programming, evaluation, and vocational plans. Meets competencies for Resource Specialist Certificate.

670. Seminar in Education of Exceptional Children (3)
Prerequisites: Special Education 524 or 525 or 526. Principles, trends, and research in the education of exceptional children.

677. Educational Management of Severe Behavior Disorders (3)
Prerequisite: Special Education 553. Nature and educational treatment of severe behavioral problems in handicapped students. Review of research on effectiveness of various interventions and development of skills needed to implement appropriate strategies to evaluate, manage, and treat these behaviors.

681. Advanced Topics in Special Education (3)
Prerequisites: Special Education 524 or 525 or 526. Nature and educational needs of students in area of exceptionality. Current educational theories and philosophies, research findings, and issues and trends in the field. Application of research literature to solution of educational problems. May be taken in each of the areas of exceptionality:
A. Learning Handicapped
B. Severely Handicapped
(Special Education 681A formerly numbered Special Education 680A; Special Education 681B formerly numbered Special Education 680B)

771. Directed Internship: Special Education (1-4) Cr/NC
Prerequisites: Permission of graduate adviser. Application to be made during previous semester. Extensive daily participation or teaching in public schools and preparation for teaching of exceptional individuals.

798. Special Study (1-6) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with department chair and instructor. Individual study. Maximum credit six units applicable to a master's degree. May involve fieldwork.

Teacher Education

Education 100H, (619) 594-5777

Faculty
Robert S. Ackerly Jr., Ed.D., Professor of Teacher Education
Lester A. Becklund, Ph.D., Professor of Teacher Education
Clifford P. Bee, Ph.D., Professor of Teacher Education
Marlowe J. Berg, Ph.D., Professor of Teacher Education
Houston M. Burnside, Ph.D., Professor of Teacher Education
Ricardo J. Cornejo, Ph.D., Professor of Teacher Education
Joan F. Curry, Ed.D., Professor of Teacher Education
Joseph B. Duckworth, Ed.D., Professor of Teacher Education
Leif Fearn, Ed.D., Professor of Teacher Education
James Flood, Ph.D., Professor of Teacher Education
David K. Gast, Ed.D., Professor of Teacher Education
James E. Inskoep Jr., Ph.D., Professor of Teacher Education
W. Lloyd Kendall, Ed.D., Professor of Teacher Education
Diane K. Lapp, Ed.D., Professor of Teacher Education
Robert E. McCabe, Ph.D., Professor of Teacher Education
Alain McCormack, Ed.D., Professor of Teacher Education
Leone D. McCoy, Ph.D., Professor of Teacher Education
George L. Mehaffey, Ph.D., Professor of Teacher Education
Directo of School of Teacher Education

Steve O. Moreno, Ed.D., Professor of Teacher Education
Monica A. Murphy, Ph.D., Professor of Teacher Education
Thomas S. Nagel, Ph.D., Professor of Teacher Education
Robert B. Peterson, Ph.D., Professor of Teacher Education
James N. Petson, Ed.D., Professor of Teacher Education
Eunice E. Rixman, D.M.A., Professor of Teacher Education
Ramhon Ross, Ed.D., Professor of Teacher Education
Monroe K. Rowland, Ph.D., Professor of Teacher Education
Larry J. Shaw, Ed.D., Professor of Teacher Education
Robert D. Smith Jr., Ph.D., Professor of Teacher Education (Graduate Adviser)
Sigrud Stautangen, Ph.D., Professor of Teacher Education
Mark J. Strecker, Ed.D., Professor of Teacher Education
Draid W. Strom, Ed.D., Professor of Teacher Education
David H. Treadway Jr., Ed.D., Professor of Teacher Education
Robert E. Trush, Ed.D., Associate Professor of Teacher Education
C. Lynn Fox, Ph.D., Associate Professor of Teacher Education
Jaime S. Kaatz, Ed.D., Associate Professor of Teacher Education
Ida M. Mallan, Ph.D., Associate Professor of Teacher Education
Jack D. Mooers, Ed.D., Associate Professor of Teacher Education
Joyce Morris, Ph.D., Associate Professor of Teacher Education
Cynthia Darche Park, Ph.D., Associate Professor of Teacher Education
Jane E. Reel, Ph.D., Associate Professor of Teacher Education
Pamelia J. Ross, Ph.D., Associate Professor of Teacher Education
Rafaela Santa Cruz, Ph.D., Associate Professor of Teacher Education
Barbara Armstrong, Ph.D., Assistant Professor of Teacher Education
Nadine Bezek, Ph.D., Assistant Professor of Teacher Education
Caroline A. Galvin-Murphy, Ph.D., Assistant Professor of Teacher Education
Leo M. Fenzel, Ph.D., Assistant Professor of Teacher Education
Linda R. Kramer, Ph.D., Assistant Professor of Teacher Education
Cheryli L. Mason, Ph.D., Assistant Professor of Teacher Education
Carrie A. Mathison, Ph.D., Assistant Professor of Teacher Education
My Luong Tram, Ph.D., Assistant Professor of Teacher Education
522. Substance Abuse in the Schools (3)
Prerequisite: Health Science 574.
Development of school policy and school plan to include substance abuse prevention, identification, intervention, referral, and aftercare. Collaboration with parents, schools, agencies, and local communities.

525. Discipline and Classroom Management (3) I, II
Prerequisite: Six upper division units in education, psychology or sociology.
Analysis of research and theories of classroom discipline, management, and teaching effectiveness, with practical application to the elementary and secondary classroom setting.

526. Teaching the Special Child in the Regular Classroom (2)
Prerequisite: Teaching credential or admission to multiple subject credential program.
Analysis of research and theories of classroom discipline, management, and teaching effectiveness, with practical application to the elementary and secondary classroom setting.

546. Quantitative Methods in Educational Research (3) I, II
Basic tests of statistical significance with special reference to the interpretation of educational data.

596. Topics in Teacher Education (1-6) I, II SP*
Designed to meet the needs of individuals or groups of teachers who wish to develop or continue the study of some problem. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 596, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a master's degree.

600. Curriculum Development in Education (3)
Prerequisite: Credit or concurrent registration in Education 690.
Advanced study of the research in curriculum development, construction and evaluation. (Formerly numbered Secondary Education 610 and Teacher Education 603.)

626. Advanced Educational Psychology (3)
Prerequisite: Teacher Education 525 or valid teaching credential.
Advanced study of the research in educational psychology and its application to learning and human growth.

646. Seminar in Educational Measurement (3)
Problems in educational testing. Emphasis on construction, administration and validation of teacher-made tests.

650. Seminar in International Education (3)
Prerequisites: Teaching experience and consent of instructor. Major themes in international education and issues raised by students from different cultural sources.

651. Diagnosis and Remediation of Difficulties in Mathematics (3)
Prerequisite: Twelve units in education.
Diagnosis of causes of mathematics difficulties in education and the development and implementation of instructional strategies for the remedial classroom.

652. Social Foundations of American Education (2 or 3)
Prerequisite: Admission to teacher education program.
Sociological, historical, and philosophical foundations of American education and their influence on present-day educational practices.

655. Comparative Education (3)
The contemporary educational ideas and practices of various countries of the world and their impact on our culture and education.

657. Philosophy of Education (3)
Prerequisite: Six upper division units in philosophy or psychology.
Critical evaluation of philosophical thought, with emphasis on the development of educational theory and its application to practice.

659. ComparativePhilosophy of Education (3)
Prerequisite: Six upper division units in philosophy or psychology.
Critical evaluation of philosophical thought, with emphasis on the development of educational theory and its application to practice.

665. Social Foundations of American Education (2 or 3)
Prerequisite: Admission to teacher education program.
Sociological, historical, and philosophical foundations of American education and their influence on present-day educational practices.

670. Curriculum and Instructional Planning (3)
Prerequisite: Admission to teacher education program.
A study of the principles and practices of curriculum and instruction and their application to educational practice.

675. Methods of Teaching - Secondary Education (3)
Prerequisite: Admission to teacher education program.
Methods of teaching in secondary education, including the planning of lessons, the organization of materials, and the evaluation of student performance.

680. Comparative International Education (3)
Prerequisite: Admission to teacher education program.
Comparative study of educational systems and practices in various countries, with emphasis on the impact of cultural and social factors on education.

685. Advanced Problems in Instruction (3)
Prerequisite: Admission to teacher education program.
Advanced study of instructional problems and their solutions, with emphasis on the development of innovative teaching strategies.

690. Seminar in Educational Measurement (3)
Prerequisite: Consent of instructor.
Advanced study of the research in educational measurement, with emphasis on the development and implementation of innovative testing techniques.

798. Special Study (1-6) Cr/NCR
Prerequisite: Consent of staff. May be repeated with new content. Individual study. Maximum credit six units applicable to a master's degree. May involve fieldwork.

## Elementary Education

### General

#### GRADUATE COURSES

600. Curriculum Development in Education (3)
Prerequisite: Credit or concurrent registration in Education 690.
Advanced study of the research in curriculum development, construction and evaluation.

626. Advanced Educational Psychology (3)
Prerequisite: Teacher Education 525 or valid teaching credential.
Advanced study of the research in educational psychology and its application to learning and human growth.

646. Seminar in Educational Measurement (3)
Problems in educational testing. Emphasis on construction, administration and validation of teacher-made tests.

650. Seminar in International Education (3)
Prerequisites: Teaching experience and consent of instructor. Major themes in international education and issues raised by students from different cultural sources.

651. Diagnosis and Remediation of Difficulties in Mathematics (3)
Prerequisite: Twelve units in education.
Diagnosis of causes of mathematics difficulties in education and the development and implementation of instructional strategies for the remedial classroom.

652. Social Foundations of American Education (2 or 3)
Prerequisite: Admission to teacher education program.
Sociological, historical, and philosophical foundations of American education and their influence on present-day educational practices.

655. Comparative Education (3)
The contemporary educational ideas and practices of various countries of the world and their impact on our culture and education.

657. Philosophy of Education (3)
Prerequisite: Six upper division units in philosophy or psychology.
Critical evaluation of philosophical thought, with emphasis on the development of educational theory and its application to practice.

659. ComparativePhilosophy of Education (3)
Prerequisite: Six upper division units in philosophy or psychology.
Critical evaluation of philosophical thought, with emphasis on the development of educational theory and its application to practice.

665. Social Foundations of American Education (2 or 3)
Prerequisite: Admission to teacher education program.
Sociological, historical, and philosophical foundations of American education and their influence on present-day educational practices.

670. Curriculum and Instructional Planning (3)
Prerequisite: Admission to teacher education program.
A study of the principles and practices of curriculum and instruction and their application to educational practice.

675. Methods of Teaching - Secondary Education (3)
Prerequisite: Admission to teacher education program.
Methods of teaching in secondary education, including the planning of lessons, the organization of materials, and the evaluation of student performance.

680. Comparative International Education (3)
Prerequisite: Admission to teacher education program.
Comparative study of educational systems and practices in various countries, with emphasis on the impact of cultural and social factors on education.

685. Advanced Problems in Instruction (3)
Prerequisite: Admission to teacher education program.
Advanced study of instructional problems and their solutions, with emphasis on the development of innovative teaching strategies.

690. Seminar in Educational Measurement (3)
Prerequisite: Consent of instructor.
Advanced study of the research in educational measurement, with emphasis on the development and implementation of innovative testing techniques.

798. Special Study (1-6) Cr/NCR
Prerequisite: Consent of staff. May be repeated with new content. Individual study. Maximum credit six units applicable to a master's degree. May involve fieldwork.

## Elementary Education

#### GRADUATE COURSES

610A. Seminar in Mathematics Education - Elementary School (3)
Prerequisite: Credit or concurrent registration in Education 690.
Factors affecting the elementary school mathematics curriculum; recent trends and current research in the teaching of elementary school mathematics.

610C. Seminar in Science in Elementary Education (3)
Prerequisite: Credit or concurrent registration in Education 690.
Advanced study of the problems of teaching science in the elementary school with emphasis on the literature of science education.

## Secondary Education

#### GRADUATE COURSES

604. Advanced Problems in Instruction (3)
Prerequisites: Teaching experience and consent of instructor.
Scientific research and philosophical principles which underlie school instruction.

605. Innovations in Instruction (1-3)
Prerequisite: Teaching experience or enrollment in the Single Subject Credential Program.
An introduction to special subject teaching strategies with emphasis on innovative teaching strategies. An evaluation of the motivational effect and structural validity of promising instructional practices. See Class Schedule for specific content.

Maximum credit three units applicable to a master's degree.
607. Seminar in Research in Curricular Problems (1-3)  
Prerequisites: Consent of the Director of the School of Teacher Education and instructor. 
Individual study by graduate students who have demonstrated exceptional ability. 
Maximum credit three units applicable to a master's degree.

613. Seminar in Mathematics Education - Secondary School (3) 
Factors affecting the secondary school mathematics curriculum; recent trends and current 
research in the teaching of secondary school mathematics.

790. Seminar in Teacher Education (3) 
Prerequisite: Advancement to candidacy.
Intensive consideration of selected topics of current importance in Teacher Education. May 
be repeated with new content. See Class Schedule for specific content. Maximum credit six 
units applicable to a master's degree.

Reading and Language Arts

UPPER DIVISION COURSES

530. Children's Literature in Elementary Education (3) I, II 
A survey of children's literature; the selection and use of material in the elementary 
classroom.

531. Storytelling (3) 
Prerequisites: Basic language arts course, children's literature. 
Art of storytelling, including planning of the story hour, locating suitable materials, tech-
niques for learning and presenting various story types. Selection of literature appropriate for 
oral presentation to different groups and age levels.

532. Children's Literature on Film (3) 
Six hours of activity. 
Current and classic children's literature as expressed on film. Selection criteria, sources, 
and identification of guidance and film-related activities.

536. Reading Diagnosis (3) 
Prerequisite: Valid teaching credential and consent of instructor. 
Formal and informal diagnosis of reading difficulties.

Reading and Language Arts

GRADUATE COURSES

630. Seminar in Reading Education (3) 
Prerequisite: Credit or concurrent registration in Education 690. 
Advanced study of trends in reading instruction. Topics include developmental sequences 
in reading skills and abilities, reading in the content fields, individual differences and interests. 
Students will develop individual projects or problems.

631. Seminar in Language Arts in Elementary Education (3) 
Prerequisite: Credit or concurrent registration in Education 690. 
Advanced study of problems in teaching language arts. The study of the scientific research 
and application in the field.

633. Seminar in Research in Reading (3) 
Prerequisite: Education 690. 
Research in reading including review of classic studies, broad topics in field of reading, 
identification of research trends and needs.

636. Advanced Diagnosis in Reading (3) 
Prerequisite: Teacher Education 536. 
Principles and techniques of individual and group diagnosis of reading difficulties. Experience 
in administration and interpretation of individual and group instruments in diagnosis. 
(Formerly numbered Elementary Education 621.)

637. Reading Clinic (3) 
Two lectures and three hours of laboratory. 
Prerequisites: Teacher Education 536 and 636. 
Supervised clinical experience in the utilization of remedial techniques in an individual and 
small group setting.

638. Topics in Reading Education (1-6) 
Prerequisite: California Teaching Credential. 
A variety of instructional sequences (mini-courses), each focusing on a single topic or 
competency dealing with reading instruction. Topics differ each semester to adjust to current 
literature in the field, in-service needs and resource availability. Of three required units, at least 
one must be taken from each of the three required categories (A, B and C). Students may elect 
to take more than three from these same categories. See Class Schedule for specific content. 
A. Linguistic/Cultural Difference and Reading 
B. Interpersonal/Interdisciplinary Communication Skills 
C. Children/Young Adult Literature, Oral and Creative Responses to Reading

639. Literacy and Language (3) 
Prerequisite: Teacher Education 430A or 433. 
Theories of literacy and methods for developing literacy in language, reading and writing. 
Instructional methods and assessment techniques for children and adults.

736. Field Experience as a Reading Specialist (4) 
Prerequisite: Eighteen units of core courses. 
Individually designed practicum for the reading specialist.
Engineering

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 chair of the appropriate department.

General Information

The College of Engineering offers graduate study leading to Master of Science degrees in Aerospace, Civil, Electrical, and Mechanical Engineering. These curricula are designed to augment the student's undergraduate training by advanced study in one of the various fields of engineering. Recognizing the increasing importance in modern technology of the engineer-scientist team, San Diego State University has developed an academic pattern which offers to one holding a first degree in engineering an opportunity to pursue advanced study in a specialized area of knowledge.

The undergraduate curricula in engineering, with degrees in aerospace, civil, electrical, and mechanical engineering, are accredited by the Accreditation Board for Engineering and Technology, Inc.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the Graduate Division with classified graduate standing as described in Part Two of this bulletin. Candidates for admission to Aerospace Engineering, Civil Engineering, Electrical Engineering and Mechanical Engineering programs must have attained a grade point average of at least 2.75 (when A equals 4) in the last 60 semester (90 quarter) units attempted in the undergraduate degree program. In addition, the student must have a bachelor's degree in a field of engineering appropriate to the field in which he/she desires to earn an advanced degree or in a field closely related thereto from an institution acceptable to the College of Engineering. If undergraduate preparation is deemed insufficient, the student will be required to take specified courses for the removal of the deficiency. Such courses, taken as an unclassified student, are in addition to the minimum of 30 units for the master's degree in engineering.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, which are described in Part Two 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 Two 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

(Major Code: 09021)

General Information: The Department of Aerospace Engineering and Engineering Mechanics offers graduate study leading to the Master of Science degree in Aerospace Engineering.

Students are encouraged to engage in thesis research or special study projects. Available areas of research include experimental, theoretical, and computational aerodynamics and fluid mechanics, structural mechanics, fracture mechanics, composite structures, random vibrations, fluid-structure interactions, acoustics, and aircraft and spacecraft stability and control.

Specific Requirements for the Degree:
The student's program prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:
1. Eighteen units of 600- and 700-numbered courses in aerospace engineering and/or engineering mechanics. At least one course must be outside the student's area of specialization.
2. Nine additional units of 500-, 600- and 700-numbered courses approved by the graduate adviser.

Areas of Specialization in Aerospace Engineering and Engineering Mechanics

1. Aerodynamics/Astronautics
   - AE 611: Flight Mechanics (3)
   - AE 620: Incompressible Aerodynamics (3)
   - AE 640: Experimental Fluid Mechanics (3)
   - AE 642: Fluid Mechanics and Heat Transfer (3)

2. Structures
   - EM 600: Seminar (1-3)
   - EM 611: Vibration of Elastic Solids (3)
   - EM 621: Theory of Elasticity (3)
   - EM 622: Theory of Plates (3)
   - EM 623: Theory of Shells (3)

Civil Engineering

(Major Code: 09081)

General Information: The Department of Civil Engineering offers graduate study leading to the Master of Science degree in Civil Engineering. Available areas of research include water resources, geotechnical engineering, structural engineering, transportation engineering, and other related areas.

Specific Requirements for the Degree:
The student's program, prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:
1. At least twelve additional units of 500-, 600-, and 700-numbered courses in civil engineering, excluding Civil Engineering 797, 798, and 799A.
2. At least twelve additional units of 500-, 600-, and 700-numbered courses, including Civil Engineering 799A (Plan A), if elected and approved by the graduate adviser.

Electrical Engineering

(Major Code: 09091)

General Information: The Department of Electrical and Computer Engineering offers graduate study leading to the Master of Science degree in Electrical Engineering. The program provides balanced opportunities to study practical engineering design and research. Research in areas include computer engineering and assistantships are available in the research areas which include computer engineering and robotics, power systems, and biomedical engineering.

Specific Requirements for the Degree:
The student's program, prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:
1. At least twelve additional units of 500-, 600-, and 700-numbered courses in electrical engineering.
2. At least six additional units of 500-, 600-, and 700-numbered courses approved by the graduate adviser.
3. Six elective units of 500-, 600-, and 700-numbered courses approved by the graduate adviser.
4. As a breadth requirement, each classified graduate student is required to complete with prior approval of the Graduate Adviser at least one course from four of the following disciplines: Communications, Computers, Electronics/Networks, Physical Electronics, Power/Control Systems. If the course content is appropriate, the Graduate Adviser may approve certain Electrical Engineering 596 and 600 courses to satisfy part of the breadth requirement.

Disciplines and related courses:

Communications: Electrical Engineering 553, 555, 556, 557, 558, 605, 647, 650, 651, 655, 653, 658.


Electronics/Networks: Electrical Engineering 530, 554, 570, 631, 634.


Mechanical Engineering

(Major Code: 09101)

General Information: The Department of Mechanical Engineering offers graduate study leading to the Master of Science degree in Mechanical Engineering.

Available opportunities for thesis research and special study projects include heat transfer, thermodynamics, fluid mechanics, mechanical design which includes vibration, control, CAD/CAM and robotics, materials, optimization and bioengineering.

Specific Requirements for the Degree: The student's program, prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:

1. Twenty-one units of 600- and 700-numbered courses in mechanical engineering to include 12 units in one area of specialization (designated as Group A and Group B) and Mechanical Engineering 797.

2. Nine additional units of 500-, 600- and 700-numbered courses approved by the graduate adviser.

Areas of Specialization in Mechanical Engineering

Group A: Thermal Sciences

ME 651. Analytical Thermodynamics (3)
ME 661. Gas Dynamics (3)
ME 663. Boundary Layers in Internal Flows (3)
ME 671. Conduction Heat Transfer (3)
ME 673. Convection Heat Transfer (3)
ME 675. Radiation Heat Transfer (3)

Group B: Engineering Design

ME 610. Finite Element Methods in Mechanical Engineering (3)
ME 614. Engineering Design: Analytical Methods (3)
ME 631A. Mechanical Vibrations (3)
ME 632. Advanced Topics in Automatic Controls (3)
ME 645. Mechanical Metallurgy for Engineers (3)

Courses Acceptable on Master's and Doctoral Degree Programs in Engineering

UPPER DIVISION COURSES

510. Methods of Analysis (3) I, II
Prerequisite: Engineering 310 with a minimum grade of C. Selected topics from vector calculus, partial differential equations, and complex analysis, with engineering applications.

511. Digital Solutions of Engineering Problems (3)
Prerequisites: Engineering 120 or Computer Science 107; and Engineering 310. Digital solution of classes of engineering problems. Application of numerical methods with consideration of limitations imposed by computer and programming language characteristics.

Aerospace Engineering and Engineering Mechanics

Engineering 308, (619) 594-6074

Faculty

John F. Conly, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics (Graduate Adviser)
Sangiam Nadar Dharmanaraj, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics
Joseph Katz, D.Sc., Professor of Aerospace Engineering and Engineering Mechanics
Govindarajalu Krishnamorthy, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics
Robert D. McGregor, Ph.D., P.E., Professor of Aerospace Engineering and Engineering Mechanics
Barbi S. Narang, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics
Mauro Pierucci, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics
Allen Plotkin, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics
Chair of Department
Kuo Chang Wang, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics

Nagy Nosseir, Ph.D., Associate Professor of Aerospace Engineering and Engineering Mechanics
Constantinos S. Lyrintzis, Ph.D., Assistant Professor of Aerospace Engineering and Engineering Mechanics

UPPER DIVISION COURSES IN AEROSPACE ENGINEERING

501. Computational Fluid Mechanics (3)
Prerequisites: Engineering 120 and Engineering Mechanics 340.
Finite difference methods of solution to fluid dynamics equations of the potential flow, boundary layer theory and the Navier-Stokes formulation. Study of the convergence and stability of the difference equations.

520. Intermediate Aerospace Flight Mechanics (3)
Prerequisite: Aerospace Engineering 320.
A continuation of Aerospace Engineering 320 to include orbit determination techniques, general and special perturbations, artificial satellites, rocket dynamics and transfer orbits, earth-moon trajectories, and interplanetary trajectories.

530. Rocket and Space Propulsion (3)
Prerequisite: Aerospace Engineering 430.
Equilibrium combustion thermodynamics. Performance of rocket propelled vehicles. Rocket propulsion fundamentals. Topics in chemical (solid and liquid) and electrical propulsion systems.

540. Aircraft Stability and Control II (3)
Prerequisite: Aerospace Engineering 440.
Dynamic stability and control of rigid aircraft; general equations of unsteady motion, stability derivatives, perturbed state thrust forces and moment, special problems in dynamic stability and response.

550. Viscous Flow (3)
Prerequisites: Credit or concurrent registration in Engineering Mechanics 340, and Engineering 510.
Kinematics of fluid motion. Conservation of mass, momentum and energy. Navier-Stokes equations, exact solutions, Boundary-layer approximations, turbulent flow. (Formerly numbered Engineering Mechanics 540.)
596. Advanced Aerospace Engineering Topics (3)
Prerequisite: Consent of instructor.
Modern developments in aerospace engineering. See Class Schedule for specific content.
Maximum credit of six units for any combination of Aerospace Engineering or Engineering Mechanics 496, 499, and 596 applicable to a bachelor's degree. Maximum combined credit of six units of Aerospace Engineering or Engineering Mechanics 596 and 696 applicable to a 30-unit master's degree.

UPPER DIVISION COURSES IN ENGINEERING MECHANICS

510. Finite Element Methods in Aerospace Structures (3)
Prerequisite: Aerospace Engineering 310B.
Static and dynamic analysis of aerospace structures utilizing finite element methods.
(Formerly numbered Aerospace Engineering 510.)

521. Advanced Mechanics of Deformable Media (3)
Prerequisites: Aerospace Engineering 310B and Engineering 510.
Application of advanced topics in mechanics of deformable media to the design of aerospace structural components. Theory of failure, curved beams, beams on elastic foundation, thick-walled cylinders. Fracture mechanics and optimization of structures.

530. Composite Structural Analysis (3)
Prerequisites: Engineering 310 and Civil Engineering 301.
Strength of composite materials; lamination theory; strength analysis of laminates; bending, buckling and vibration of composite plates.

596. Advanced Engineering Mechanics Topics (1-3) I, II
Prerequisite: Consent of instructor.
Modern developments in engineering mechanics. See Class Schedule for specific content.
Maximum credit of six units for any combination of Engineering Mechanics 496, 499 and 596 applicable to a bachelor's degree. Maximum combined credit of six units of Engineering Mechanics 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES IN AEROSPACE ENGINEERING

600. Seminar (1-3)
Prerequisite: Consent of the graduate adviser and instructor.
Intensive study of one of the following topics: Incompressible aerodynamics, aeroelasticity, aerodynamic noise, aerostructural analysis, hydrodynamic stability, hypersonic flow boundary layers, and other areas of aerospace engineering. See Class Schedule for specific content.

612. Compressible Fluid Flow (3)
Prerequisites: Aerospace Engineering 302 and credit or concurrent registration in Engineering 510.
Theory of flow at supersonic speeds. Linearized theory, three-dimensional wings in steady flight, slender body theory, methods of characteristics.

620. Incompressible Aerodynamics (3)
Prerequisites: Aerospace Engineering 301 and Engineering 510.
Theory of incompressible aerodynamics, airfoil and wing theory, computational methods.

643. Laminar Flow (3)
Prerequisites: Engineering Mechanics 340 and credit or concurrent registration in Engineering 510.
Fluid kinematics and dynamics. Governing equations in general coordinate systems; Navier-Stokes equations; exact solutions, approximations including boundary layer. Three-numbered Engineering Mechanics 643.)

644. Turbulent Flow (3)
Nature of turbulence based on simple flow observations and a theoretical basis for interpreting and predicting the behaviors of specialized turbulent flow problems.

671. Flight Dynamics—Theory of Flight Paths (3)
Prerequisite: Aerospace Engineering 302.
Analysis of trajectories of aircraft, missiles, satellites, and spacecraft subjected to uniform or central gravitational forces, aerodynamic forces, and thrust.

696. Advanced Topics in Aerospace Engineering (2 or 3)
Intensive study in specific areas of aerospace engineering. May be repeated with new content. See Class Schedule for specific content.
Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree. (Formerly numbered Aerospace Engineering 796.)

797. Research (1-3) Cr/NC/SP
Prerequisite: Consent of graduate adviser.
Research in engineering. Maximum credit six units applicable to a master's degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of instructor.
To be arranged with department chair and instructor. Individual study. Maximum credit three units applicable to a master's degree.

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

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

GRADUATE COURSES IN ENGINEERING MECHANICS

600. Seminar (1-3)
Prerequisite: Consent of the graduate adviser and instructor.
Intensive study of one of the following topics: Nonlinear vibrations, random vibrations, continuum mechanics, anisotropic elasticity, energy methods, plasticity, and other areas of engineering mechanics. May be repeated with new content. See Class Schedule for specific content.
Maximum credit six units applicable to a master's degree.

601. Advanced Dynamics (3)
Prerequisites: Engineering Mechanics 220 and Engineering 310.

611. Vibration of Elastic Solids (3)
Prerequisites: Engineering 510 and Engineering Mechanics 521 or Mechanical Engineering 520.
Vibrational characteristics of elastic media. Vibration of plates. Longitudinal and transverse wave motion in infinite, semi-infinite and finite thickness media.

621. Theory of Elasticity (3)
Prerequisites: Civil Engineering 301 and credit or concurrent registration in Engineering 510.
Analysis of stress and strain: stress-strain relations; the equations of elasticity, uniqueness theorem; compatibility conditions; fixity and torsion.

703. Theory of Vibrations (3)
Prerequisites: Engineering Mechanics 601 and credit or concurrent registration in Engineering 510.
Linear and nonlinear periodic phenomena as applied to discrete systems and continuous media with application to physical problems.

711. Structural Acoustics (3)
Prerequisites: Engineering 510 and Engineering Mechanics 611.
Acoustic radiation from different sources. Vibration of and acoustic radiation from beams, plates, and other solids. Effect of fluid loading.
208 / Engineering/AE & EM

725. Theory of Plates (3)
Prerequisite: Engineering Mechanics 621.
Bending and buckling theory of plates; application of small deflection and large deflection theories to plates with various boundary conditions; use of approximate methods and exact methods in solution.

726. Theory of Shells (3)
Prerequisite: Engineering Mechanics 621.
Membrane and bending theory of shells of revolution and shells of arbitrary shape; exact and approximate methods of solution of shells subjected to axisymmetric and arbitrary loads.

727. Theory of Elastic Stability (3)
Prerequisite: Engineering Mechanics 621.

797. Research (1-3) Cr/NC/SP
Prerequisite: Consent of graduate advisor.
Research in engineering. Maximum credit six units applicable to a master's degree.

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Civil Engineering

Engineering 424, (619) 594-6071

Faculty
James H. Banks, Ph.D., Professor of Civil Engineering (Graduate Adviser)
Howard H. Chang, Ph.D., P.E., Professor of Civil Engineering
Fang-Hui Chou, Ph.D., P.E., Professor of Civil Engineering, Assistant Dean for Student Affairs, College of Engineering
Iraj Nocarany, Ph.D., P.E., Professor of Civil Engineering
Victor M. Ponce, Ph.D., Professor of Civil Engineering, Chair of Department
Sanford H. Stone, M.S., P.E., Professor of Civil Engineering
Frank E. Stratton, Ph.D., P.E., Professor of Civil Engineering
Janusz C. Supernak, Ph.D., Professor of Civil Engineering
Bruce D. Westermo, Ph.D., Professor of Civil Engineering
M. Nazmi Sharabi, Ph.D., Associate Professor of Civil Engineering
Timothy D. Stark, Ph.D., Assistant Professor of Civil Engineering

UPPER DIVISION COURSES

521. Structural Analysis II (3) I
Prerequisite: Civil Engineering 321 with minimum grade of C.

525. Design of Steel Structures (3) II
Prerequisite: Civil Engineering 321 with a minimum grade of C.
Mechanical behavior of structural steel. Design of steel beams, girders, columns, and members subjected to combined stresses. Design of various types of connections of steel structures; plate girders, continuous beams, and rigid frames.

530. Open Channel Hydraulics (3) I, II
Prerequisite: Civil Engineering 444 with minimum grade of C.
Open channel flow theory, analysis and problems, including studies of critical flow, uniform flow, gradually varied and rapidly varied flow—all as applied to the design of channels, spillways, energy dissipators, and gravity pipelines.

555. Water and Wastewater Engineering (3) I
Prerequisite: Civil Engineering 355 with minimum grade of C.

596. Advanced Civil Engineering Topics (1-3) I, II
Prerequisites: Minimum grade point average of 3.0 and consent of instructor.
Modern developments in civil engineering. See Class Schedule for specific content. Maximum credit of six units for any combination of Civil Engineering 496, 499 and 596 applicable to a bachelor's degree. Maximum combined credit of six units of Civil Engineering 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

605. Prestressed Concrete Structures (3)
Prerequisite: Civil Engineering 421 with minimum grade of C.
Fundamental concepts of prestressed concrete theory. Design applications to various types of structures.

607. Dynamics of Structures (3)
Prerequisite: Civil Engineering 521 with minimum grade of C.
Fundamental concepts of dynamics and analysis of structures, including the study of vibrations of building structures, application of the theorem of D'Alembert, and energy methods of solution.
608. Earthquake Engineering (3)
Prerequisite: Civil Engineering 607.
Elements of seismology. Methods of analysis for earthquake loads. Procedures and code provisions for the design of earthquake-resistant structures.

610. Finite Element Analysis of Structures (3)
Prerequisites: Engineering 120 and Civil Engineering 521 with minimum grade of C.
General procedure, various types of finite elements, analysis and design of isotropic and orthotropic plates and shells, deep beams, and shear walls using finite element techniques. Use of digital computers for solutions. Application to civil engineering structures.

620. Traffic Engineering (3)
Prerequisite: Consent of instructor.
Traffic characteristics and studies. Control and regulation of street and highway traffic. Parking facilities, mass transportation, traffic engineering administration.

622. Mass Transit Engineering (3)
Prerequisite: Consent of instructor.
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.

632. Computational Hydraulics and Hydrology (3)
Prerequisite: Civil Engineering 444.

634. Surface Water Hydrology (3)
Prerequisite: Civil Engineering 445.

635. Water Quality Engineering (3)
Prerequisite: Civil Engineering 555 with minimum grade of C.

636. Water Quality Processes (3)
Prerequisite: Civil Engineering 555 with minimum grade of C.
Two lectures and three hours of laboratory.
Theoretical and laboratory study of the chemical and microbiological processes which govern modern water and wastewater treatment.

638. Sedimentation and River Engineering (3)
Prerequisite: Civil Engineering 444 with a minimum grade of C.

640. Advanced Soil Mechanics (3)
Prerequisites: Civil Engineering 462 and 463 with minimum grades of C.
Advanced theories of soil mechanics and their applications to design, including physical-chemical behavior of soils, theories of compaction, consolidation, stress distribution, shear strength, settlement analyses, lateral pressures, and bearing capacity of soils.

641. Advanced Foundation Engineering (3)
Prerequisite: Civil Engineering 640.

642. Seepage andEarth Dams (3)
Prerequisites: Civil Engineering 462 and 463.
Seepage and flow nets in earth dams and dam foundations. Stability analysis and design of earth and rock fill dams.

643. Soil and Site Improvement (3)
Prerequisite: Civil Engineering 640.
Soil and site improvement techniques used in geotechnical engineering.

696. Advanced Topics in Civil Engineering (2 or 3)
Intensive study in specific areas of civil engineering. May be repeated with new content.
See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

780. Seminar in Structural Engineering (2 or 3)
Prerequisites: Minimum grade point average of 3.0 and consent of instructor.
An intensive study in structural engineering. Maximum credit six units applicable to a master's degree.

781. Seminar in Transportation Engineering (2 or 3)
Prerequisites: Minimum grade point average of 3.0 and consent of instructor.
An intensive study in transportation engineering. Maximum credit six units applicable to a master's degree.

797. Research (1-3) Cr/NC/SP
Prerequisite: Consent of graduate adviser.
Research in engineering. Maximum credit six units applicable to a master's degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit three units applicable to a master's degree.

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

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

Engineering 411, (619) 594-5718

Faculty

Huseyin Abut, Ph.D., Professor of Electrical and Computer Engineering
Ching-Ten Chang, Ph.D., Professor of Electrical and Computer Engineering
Fredric J. Harris, M.S.E.E., P.E., Professor of Electrical and Computer Engineering
Jay H. Harris, Ph.D., Professor of Electrical and Computer Engineering
Alexander Isoupovic, Ph.D., Professor of Electrical and Computer Engineering
Long C. Lee, Ph.D., Professor of Electrical and Computer Engineering
Mao-Siu Lin, Ph.D., Professor of Electrical and Computer Engineering
Leonard R. Marino, Ph.D., Professor of Electrical and Computer Engineering, Chair of Department
Gail A. Masssey, Ph.D., Professor of Electrical and Computer Engineering
Nicholas Panos, M.S.E.E., P.E., Professor of Electrical and Computer Engineering
Masako Suto, Ph.D., Professor of Electrical and Computer Engineering
Andrew Y.J. Szeto, Ph.D., P.E., Professor of Electrical and Computer Engineering
(Graduate Adviser)
Allons A. Tuszynski, D.Eng.Sc., Professor of Electrical and Computer Engineering
Ramon Betancourt, Ph.D., Associate Professor of Electrical and Computer Engineering
Paul T. Kolen, Ph.D., Associate Professor of Electrical and Computer Engineering
Kalyan S. Thyagarajan, Don. Eng., Associate Professor of Electrical and Computer Engineering
David A. Wright, M.S.E.E., Associate Professor of Electrical and Computer Engineering
Robert S. Jaffe, Ph.D., Assistant Professor of Electrical and Computer Engineering

UPPER DIVISION COURSES

503. Computer Hardware (3) II
Prerequisites: Computer Science 237 and Mathematics 245.
Digital electronics, sequential networks, digital arithmetic, integrated circuit components, microprocessor-based systems. Not open to electrical engineering majors.

520. Feedback Control Systems (3) I
Prerequisite: Electrical Engineering 410, 420 recommended.
Analysis of regulatory systems including servo mechanisms by the Laplace transform method. System performance and stability; Nyquist, Bode, and root-locus diagrams; elementary synthesis techniques. Practical components and examples of typical designs.

521. Advanced Feedback Control Systems (3) II
Prerequisite: Electrical Engineering 520.
A continuation of Electrical Engineering 520 to include feedback compensation, advanced compensation techniques, signal flow theory, state-variable techniques, introduction to nonlinear and sampled-data control systems.

530. Transistor Circuit Analysis (3) I, II
Prerequisite: Electrical Engineering 430.
Analysis and design of transistor voltage and power amplifier circuits by use of duality and matrix methods. Feedback amplifiers, audio amplifiers, video amplifiers, power supplies and oscillators; transient analysis and noise considerations.

534. Solid-State Devices (3)
Prerequisite: Electrical Engineering 430.
Conduction theory of solids. Characteristics of tunnel, backward, breakdown, multilayer and varactor diodes; silicon controlled rectifiers and switches; unjunction transistors, hot electron devices. Lasers and laser applications.

540. Microwave Communications (3) II
Prerequisite: Electrical Engineering 340, Engineering 510 recommended.
Applications of Maxwell's equations to wave propagation; skin effect, circuit impedance resonators, strip line circuits, electromagnetic radiation.

540L. Microwave Measurements Laboratory (1) II
Three hours of laboratory.
Prerequisites: Credit or concurrent registration in Electrical Engineering 430L and 540.
Experimental study of microwave generation including klystron, Gunn and IMPATT oscillators, TWT and microwave transistor amplifiers. Microwave modulation and detection. Microwave transmission and antennas.

541. Electro-Optics (3) II
Prerequisite: Electrical Engineering 340.
Optical/electronic devices and systems; wave beams; light-matter quantum interactions; incoherent and laser light sources; modulators and detectors. Applications in data transmission, measurement, and materials processing.

546. Optical Fiber Communications Systems (3)
Prerequisite: Electrical Engineering 434.
Optical fiber attenuation and dispersion, light-emitting diodes and laser diodes, pin diodes and avalanche photodiodes, receiver designs, optical power budgets and rise time budgets, applications in digital and analog communication systems.

553. Stochastic Signals (3) I
Prerequisite: Engineering 310.
Random signals, correlation functions, power spectral densities, the Gaussian process, narrow band processes. Applications to communication systems.

554. Communication Principles and Circuits (3) II
Prerequisite: Electrical Engineering 430.
Signal transmission in linear networks; modulators and detectors; wide-band and narrow-band amplifiers; oscillators; AM, FM, and phase modulation; transient response of amplifiers.

554L. Communication Circuits Laboratory (1)
Three hours of laboratory.
Prerequisite: Electrical Engineering 430L.
Regulated power supply systems; oscillator, modulator, detector, and switching circuits; superheterodyne receivers and television circuitry.

555. Modulation Theory (3) I
Prerequisite: Electrical Engineering 410.
Theory and performance characteristics of modulation and demodulation; spectral characteristics and noise performance of carrier systems: amplitude, frequency and phase, pulse coded, and compound modulation.

556. Digital Signal Processing (3)
Prerequisite: Electrical Engineering 410 or Physics 516A or Mathematics 341A.
Digital signal processing. Discrete-time signals, transform techniques, and digital filters. Design of FIR and IIR filters, FFT's, and finite-length effects on digital systems.

557. Two-Dimensional Digital Signal Processing (3) II
Prerequisite: Electrical Engineering 410 or Physics 516A or Mathematics 341A.
Two-dimensional analysis of signals and systems in areas of signal representation, enhancement and restoration, processing of images, radar signals and other two-dimensional information. Experiments in image processing.

558. Digital Communication Systems (3) III
Prerequisite: Engineering 310.
Foundations and interrelationships of subsystems in modern digital communication systems. Regulatory considerations, channel descriptions, modes, error rates, digital coding of speech, line coding, intersymbol interference, networking, error control and cryptography.

570. Advanced Digital Circuits (3)
Prerequisite: Electrical Engineering 470.
Digital applications of linear devices, the digital/analog interface, and ultra high speed logic devices.

571. Bit-Slice Digital Systems (3) I
Prerequisites: Electrical Engineering 373 and 470.
Design of high-speed microprogrammable bit-slice digital systems. Case studies of CPU and controller designs.
576. Microprocessor Systems Development (3) I
Prerequisite: Electrical Engineering 373.
A study of microprocessor-based systems using modern development systems. Hardware and software development. Assembly language and PASCAL. Testing by simulation and real-time analysis.

577. Design of Very Large Scale Integrated Circuits I (3) I
Prerequisites: Electrical Engineering 330 and 371.
Digital integrated circuit design based on NMOS and CMOS technologies; characterization of field effect transistors, design and circuit level simulation (using SPICE) of logic gates and subsystems, wafer processing, design rules and chip layout, bit-slice chip architecture.

578. Design of Very Large Scale Integrated Circuits II (3) II
Prerequisite: Electrical Engineering 578.
VLSI system design; chip design methodology and architecture; computer-aided design of custom and semicustom chips; circuit, gate and behavioral level simulation; testing wafers and chips; design for special applications.

580. Modern Power Systems I (3) I
Prerequisite: Electrical Engineering 310, Electrical Engineering 310 and 380.
Modern power system elements; calculation of load flow, fault currents, and system stability.

581. Modern Power Systems II (3) II
Prerequisite: Electrical Engineering 380.
Transient response of modern power system elements, positive, negative and zero sequence impedance, subharmonic effects.

582. Power Relay Systems (3) I
Prerequisite: Electrical Engineering 380.
Power relays including metering and control as used in modern power systems. Characteristics of operations and applications of equipment. Demonstrations on individual component relays. Basic relay calculations.

596. Advanced Electrical Engineering Topics (1-3) I, II
Prerequisite: Consent of instructor.
Modern developments in electrical engineering. See Class Schedule for specific content. Maximum credit of six units for any combination of 496, 499 and 596 applicable to a bachelor's degree.

GRADUATE COURSES

600. Seminar (1-3)
Prerequisite: Consent of instructor.
An intensive study in advanced electrical engineering. May be repeated with new content.

605. Seminar In Communications Systems (1-3)
Prerequisite: Consent of instructor.
An intensive study in communication theory and systems. May be repeated with new content.

608. Seminar In Computer Engineering (1-3)
Prerequisite: Consent of instructor.
Intensive study in computer engineering topics. May be repeated with new content.

622. Sampled-Data Systems (3)
Prerequisite: Electrical Engineering 520.
Analysis and synthesis of sampled-data and digital control systems; techniques for the equation synthesis technique for determining stability and system response.

625. State Space Analysis of Control Systems (3)
Prerequisite: Electrical Engineering 410, 520 recommended.
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.

631. Integrated Circuits (3)
Prerequisite: Electrical Engineering 430, 534 recommended.
Digital integrated circuit design 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' specifications sheets.

634. Semiconductor RF Circuit Design (3)
Prerequisite: Electrical Engineering 540.
Wide band amplifiers, low level RF amplifiers and mixers, IF amplifiers, AGC, tuning and stability problems, unilateralization and mismatching techniques, harmonic oscillators, VHF and UHF power amplifiers including varactor multipliers.

642. Optical Communications (3)
Prerequisite: Electrical Engineering 340.
Fundamentals of electro-optical technology from ultraviolet through infrared. Characteristics of thermal and laser radiation including generation, transmission, and detection.

644. Optical Data Processing (3)
Prerequisites: Electrical Engineering 340 and 410.
Electro-optical systems for processing electronic data or images. Spatial frequency analysis, filtering, convolution, and correlation based on light diffraction. Film as a recording medium.

645. Antennas and Propagation (3)
Prerequisite: Electrical Engineering 540.
Impedance characteristics and radiation patterns of thin linear antenna elements; field intensity calculations. Tropospheric and ionospheric propagation; propagation anomalies.

647. Radar Systems (3)
Prerequisite: Electrical Engineering 540.
Radar equation, range and Doppler resolution, design principles, signal processing, waveforms, synthetic aperture radar and target imaging.

650. Modern Communication Theory I (3)
Prerequisite: Electrical Engineering 553 or Mathematics 550.
Probability theory, random variables, random processes, Gaussian process, random processes through linear systems, noise considerations, optimum receiver design, applications to digital and waveform communication.

651. Modern Communication Theory II (3)
Prerequisite: Electrical Engineering 650.

652. Principles and Applications of Information Theory (3)
Prerequisite: Electrical Engineering 553 or 555 or 558.
Measure of information; digital communication systems, Shannon theorems, channel coding, coding theory, random variables, random processes, Gaussian process, random processes through linear systems, noise considerations, optimum receiver design, applications to digital communication systems, Shannon theorems, channel coding, coding theory, random variables, random processes, Gaussian process, random processes through linear systems, noise considerations, optimum receiver design, applications to digital and waveform communication.

653. Coding Theory (3)
Prerequisite: Electrical Engineering 553.
The theory of coding to combat noise over communication channels. Redundancy added to the coding systems. Coding of messages to assure arbitrarily small error rates at a given information rate. Discussion of measurement of information; digital communication systems, Shannon theorems, channel coding, coding theory, random variables, random processes, Gaussian process, random processes through linear systems, noise considerations, optimum receiver design, applications to digital communication systems, Shannon theorems, channel coding, coding theory, random variables, random processes, Gaussian process, random processes through linear systems, noise considerations, optimum receiver design, applications to digital and waveform communication.

658. Advanced Applications of Digital Signal Processing (3)
Prerequisite: Electrical Engineering 556 or 557.
Concepts of spectral analysis. Application of DSP to speech encoding. Image coding, fast algorithms applied to speech, image, radar, sonar and geophysical signal processing.
Mechanical Engineering

Engineering 323M, (619) 594-6087

Faculty
Robert L. Bedore, M.S.M.E., P.E., Professor of Mechanical Engineering (Graduate Adviser)
George T. Craig, Ph.D., Professor of Mechanical Engineering, Dean of the College of Engineering
Richard A. Fitz, Ph.D., Professor of Mechanical Engineering
Jack W. Hoyt, Ph.D., Professor of Mechanical Engineering
Nihad A. Hussain, Ph.D., Professor of Mechanical Engineering, Associate Dean of the College of Engineering
George A. Mansfield Jr., M.S.M.E., P.E., Professor of Mechanical Engineering
Robert J. Murphy, Ph.D., P.E., Professor of Mechanical Engineering
Basil Orhney, N.S., P.E., Professor of Mechanical Engineering
John G. Pinto, Ph.D., Professor of Mechanical Engineering, Chair of Department
Hail M. Glüven, Ph.D., Associate Professor of Mechanical Engineering
Kurt O. Lund, Ph.D., Associate Professor of Mechanical Engineering
Ramachandran Radharamanan, Ph.D., Associate Professor of Mechanical Engineering
D. Preston Lowrey III, Ph.D., Assistant Professor of Mechanical Engineering
Larry D. Thompson, Ph.D., Assistant Professor of Mechanical Engineering

UPPER DIVISION COURSES

510. Advanced Machine Design (3) I, II
Prerequisites: Mechanical Engineering 314 and 340.
Application of advanced topics in strength of materials to the design of mechanical elements. Energy methods, stress concentrations, curved beams, and thick-walled cylinders. Practical application of principles through case studies or design projects.

512. Simulation of Engineering Systems (3) I, II
Two lectures and three hours of laboratory.
Prerequisites: Mechanical Engineering 314, 350 and 395.
Analysis and design of engineering systems using modern analog and digital computers. Simulation of dynamic systems. Application to problems in mechanics, heat transfer, thermodynamics, and control systems.

514. Experimental Stress Analysis (3)
Prerequisite: Mechanical Engineering 314.
Advanced study of resistance of materials, failure theories and experimental stress analysis. Methods will include photoelasticity, brittle lacquers, strain gauges, grid methods, and analogs for determining static and dynamic stress distributions. Laboratory demonstrations.

516. Engineering Design: Mechanisms (3)
Prerequisite: Mechanical Engineering 512. Design of linkages, cams, and gears wherein displacement, velocity and acceleration are paramount considerations.

520. Introduction to Mechanical Vibrations (3)
Prerequisites: Mechanical Engineering 512 and Civil Engineering 301. Analysis of mechanical vibration: single- and multi-degree of freedom systems; free and forced vibrations, vibration isolation, vibration absorbers. Theory of vibration measuring instruments.

521. Vibration, Shock and Noise Measurements (3)
Prerequisites: Mechanical Engineering 512 and Civil Engineering 301. Experimental problems utilizing vibration excitation equipment, recording equipment, transducers, sound analysis systems and analog computers.

530. Automatic Control Systems (3)
Prerequisites: Engineering 310 and credit or concurrent registration in Mechanical Engineering 512. Analysis of the dynamic characteristics of control components and systems. Stability and response of closed loop systems. Design of control systems.
540. Nonmetallic Materials (3)
Prerequisites: Mechanical Engineering 340.

542. Production Engineering (3)
Prerequisites: Mechanical Engineering 340 and Engineering 310.
Quantitative techniques including regression analysis, linear programming, network and simulation methods applied to planning, forecasting, scheduling and maintaining of modern production and manufacturing systems.

544. Advanced Manufacturing Processes (3)
Prerequisites: Mechanical Engineering 195, 314, 340, and Engineering 310.
Theory and techniques of metal cutting, forming, non-cutting metal removal, computer controlled machining, and special languages.

546. Computer Aided Manufacturing (3)
Prerequisites: Mechanical Engineering 195, 340, and Engineering 120, 310.
Computer controlled manufacturing and assembly techniques and devices. Data bases and simulation methods.

570. Thermal Systems Analysis and Design (3)
Prerequisites: Mechanical Engineering 470, 472.
Analysis, design and optimization of thermal systems using microcomputers: Modelling of thermal systems and components. Thermal system component characteristics and their effect on overall system performance. Relationship among thermal sciences in design process. Introduction to thermoeconomic optimization.

580. Elements of Energy Conversion (3)
Prerequisites: Mechanical Engineering 350.
Principles of physics and energy conversion applied to the analysis of a broad spectrum of energy conversion devices from an engineering point of view.

582. Thermal Environmental Physics (3)
Prerequisite: Mechanical Engineering 470.

584A-584B. Principles of Chemical Engineering (3-3)
(Same course as Chemistry 500A-500B.)
Prerequisites: Credit or concurrent registration in Mechanical Engineering 350 or Chemistry 410A.
Industrial stoichiometry; fluid flow and heat transfer as applied to unit operations such as evaporation, precipitation, distillation, filtration, gas-phase mass transfer, drying, and others. Problems, reports, and field trips.

586. Solar Energy Conversion (3)
Application of thermodynamics, fluid mechanics and heat transfer to the thermal design of solar energy conversion systems. Computer simulations utilized.

590. Biomechanics (3)
Prerequisites: Civil Engineering 301 and Engineering Mechanics 340.

596. Advanced Mechanical Engineering Topics (1-3) I, II
Prerequisites: Consent of instructor.
Modern developments in mechanical engineering. See Class Schedule for specific content. Maximum credit of six units for any combination of Mechanical Engineering 496, 499 and 596 applicable to a bachelor's degree. Maximum combined credit of six units of Mechanical Engineering 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

610. Finite Element Methods in Mechanical Engineering (3)
Prerequisites: Engineering 310 and Mechanical Engineering 510.
Development of finite elements and an introduction to solution methods. Problems from various fields of study in mechanical engineering such as stress analysis, vibrations and heat transfer. Introduction to finite element programs such as NASTRAN.

614. Engineering Design: Analytical Methods (3)
Prerequisites: Mechanical Engineering 512 and Engineering 510.

621A-621B. Mechanical Vibrations (3-3)
Prerequisites: Mechanical Engineering 512, 520 and Engineering 510.
Topics in vibration relating to mechanical design such as structural dynamics, non-linear vibrations, distributed mass systems, random vibrations, mobility analysis, isolator design.

632. Advanced Topics in Automatic Controls (3)
Prerequisite: Mechanical Engineering 530.
Analysis and synthesis of control systems. State space analysis of multivariable systems, optimal control systems.

642. Corrosion (3)
Prerequisite: Mechanical Engineering 340.
The destructive attack of a metal by chemical or electrochemical reaction with its environment. Thermodynamics of cells, E-PH diagrams, and electrode kinetics; corrosion resistant metals, polymers and composites.

643. Failure Analysis (3)
Prerequisite: Mechanical Engineering 510.
Behavior of materials in mechanical design. Analysis, prediction and prevention of failure.

645. Mechanical Metallurgy for Engineers (3)
Prerequisites: Mechanical Engineering 340 and 350.
Fundamentals of plastic deformation of crystalline solids; elementary theory of statics and dynamics of dislocations, deformation, fracture and metallurgical variables on mechanical properties, environment-failure interactions.

651. Analytical Thermodynamics (3)
Prerequisite: Engineering 310.
Advanced concepts of macroscopic thermodynamics. Application of thermodynamics to special systems.

661. Gas Dynamics (3)
Prerequisites: Mechanical Engineering 450 and Engineering 510.
Thermodynamics of high velocity compressible fluid flow. Adiabatic and diabatic flow, shock phenomena; imperfect gases; multidimensional flow. Applications to the propulsion of rockets and turbomachinery.

663. Boundary Layers in Internal Flows (3)
Prerequisites: Mechanical Engineering 470 and Engineering 510.
Conservation laws applied to boundary layers in viscous, heat conducting fluids; analysis of the boundary layer equations; applications to internal flows.

671. Conduction Heat Transfer (3)
Prerequisites: Mechanical Engineering 470 and Engineering 510.
Conduction heat transfer, multidimensional and transient processes; analytical and numerical models of conduction phenomena.

673. Convection Heat Transfer (3)
Prerequisites: Mechanical Engineering 470, Engineering 510. Concurrent registration in Mechanical Engineering 663.
Convection heat transfer processes under laminar and turbulent flow conditions. Analytical and numerical modeling of processes.

675. Radiation Heat Transfer (3)
Prerequisites: Mechanical Engineering 470 and Engineering 510.

696. Advanced Topics in Mechanical Engineering (2 or 3)
Intensive study in specific areas of mechanical engineering. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of Mechanical Engineering 596 and 696 applicable to a 30-unit master's degree. (Formerly numbered Mechanical Engineering 796.)
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700. Seminar (1-3)
Prerequisite: Consent of the graduate adviser and instructor.
An intensive study in advanced mechanical engineering. May be repeated with new
content. See Class Schedule for specific content. Maximum credit six units applicable on a
master’s degree. 797. Research (1-3) Cr/NC/SP
Prerequisites: Consent of graduate adviser and advancement to candidacy.
Research in engineering. Maximum credit six units applicable to a master’s degree.
798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff, to be arranged with department chair and instructor.
Individual study. Maximum credit three units applicable to a master’s degree.
799. Thesis or Project (3) Cr/NC/SP
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master’s degree.
799B. Thesis or Project Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in
which the student expects to use the facilities and resources of the university; also student must
be registered in the course when the completed thesis or project is granted final approval.

English and Comparative Literature

Adams Humanities 4158, (619) 594-5237

Faculty
Elsie B. Adams, Ph.D., Professor of English and Comparative Literature
Jackson J. Benson, Ph.D., Professor of English
Robert F. Borkat, Ph.D., Professor of English
Howard C. Brashers, Ph.D., Professor of English
Jerry D. Bumpus, M.F.A., Professor of English
Gerald J. Butler, Ph.D., Professor of English and Comparative Literature
Glover T. Davis II, M.F.A., Professor of English
John W. Dickinson, Ph.D., Professor of English
Gerald H. Farber, Ph.D., Professor of English and Comparative Literature
Maurice S. Friedman, Ph.D., L.L.D., Professor of Religious Studies, Philosophy and
Comparative Literature
Jay H. Gellens, Ph.D., Professor of English
Ronald J. Gervais, Ph.D., Professor of English
Jerome J. Griswold, Ph.D., Professor of English
Suzanne Henig, Ph.D., Professor of English
James C. Hinkle, M.A., Professor of English
Harold Jaffe, Ph.D., Professor of English
Dorothea F. Kehler, Ph.D., Professor of English
Lois R. Kuznets, Ph.D., Professor of English
Lawrence F. McCaffrey, Ph.D., Professor of English and Comparative Literature
Dan D. McLeod, Ph.D., Professor of English and Comparative Literature, Associate Chair
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Fred S. Moramarco, Ph.D., Professor of English
Thomas A. Nelson, Ph.D., Professor of English (Graduate Adviser)
Peter F. Neumeyer, Ph.D., Professor of English and Comparative Literature
William N. Rogers II, Ph.D., Professor of English and Comparative Literature
James Rother, Ph.D., Professor of English and Comparative Literature
Gennaro A. Santangelo, Ph.D., Professor of English and Comparative Literature
Minas Savvas, Ph.D., Professor of English and Comparative Literature (Graduate Adviser)
Ita G. Sheres, Ph.D., Professor of English and Comparative Literature
Donald A. Shojai, Ph.D., Professor of English and Comparative Literature, Graduate
Coordinator
Harry C. Stehi, Ph.D., Professor of English
Carey G. Wall, Ph.D., Professor of English, Chair of Department
Kingsley Widmer, Ph.D., Professor of English and Comparative Literature
Sandra B. Aicosser, M.F.A., Associate Professor of English, Director of Creative Writing
Program (Graduate Adviser)
Alfred F. Boe, Ph.D., Associate Professor of English and Comparative Literature
Sinda J. Gregory, Ph.D., Associate Professor of English
Sherry B. Little, Ph.D., Associate Professor of English
Shirley K. Rose, Ph.D., Associate Professor of English, Director of Composition
Hawley C. Taylor Jr., Ph.D., Associate Professor of English and Comparative Literature
Thomas Aninger, Ph.D., Assistant Professor of English
Claire E. Colquitt, Ph.D., Assistant Professor of English
D. Emily Hicks, Ph.D., Assistant Professor of English and Comparative Literature
James L. Wheeler, Ph.D., Assistant Professor of English and Comparative Literature
Susan L. Wyche-Smith, Ph.D., Assistant Professor of English
William Zeiger, Ph.D., Assistant Professor of English (Graduate Adviser)

Assistantships and Scholarships
Graduate teaching assistantships in English are available to a limited number of qualified
students. Application blanks and additional information may be secured from the Graduate
Coordinator.

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The Dorothy Cranston Stott scholarship of $100 is awarded each June to an English major who is graduating from San Diego State University and who is continuing work toward a higher degree or credential. For California State Fellowships, see Part Two, Scholarships, Fellowships section of this bulletin.

General Information

The English and Comparative Literature faculty, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in English and to postbaccalaureate (nondegree) study.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. Students may be admitted to the graduate program in literature in one of three categories:

1. Unconditional Classified Graduate Standing

   For unconditional acceptance to the graduate program in English, students must meet the following requirements:

   a. 24 units of upper division work in English
   b. 2.75 overall on a 4.0 Grade Point Scale
   c. 3.0 grade point average in the English major
   d. 950 on the GRE General Test

2. Conditional Classified Graduate Standing

   a. Conditional acceptance will be granted to a candidate who is below requirements in one of the above. A student may be granted conditional acceptance if there is a deficiency in two or more of the above requirements. A student accepted conditionally must achieve an average of 3.25 in nine units of English or comparative literature courses before proceeding to further study and is limited to 12 units. Any units taken above this quota will count toward the 30 units for the master's degree in English.
   b. English major unit deficiencies. Students who lack 24 units of credit in upper division courses in English will receive conditional acceptance if they meet the requirements of 2.75 overall and 950 on the GRE General Test. After the completion of 24 units in the major, students will then be given classified graduate standing if they meet the other requirements.

3. Postbaccalaureate Standing (Unclassified-No Degree Objective). See description in Part Two, Admission Section of this bulletin.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement, as stated in Part Two of this bulletin. Each candidate, with the approval of the graduate coordinator, may fulfill the foreign language requirement in one of several ways: (1) by passing the Graduate School Foreign Language Test or the Modern Language Association Reading Examination, (2) by passing a local examination administered by one of the University's foreign language departments, (3) by completing three-quarter upper division foreign language literature course with readings in the original language with a grade of C (2.0) or better, or (4) by passing an examination to be determined by the graduate coordinator if the chosen language is not one taught in a department at SDSU.

To be advanced to candidacy in the Creative Writing program, a student must submit a sample of his or her writing or work in progress for approval as a thesis level achievement by a committee of three of the faculty in the Creative Writing area.

Specific Requirements for the Master of Arts Degree

(Major Code: 15011)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program, approved by a graduate adviser and the graduate coordinator of the department, which includes a major consisting of 30 units, with at least 18 units of 600-

and 700-numbered courses. The student may take up to six units of electives outside the Department with the approval of his or her adviser. Students in the Emphasis on the Teaching of Writing may take up to nine units outside the department with approval of the adviser. (Students in Comparative Literature may also take up to six units of foreign language literature courses numbered 600 or above as part of their program and with approval of adviser.) This major will include a specialization in one program area (British Literature, American Literature, Comparative Literature, Creative Writing, or Emphasis on the Teaching of Writing) and will fulfill requirements of one of the six plans described below. Literature students will follow Plan A (I) or Plan B (I) or (II), Creative Writing students will follow Plan A (III) or Plan B (III), Emphasis on the Teaching of Writing students will follow Plan A (III) or Plan B (III).

Plan A (I) Thesis:

Thirty units, including English 600 (English 600 or 601 for Comparative Literature students), 799A (Thesis) and a second 700-level course (other than 798). The program of courses developed with the student's adviser will emphasize breadth; a minimum of nine units must be selected from English and Comparative Literature courses outside the program area. The thesis (usually 75-125 pages in length) will be in the student's program area.

Plan A (II) Creative Writing:

Thirty units, including English 600 or 601, 799A (a creative work), a second 700-numbered English and Comparative Literature course (other than 798), at least nine units of writing courses, and a minimum of nine units in literature courses apart from Creative Writing. The creative work will normally be a novel or a collection of poems or short stories.

Plan A (III) Thesis in the Teaching of Writing:

Thirty units, including English 600, 740, 799A (Thesis), and a third graduate level course related to the teaching of writing, selected with the student's adviser. A minimum of nine units must be selected from literature courses. English 500W and 508W are required if courses of similar content not taken as an undergraduate. The thesis (usually 75-125 pages in length) will be in the student's program area.

Plan B (I) Oral and Written Examination:

Thirty units of coursework, including English 600 (English 600 or 601 for Comparative Literature students), three 700-level English courses (seminars), and nine units in English and Comparative Literature courses outside the program area. In addition, the student must pass (1) a three-hour written examination in one broad area of emphasis (e.g., American Literature, British Literature Before 1800, Modern French Literature), and (2) a two-hour comprehensive oral examination covering American and British Literature (or equivalent areas in Comparative Literature).

Plan B (II) Starred Papers and Oral Examination:

Thirty units including English 600 (English 600 or 601 for Comparative Literature students), at least three 700-level (seminar) courses in the Department, and a minimum of nine units from English and Comparative Literature courses outside the program area. The program developed by the student and the graduate adviser will emphasize breadth. Three seminar papers of about 36 pages each recommended as a "Starred Paper" by a seminar instructor, will be revised to meet the approval of the student's committee. Two of these papers must be from the student's program area, the third from outside that area (e.g., two from British Literature, one from American Literature). In addition, the student will be required to pass an oral examination covering the area of specialization as defined by his or her committee (e.g., British Literature since 1800, Twentieth Century World Literature).

Plan B (III) Starred Papers and Oral Examination in the Teaching of Writing:

Thirty units, including English 600, 740, at least three other 700-level (seminar) courses, and a minimum of nine units of literature courses. English 500W and 508W are required courses if similar content not taken as an undergraduate. Three graduate and/or seminar papers are to be revised to meet the approval of the student's committee. Two of these papers must be from the student's program area, the third from outside that area. In addition, the student will be required to pass an oral examination covering the area of specialization as defined by his or her committee.
Master of Fine Arts Degree in Creative Writing

General Information

The Master of Fine Arts degree in Creative Writing offers a study in poetry or fiction with a balance between studio and academic, traditional and experimental, commercial and aesthetic approaches. The graduate program has two stages—graduate seminars followed by intensive study with one or more professors in tutorials and thesis preparation. The MFA is a professional program designed for full-time students who wish to receive a terminal degree in creative writing. Each year, in addition to the resident faculty, the department invites approximately twenty writers and editors to the campus for readings and residencies. The department publishes two literary journals: Pacific Review, an SDSU literary magazine edited by students, and Fiction International. Teaching assistantships are available on a competitive basis for graduate writing students. Internships are available for advanced students in arts administration, academic and professional services, editing and publishing for which unit credit is given. For further information, contact MFA Program Director, Department of English and Comparative Literature.

Admission to Graduate Study

STUDENTS WILL BE ADMITTED TO THE M.F.A. IN CREATIVE WRITING ONLY IN THE FALL SEMESTER AND COMPLETE APPLICATIONS MUST BE RECEIVED NOT LATER THAN MARCH 1.

In addition to meeting the general requirements for admission to San Diego State University with classified graduate standing, as described in Part Two of this bulletin, a student must satisfy the following requirements before being recommended for classified graduate standing and three letters of recommendation, to enable the Creative Writing faculty to assess the candidate's suitability to pursue an MFA in Creative Writing. The sample of creative work and the letters of recommendation are to be sent directly to the Director of the Creative Writing Program, Department of English and Comparative Literature, San Diego State University.

1. The applicant must submit a sample of creative work (15 poems or 30 pages of prose) and a statement to the Creative Writing faculty regarding the applicant's suitability to pursue an MFA in Creative Writing. The sample of creative work and the letters of recommendation are to be sent directly to the Director of the Creative Writing Program, Department of English and Comparative Literature, San Diego State University.

2. The applicant must possess a baccalaureate degree in Creative Writing, or in English with a focus in Creative Writing, or an approved affiliated field, with a grade point average of not less than 3.0 overall in the last 60 units of study attempted, with a 3.25 average in those courses and a grade point average of not less than 3.0 overall in the last 60 units of study attempted, with a 3.5 average in those courses and a grade point average of not less than 3.0 overall in the last 60 units of study attempted.

3. If deficient, the applicant must complete undergraduate requirements commensurate with the proposed focus in the MFA program.

4. The applicant normally must achieve a total score of 600 on the Graduate Record Examination, with a minimum of 500 on the verbal section. The results of the GRE should be sent directly to Admissions and Records, San Diego State University.

Admittance to Candidacy

Aspects to be reviewed include artistic achievement, ability to function in a variety of situations that writers and teachers usually encounter, and demonstration of skills in the area of focus. The Creative Writing faculty must review the applicant's sample of creative work and letters of recommendation for admittance to Candidacy.

Specific Requirements for the Master of Fine Arts Degree in Creative Writing

In addition to meeting the requirements for classified graduate standing, candidates for the M.F.A. degree must complete a 54-unit graduate program, 39 of which must be in courses numbered 600 and above as follows:

1. Core Requirements.

   A. Poetry
      - English 680 Poetry Writing (6)
      - English 780 MFA Seminar: Poetry (6)
      - Six units of electives in another creative writing research focus with the approval of the MFA advisor.

   B. Fiction
      - English 681 Fiction Writing (6) and six units of electives in another creative writing research focus with the approval of the MFA advisor.

   C. Six units of electives in another creative writing research focus with the approval of the MFA advisor.

2. Creative Writing Research Focus

   Student to select one 18-unit research focus as follows:
   A. Poetry
      - English 680 Poetry Writing (6)
      - English 780 MFA Seminar: Poetry (6)
      - Six units of electives in another creative writing research focus with the approval of the MFA advisor.
   B. Fiction
      - English 681 Fiction Writing (6) and six units of electives in another creative writing research focus with the approval of the MFA advisor.
   C. Six units of electives in another creative writing research focus with the approval of the MFA advisor.

3. Literature Research

   An 18-unit literature research component divided as follows:
   A. Three units selected from the following:
      - English 630 Form and Theory of Poetry (3)
      - English 631 Form and Theory of Fiction (3)
   B. Nine units in American, British, or Comparative Literature, or an appropriate modern language literature selected with the approval of the MFA advisor.
   C. Six units selected from the following:
      - English 700 Seminar: A Major Author (3)
      - English 709 Seminar in Teaching of Creative Writing (3)
      - English 710 Seminar: A Cultural Period (3)
      - English 730 Seminar: A Literary Type (3)
      - English 740 Topics in the Teaching of Composition (3)
      - English 741 Seminar in Classical Rhetoric and Composition (3)
      - English 742 Seminar in Modern Rhetoric and Composition (3)
      - English 743 Seminar in Research Methods in Rhetoric and Composition (3)

4. Correlative Study in Another Discipline

   Six units in a correlative study related to the student's interest and selected with the approval of the MFA advisor.
Courses Acceptable on the Master's Degree Programs in Creative Writing and English

**UPPER DIVISION COURSES IN ENGLISH**

**Prerequisite for all 500-level courses:** Six lower division units in courses in literature and/or creative writing.

**500W. Advanced Composition** (3) I, II

Prerequisite: Satisfies University upper division writing requirement for students who have completed 60 units, fulfilled the Writing Competency requirement, and completed the General Education requirement in Written Communication. Proof of completion of prerequisites required. Includes the theory and practice of expository writing, including the contributions of semantics, rhetoric, and logic.

501. Literature for Children (3)


504. Problems in Technical Communication (3) I, II

Prerequisite: English 304W. Recommended: Graphics or drawing course. Problems in technical writing, including graphics, printing, and reproduction of technical documents; technical communication, including reports, manuals, and proposals; manuscript editing and proofreading; audience analysis and readability; writing and recognition of clear technical prose.

506. Writing Internship (3) I, II, S Cr/NC

Prerequisite: Consent of instructor and successful completion of a 500-level writing course with a grade of B or better. Intensive experience in writing and editing documents while student is under the joint supervision of an academic instructor and a professional coordinator.

507. The History of Literary Criticism (3)

Principles and practices of literary criticism from Greek times to the twentieth century.

508W. The Writing of Criticism (3)

Prerequisite: Satisfies University upper division writing requirement for students who have completed 60 units, fulfilled the Writing Competency requirement, and completed the General Education requirement in Written Communication. Theory and practice of literary criticism. Emphasis on the work of important critics and on development of student's own critical writing.

509. Introduction to the Teaching of Composition (3) I, II

Prerequisite: Consent of instructor based on writing sample and/or test. Techniques for teaching and evaluation of written composition. Provides a theoretical base for these techniques.

522. American Literature, 1800 until 1860 (3)

Representative works by American writers from 1800 until 1860; likely to include works by Emerson, Hawthorne, Melville, Poe, H. B. Stowe, Thoreau, Whitman, others.

523. American Literature, 1860 until 1920 (3)

Representative works by American writers from 1860 until 1920; likely to include works by Kate Chopin, Stephen Crane, Emily Dickinson, Henry James, Carl Sandburg, Mark Twain, Edith Wharton, others.

524. American Literature, 1920 until 1950 (3)

Representative works by American writers from 1920 until 1950; likely to include works by Willa Cather, T. S. Eliot, William Faulkner, F. Scott Fitzgerald, Ernest Hemingway, Eugene O'Neill, K. A.女星, Ezra Pound, John Steinbeck, others.

525. American Literature, 1950 until Present (3)

American writers from 1950 until the present, likely to include works by Edward Albee, Saul Bellow, Allen Ginsberg, Joseph Heller, Norman Mailer, Toni Morrison, Sylvia Plath, Adrienne Rich, Kurt Vonnegut, Eudora Welty, others.

526. Topics in American Literature (3)

Topics in American literature to include The Literature of the South; Black Writers in America; The Frontier and American Literature; The History of American Literature; The Outcast in American Literature. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

527. Genre Studies in American Literature (3)


528. Individual American Authors (3)

Writers of major American authors or, if useful comparisons and juxtapositions warrant it, the works of two or three authors: Melville, Twain, James, Faulkner, Steinbeck, Nabokov, or Pound and Eliot, Emerson and Thoreau, Vonnegut and Barth, others. See Class Schedule for specific content. May be repeated with new title and content. Maximum credit six units.

530. Chaucer (3)

Chaucer's works, with emphasis on The Canterbury Tales and Troilus and Criseyde.

531. Renaissance Literature (3)

English poetry and prose from 1485 to 1603.

533. Shakespeare (3) I, II

An introduction to the writings of Shakespeare. This course cannot be used in place of English 300 to satisfy General Education requirements.

534. Study of Shakespeare (3)

Prerequisite: English 533. Advanced study of Shakespeare's achievement as a poet and playwright.

536. Seventeenth Century Literature (3)

English poetry and prose from 1603 to 1660.

537. Milton (3)

Milton's works, with emphasis on Paradise Lost.

538-539B. Restoration and Eighteenth Century Literature (3-3) I, II

English literature in the neoclassical era. Semester I: Dryden, Swift, Pope, and their contemporaries. Semester II: Writers of the middle and late eighteenth century.

540A-540B. English Fiction (3-3)


541A-541B. English Drama (3-3)

English dramatic literature from its beginnings to the nineteenth century. Semester I: The period from the beginning to 1642. Semester II: The period following reopening of the theatres in 1660.

542. Romantic Literature (3)

Representative British works from the 1790's to the 1830's by such writers as Wollstonecraft, Blake, Wordsworth, Coleridge, Byron, Shelley, Keats, Austen, and Scott. (Formerly numbered English 542A.)

543. Victorian Literature (3)

Representative British works from 1837 until 1890 by such writers as Carlyle, Tennyson, Ruskin, Browning, Dickens, Arnold, Eliot, and Pater. (Formerly numbered English 542B.)

544. British Literature, 1890-1918 (3)

Representative British works from 1890 until 1918 by such writers as Hardy, Gissing, Shaw, Conrad, Yeats, Wells, Forster, and the World War I poets.

547. British Literature, 1918-1950 (3)

Representative British works from 1918 until 1950 by such writers as Joyce, Woolf, T. S. Eliot, Lawrence, Mansfield, Huxley, Bowen, Greene, Auden, Orwell, and Thomas.

548. British Literature, 1950 until Present (3)

Representative British works from 1950 until the present by such writers as Golding, Amis, Murdoch, Lessing, Pinter, Hughes, Fowles, Stoppard, and Drabble.
549. Topics in English Literature (3) I, II

560A. British Literature, Beginnings through the Eighteenth Century (3)
Survey of major British writers, with emphasis on reading of complete works. From the beginnings to the neoclassical period. Especially appropriate for those students who have not satisfied the lower division survey requirements, for those who will teach British literature, and for those proceeding on to graduate study.

560B. British Literature, Romanticism to the Present (3)
Survey of major British writers, with emphasis on reading of complete works. Begins with the Romantic writers. Especially appropriate for those students who have not satisfied the lower division survey requirements, for those who will teach British literature, and for those proceeding on to graduate study.

570. Techniques of Poetry (3) I, II
Prerequisite: English 280.
Techniques of poetry from the creative writer's point of view, introduction to critical and theoretical literature on poetry. Includes a creative writing workshop.

571. Techniques of the Short Story (3) I, II
Prerequisite: English 280.
Techniques of the short story, from the writer's point of view. Introduction to critical and theoretical literature on the short story. Includes a creative writing workshop.

572. Techniques of the Novel (3) I, II
Prerequisite: English 280.
Techniques of the novel from the writer's point of view. Introduction to critical and theoretical literature on the novel. Includes a creative writing workshop.

574. Techniques of Informal Essays (3) I, II
Prerequisite: English 280.
Techniques of the essay as an art form. Introduction to critical and theoretical literature on the essay. Includes a creative writing workshop.

576. Literary Editing and Publishing (3) I, II
Prerequisite: English 280.
Principles and practices of editing and literary publishing. Workshop on small press publishing. Includes editing and publishing workshop.

577. Techniques of Screenwriting (3) I, II
Prerequisite: English 280 or Telecommunications and Film 110 or 510 for Telecommunications and Film majors.
Techniques of screenwriting. Introduction to the critical and theoretical literature on screenwriting. Includes a creative writing workshop.

578. Techniques of Drama (3)
Prerequisite: English 280.
Techniques of drama written for the stage, from writer's point of view. Introduction to the critical and theoretical literature on drama. Includes a creative writing workshop. (Formerly numbered English 572.)

579. Topics in Creative Writing (3)
Prerequisite: English 280.
Techniques of creative writing focusing on a specialized genre such as comedy, science fiction, and biography. Study of the critical and theoretical literature on the genre. Includes a creative writing workshop. See Class Schedule for specific content. Maximum credit six units.

580. Writing of Poetry (3) I, II
Prerequisite: English 570.
A creative writing workshop in poetry. Continuation of English 570. Maximum credit six units.

581W. Creative Writing of Fiction (3) I, II
Prerequisite: English 280. Satisfies University upper division writing requirement for completed General Education requirement in Written Communication.
A creative writing workshop in fiction. Continuation of English 571. Maximum credit six units.

584W. Writing Informal Essays (3)
Prerequisite: English 574. Satisfies University upper division writing requirement for students who have completed 60 units, fulfilled the Writing Competency requirement, and completed the General Education requirement in Written Communication.
A creative writing workshop in nonfiction, especially the essay as an art form. Maximum credit six units. (Formerly numbered English 582W.)

585. Writing the Screenplay (3) I, II
Prerequisite: English 577 or Telecommunications and Film 110 or 510 for Telecommunications and Film majors.
A creative writing workshop in screenwriting with emphasis on the feature film. Continuation of English 577. Includes playwriting and revising a television script or short film. Maximum credit six units.

586. Playwriting: The One-Act Play (3) II
Prerequisite: English 578 or Drama 420.
A creative writing workshop in planning, writing, and revising a one-act play. Selected plays may be submitted to the Drama Department for production in the One-Act Program. May be repeated with new content. Maximum credit six units.

589. Senior Workshop in Creative Writing (3)
Prerequisites: Three units from English 570, 571, 573, 578, or 579; six units from English 580, 581W, 583, 584W, 587, or 588. Not applicable to a master's degree.
Advanced workshop for students who have an extensive background in creative writing, and who wish to prepare a senior project. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

UPPER DIVISION COURSES IN COMPARATIVE LITERATURE

510. Medieval Literature (3)
Representative selections from authors of the Middle Ages.

511. Continental Renaissance (3)
Representative selections from authors of the Renaissance period in continental Europe.

512. Seventeenth and Eighteenth Century European Literature (3)
Selected works by European writers prior to 1800.

513. Nineteenth Century European Literature (3)
Selected works by European writers between 1800 and 1900.

514. Modern European Literature (3)
Selected works by European writers of the twentieth century.

526. Modern Jewish Literature (3) I, II
Selected works by Jewish authors from the last half of the nineteenth century to the present, with emphasis on the United States and Israel.

560. The Epic (3)
Selected epic poems from world literature; emphasizes the Western epic tradition from Homer to the present. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

561. Fiction (3)
A comparative approach to themes and forms in fiction (novel and short story). Focus of course to be set by instructor. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

582. Drama (3)
Forms and themes in drama. Focus of course to be set by instructor. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.
563. Poetry (3)
A comparative approach to themes and forms in poetry. Focus of course to be set by
instructor. May be repeated with new title and content. See Class Schedule for specific content.
Maximum credit six units applicable to a master's degree.

571. Literary Use of Legend (3)
Literary treatment of such legendary figures as Don Juan, Faust, and Ulysses, in a wide
range of literature and genres. May be repeated with new content. See Class Schedule for
specific content. Maximum credit six units.

577. Major Individual Authors (3)
In-depth study of the works of a major author, such as Sophocles, Dante, Cervantes,
Goethe, Dostoevsky or Proust. May be repeated with new title and content. See Class
Schedule for specific content. Maximum credit six units.

580. Concepts in Comparative Studies (3)
Basic concepts in comparative studies in literature (e.g., influence, movement, figure,
genre, etc.); their validity, usefulness and limitations. May be repeated with new title
and content. See Class Schedule for specific content. Maximum credit six units.

581. Literary Uses of Languages (3)
Study of the functions of language in literary writings. May take the form of translation
workshop, stylistic studies, etc. May be repeated with new title and content. See Class
Schedule for specific content. Maximum credit six units.

584. Topics in Literature and the Arts (3) I, II
Prerequisite: Six upper division units in literature or any of the other arts.
Comparative study of literature, usually in translation, and other arts such as painting,
sculpture, architecture, music, dance and film. See Class Schedule for specific content.
Maximum credit six units applicable to the M.F.A. in creative writing.

595. Literature and Aesthetics (3) I, II
Prerequisite: Six upper division units in literature or any of the other arts.
Theoretical and experiential investigation of relationships between literature, usually in
translation, and the other arts. Literary works in context of an inquiry into aesthetics.

596. Topics in Comparative Literature (3)
An intensive study of a topic to be selected by the instructor. May be repeated with new title
and content. See Class Schedule for specific content. Maximum credit six units. (Formerly
numbered Comparative Literature 550.)

GRADUATE COURSES IN ENGLISH

600. Introduction to Graduate Study (3)
Prerequisite: Twelve upper division units in English.
Introduction to research methods and critical approaches common in the graduate study of
literature, with attention to basic reference works, scholarly and critical journals, bibliographical
procedures, etc. Recommended for first semester graduate students.

601. Comparative Literature Theory (3)
Introduction to methods of comparative study involving history and theory of Comparative
Literature as a discipline. Strongly recommended for first semester students who choose an
emphasis in Comparative Literature.

610. Literature of the Middle Ages (3)
Prerequisite: Twelve upper division units in English.
Selected works in the literature of the Middle Ages with emphasis on Middle English prose
and poetry exclusive of Chaucer.

612. Renaissance Literature (3)
Prerequisite: Twelve upper division units in English.
Selected works in the literature of the Renaissance.

616. Earlier Nineteenth Century Literature (3)
Prerequisite: Twelve upper division units in English.
Selected works in the literature of the early nineteenth century.

617. Later Nineteenth Century Literature (3)
Prerequisite: Twelve upper division units in English.
Selected works in the literature of the later nineteenth century.

620. Twentieth Century Literature (3)
Prerequisite: Twelve upper division units in English.
Selected works in the literature of the twentieth century.

624. British Literature (3)
Prerequisite: Twelve upper division units in English.
Selected works of an author, period, or subject in English literature. May be repeated with
new content. See Class Schedule for specific content. Maximum credit six units applicable to a
master's degree.

625. American Literature (3)
Prerequisite: Twelve upper division units in English, with courses in American literature
strongly recommended.
Selected works of an author, period, or subject in American literature. May be repeated with
new content. See Class Schedule for specific content. Maximum credit six units applicable to a
master's degree.

630. Form and Theory of Poetry (3)
Prerequisite: Twelve upper division units in English.
Poetry as a literary form. May be repeated with new content. Maximum credit six units
applicable to an MFA degree in Creative Writing.

631. Form and Theory of Fiction (3)
Prerequisite: Twelve upper division units in English.
Fiction as a literary form. May be repeated with new content. Maximum credit six units
applicable to an MFA degree in Creative Writing.

680. Poetry Writing (3)
Prerequisites: English 580 and at least 12 units in upper division and graduate English
courses. Strongly recommended: English 570 and/or 630.
Writing original poetry; guided practice in various forms and techniques. May be repeated
with new content. Maximum credit six units applicable to a master's degree. (Formerly
numbered English 640 [Poetry].)

681. Fiction Writing (3)
Prerequisites: English 581W and at least 12 units in upper division and graduate English
courses. Strongly recommended: English 571, 578, and/or 631.
Writing original fiction. Students may emphasize short story, novel, or a combination.
Guided practice in narrative techniques. May be repeated with new content. Maximum credit
six units applicable to a master's degree. (Formerly numbered English 640 [Fiction].)

689. Advanced Tutorial in Creative Writing (3)
Prerequisite: English 680 or 681.
Class sessions and individual consultations in creative writing. May be repeated with new
content. Maximum credit six units applicable to a master's degree. (Formerly numbered English
642.)

696. Special Topics (3)
Prerequisite: Twelve upper division units in English.
Intensive study in specific areas of English. May be repeated with new content. See Class
Schedule for specific content. Maximum credit six units applicable to a master's degree.
Maximum combined credit of six units of 526, 549, or 696 applicable to a 30-unit master's
degree. (Formerly numbered English 720.)

700. Seminar: A Major Author (3)
Prerequisites: An appropriate upper division or graduate level background course, and
English 600.
The critical study of a major author, such as Shakespeare, Dickens, Mark Twain. May be
repeated with new content. See Class Schedule for specific content. Maximum credit six units
applicable to a master's degree.

709. Seminar in Teaching of Creative Writing (3)
Prerequisite: English 509.
Techniques for teaching and evaluation of written work in major genres, focusing on fiction
and poetry. Theories of creativity and major genres.
710. Seminar: A Cultural Period (3)
Prerequisite: An appropriate upper division or graduate level background course, and
English 600.
Advanced study, through its literature, of a cultural period such as the Renaissance, the
Enlightenment, the Romantic revolution. May be repeated with new content. See Class Sched-
ule for specific content. Maximum credit six units applicable to a master’s degree.

730. Seminar: A Literary Type (3)
Prerequisite: English 600.
Advanced study of a literary type, such as the Personal Essay, Epic, Tragedy. May be
repeated with new content. See Class Schedule for specific content. Maximum credit six units
applicable to a master’s degree.

740. Topics in the Teaching of Composition (3)
Problems in the teaching of composition, both practical and theoretical. Advanced study of
topics such as teaching practices, compositional theory, and stylistics. May be repeated
with new content. See Class Schedule for specific content, maximum credit six units applicable
to a master’s degree.

741. Seminar in Classical Rhetoric and Composition (3)
Selected major works on rhetoric, from antiquity to the nineteenth century. Relationship
between the rhetorical tradition and modern approaches to the teaching of writing and
literature.

742. Seminar in Modern Rhetoric and Composition (3)
Twentieth-century rhetoric: composition theory, reading theory, psycholinguistics, socio-
linguistics, language philosophy, and literary theory. Relationship between rhetorical theory
and modern approaches to teaching of writing and literature.

743. Seminar in Research Methods in Rhetoric and Composition (3)
Prerequisites: English 740, and 741 or 742.
Introduction to research methods and critical approaches common to advanced graduate
study of rhetoric and composition, with attention to basic reference works, scholarly journals,
bibliographical techniques. Recommended for students planning a thesis within the “teaching
of writing” emphasis.

780. MFA Seminar: Poetry (3)
Prerequisite: English 680; open only to students admitted to MFA in Creative Writing.
Advanced poetry writing for MFA candidates. Students will be expected to do considerable
work on a collection of poems in progress, as well as to participate in critiques of others’ work.
May be repeated with new content. Maximum credit six units applicable to the MFA degree in
Creative Writing.

781. MFA Seminar: Fiction (3)
Prerequisite: English 681; open only to students admitted to MFA in Creative Writing.
Fiction writing for MFA candidates. Emphasis on forms of short fiction. May be repeated with
new content. Maximum credit six units applicable to the MFA degree in Creative Writing.

783. MFA Seminar: Novel (3)
Prerequisites: English 583 and 681; open only to students admitted to the MFA in Creative
Writing.
Novel writing for MFA candidates. Students will be expected to do considerable work on a
novel in progress, as well as participate in critiques of others’ work. May be repeated with new
content. Maximum credit six units applicable to the MFA in Creative Writing.

797. Thesis Research (3)
Prerequisite: Advancement to candidacy in MFA degree in Creative Writing. Independent work in general field of candidate’s thesis project.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master’s degree.

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

799B. Thesis Extension (0) Cr/NC
Registration required in any semester or term following assignment of SP in Course 799A in
which the student expects to use the facilities and resources of the university; also student must
be registered in the course when the completed thesis is granted final approval.
Family Studies and Consumer Sciences

Faculty

Child Development and Family Studies
Francine Deutsch, Ph.D., Professor of Family Studies and Consumer Sciences, Director of School
Dorothy W. Hewes, Ph.D., Professor of Family Studies and Consumer Sciences
Helen Warren Ross, Ph.D., Associate Professor of Family Studies and Consumer Sciences, Graduate Adviser
Michele W. Chadwick, Ph.D., Assistant Professor of Family Studies and Consumer Sciences
Anthony J. Urquiza, Ph.D., Assistant Professor of Family Studies and Consumer Sciences

Foods and Nutrition
Ronald V. Josephson, Ph.D., Professor of Family Studies and Consumer Sciences
Audrey A. Spindler, Ph.D., Professor of Family Studies and Consumer Sciences, Graduate Adviser
Jane L. Hoover-Plow, Ph.D., Associate Professor of Family Studies and Consumer Sciences
Jill R. Ellis, Ph.D., Assistant Professor of Family Studies and Consumer Sciences
Michael J. Kelley, Ph.D., Assistant Professor of Family Studies and Consumer Sciences
Rebecca J. Matheny, Ph.D., Assistant Professor of Family Studies and Consumer Sciences

Home Economics
Carolyn K. Balkwell, Ph.D., Professor of Family Studies and Consumer Sciences
Gwen C. Cooke, Ph.D., Professor of Family Studies and Consumer Sciences
Jean L. Martin, Ed.D., Professor of Family Studies and Consumer Sciences (Home Economics and Child Development Graduate Adviser)
Kathleen F. Mikita, Ph.D., Associate Professor of Family Studies and Consumer Sciences
Mary E. Dickerson, Ph.D., Assistant Professor of Family Studies and Consumer Sciences

Assistantships
Graduate teaching assistantships and graduate assistantships in child development, home economics and nutritional sciences are available to a limited number of qualified students. Application blanks and additional information may be secured from the Director, Family Studies and Consumer Sciences.

General Information
Family Studies and Consumer Sciences, in the College of Professional Studies and Fine Arts, offers graduate study leading to the Master of Science degree in Home Economics and the Master of Science degree in Nutritional Sciences.

Master of Science Degree in Home Economics

Admission to Graduate Study
All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin. In addition, the student must have a bachelor's degree in home economics or a related field, and satisfy the prerequisites of the courses selected. If a student's undergraduate preparation is deemed insufficient, the student will be required to complete specified courses in addition to the minimum of 30 units required for the master's degree in home economics. The student must have a grade point average of 3.0 in the last 60 semester units attempted, and a minimum score
of 950 on the GRE General Test. The applicant must submit a letter to the advisor stating reasons for choosing graduate work at San Diego State University, professional goals, special interests in the discipline, and background preparation. The student must be approved for admission by graduate faculty of Family Studies and Consumer Sciences.

**Advancement to Candidacy**

All students must satisfy the general requirements for advancement to candidacy, as described in Part Two of this bulletin.

**Specific Requirements for the Master of Science Degree in Home Economics**

(Major Code: 1301)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units including at least 24 units from courses listed as acceptable to master's degree programs in home economics. At least 18 units must be in 600- and 700-numbered courses, including Family Studies and Consumer Sciences 799A.

**Specialization in Child Development:** Students specializing in Child Development should complete a core sequence of four 600-level courses that are scheduled on a two-year cycle: approved by the program advisor including Family Studies and Consumer Sciences 631, 634, 670, 671. Recommended electives to be approved by the program advisor include Family Studies and Consumer Sciences 536, 541, 570, 577, 579, 584, 596.

In Plan A, all students will be expected to include Family Studies and Consumer Sciences 799A, Thesis. In Plan B, students will be expected to (a) pass a comprehensive written examination; and (b) complete Family Studies and Consumer Sciences 797, Research, culminating in a paper acceptable to the student's committee. All paper examinations which are given mid-semester.

**Master of Science Degree in Nutritional Sciences**

**General Information**

The advanced degree program in nutritional sciences is intended to support the growth and development of professionals in nutrition related academic disciplines who need advanced management. Research experiences in these subject areas are an integral part of the program. Laboratories, equipment and animal facilities are available to support graduate assistantships are available to support instructional programs and grant-funded research projects on a competitive application basis.

Graduates with the M.S. degree in Nutritional Sciences seek careers in such diverse community nutrition services, private nutrition consulting, food service administration, food industry research and development, and community college teaching.

**Admission to Graduate Study**

All students must satisfy the general requirements for admission to the university with a bachelor's degree in foods and nutrition or a related field and satisfy the minimum of 30 units required for the master's degree in nutritional sciences. The student must have a grade point average of 3.0 in the last 60 semester units attempted; and a minimum score graduate work at San Diego State University, professional goals, special interests in the discipline, and background preparation. The student must be approved for admission by graduate faculty of Family Studies and Consumer Sciences.

**Advancement to Candidacy**

All students must satisfy the general requirements for advancement to candidacy as described in Part Two of this bulletin.

**Specific Requirements for the Master of Science Degree in Nutritional Sciences**

(Major Code: 13061)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units including at least 21 units from courses listed as acceptable to the master's degree program in nutritional sciences. At least 18 units must be in 600- and 700-numbered courses.

Required courses include six units selected from Family Studies and Consumer Sciences 605, 606, 607, 608, 609; three units selected from Family Studies and Consumer Sciences 600, 603, and 700; Family Studies and Consumer Sciences 790; and one at Family Studies and Consumer Sciences 797. Family Studies and Consumer Sciences 507, or equivalent course, as approved by the nutrition graduate adviser, is required as part of the program. If it was not a part of the student's undergraduate work. All course selections for the graduate program must be approved by the student's nutrition faculty adviser.

In Plan A, all students will include Family Studies and Consumer Sciences 799A, Thesis. In Plan B, students will (a) pass a comprehensive examination; and (b) complete Family Studies and Consumer Sciences 797, Research, culminating in a paper acceptable to the student's committee. Reservations must be made six weeks in advance of the examination, which is given mid-semester.

**Courses Acceptable on Master's Degree Programs in Home Economics and Nutritional Sciences**

**UPPER DIVISION COURSES**

**GENERAL**

596. Advanced Studies in Family Studies and Consumer Sciences (1-6)
Prerequisite: Nine upper division units in family studies and consumer sciences.

Advanced study of selected topics. See Class Schedule for specific content. Limit of nine units of any combination of 596, 596A, or 596B applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 596A applicable to a 30-unit master's degree.

**HOME ECONOMICS**

520. Clothing and Human Behavior (3) II
Prerequisites: Family Studies and Consumer Sciences 217, Psychology 101 and Sociology 101; Economics 201 or Psychology 270 or Sociology 201. Proof of completion of prerequisites required.

Concepts and theories of human behavior as they apply to clothing usage. Significance of impressions of individuals that result from their attire in the dynamics of social interaction and contemporary Western societies.

536. Family Study (3)
Prerequisites: Family Studies and Consumer Sciences 335 and Sociology 101.

Dynamics of family living: attitudes, practices, social and psychological interaction and family life patterns in different cultures, social classes and ethnic groups.

537. Child Abuse (3)
Prerequisites: Family Studies and Consumer Sciences 437 for majors; completion of the General Education requirement in Explorations for nonmajors; consent of instructor for graduate students.

A multidisciplinary approach to child abuse; includes study of child maltreatment and mistreatment, child neglect, and sexual abuse.
541. Consumer Interest (3) II
Prerequisite: Family Studies and Consumer Sciences 240 or 440.
Analysis of consumer legislation, consumer information and consumer protection programs.

570. Infant/Toddler Development (3) I, II
Prerequisites: Family Studies and Consumer Sciences 270 or Psychology 330; Psychology 260; Biology 350 recommended.
Physiological, psychological, social and cultural development of the human organism from birth through three years of age.

576. Field Experiences with Families and Children (3) I, II
One lecture and nine hours of field work.
Prerequisite: Twelve units in child development major.
Directed experiences in various community settings.

577. Advanced Administration of Child Development Programs (3) II
Prerequisite: Family Studies and Consumer Sciences 477.
Problems of organization in conducting programs for young children, interrelationships of staff, personnel practices; communication with teaching staff, parents, and community; records and reports.

579. Advanced Child Study (3)
Prerequisite: Nine units in child development courses.
Physical, social, and psychological factors that determine the direction of child behavior; readings and interpretations of scientific literature that contribute to an understanding of theories of human development.

584. Occupational Economics Programs (3) II
Prerequisite: Twelve upper division units in family studies and consumer sciences.
Vocational education legislation; development and administration of occupational and career programs in all areas of home economics.

507. Processing Food and Nutrition Data (3)
One lecture and six hours of laboratory.
Prerequisites: Family Studies and Consumer Sciences 302 and 303.
Application of computer logic to food service management, diet planning and analysis.

508. Advanced Food Systems Management (3)
Prerequisite: Family Studies and Consumer Sciences 404.
Analysis of current topics in food systems management. Application of management principles in individual special projects.

510. Nutrition and Community Health (3)
Two lectures and three hours of laboratory.
Prerequisite: Family Studies and Consumer Sciences 302.
Exploration of nutrition problems in the community with consideration of current and potential means of resolving them.

GRADUATE COURSES

GENERAL

790. Research Methods (3)
Prerequisite: Approval of graduate program adviser.
Analysis of research in the area of family studies and consumer sciences; criteria and procedures for conducting research.

791. Research Seminar (1)
Prerequisite: Consent of graduate faculty.
Discussion of current research by students, faculty and visiting scientists. Each student will participate and presentations will be based on current literature and research projects. Maximum credit three units applicable to a master's degree.

797. Research (3) Cr/NC/SP
Prerequisites: Family Studies and Consumer Sciences 790 and approval of graduate program adviser.
Research in one of the areas of family studies and consumer sciences. Completion of Plan B Project.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with the director and instructor and approval of graduate program adviser.
Individual study. Maximum credit six units applicable to a master's degree.

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

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

HOME ECONOMICS

631. Family Life and Sex Education (3)
Prerequisite: Six upper division units in child development and family relations.
Content, resources and alternative methods of presentation of family life and sex education for schools, colleges, churches and social agencies.

634. Seminar: Marriage Adjustment (3)
Prerequisite: Family Studies and Consumer Sciences 335.
Individual study, seminar reports, and group discussion of selected topics in marriage adjustment.

670. Seminar: Child Development and Guidance (3)
Prerequisite: Six upper division units in family studies and consumer sciences.
Emphasis on personality theories and on research and clinical findings relevant to systematic study of human development and the guidance of children.

671. Seminar in Advanced Readings in Human Development (3)
Prerequisite: Six upper division units in family studies and consumer sciences.
Analysis of selected research in human development.

681. Seminar: Home Economics Education (3)
Prerequisite: Eighteen units in family studies and consumer sciences.
Study and evaluation of home economics research and philosophical principles which have implications for the secondary homemaking teacher.

NUTRITIONAL SCIENCES

600. Seminar: Foods and Nutrition (3)
Prerequisites: Family Studies and Consumer Sciences 301 and 302.
Introductory seminar of research and research publications in foods and nutrition.

603. Seminar in Food Science (3)
Prerequisite: Family Studies and Consumer Sciences 301.
Reading and analysis of basic and applied research in food science.

605. Assay for Nutrients in Foodstuffs and Tissues (3)
Two lectures and three hours of laboratory.
Prerequisites: Family Studies and Consumer Sciences 301 and 302.
Determination of energy values, organic nutrients, and minerals in foodstuffs and tissues by chemical, biological, and microbiological methods.

606. Physiological Bases of Diet Therapy (3)
Prerequisite: Family Studies and Consumer Sciences 406. Chemistry 361B or 660B recommended.
Biochemical and/or physiological lesions in pathological states and modifications of diet which should accompany medical treatment to prevent or alleviate patient symptoms.

607. Child Nutrition (3)
Prerequisite: Family Studies and Consumer Sciences 302.
Nutrition, health, and biochemical growth in children. Conditions leading to malnutrition, prevention and correction.
608. Geriatric Nutrition (3)
Prerequisite: Family Studies and Consumer Sciences 302.
Biomedical and psychosocial aspects of aging which affect food habits, nutritional status, nutrient needs and dietary management of chronic disease states in the elderly.

609. Advanced Studies: Food Proteins (3)
Prerequisites: Family Studies and Consumer Sciences 302 and 405.
Availability, composition, structure, and physical chemical properties of conventional and new food proteins and protein-based products; methods of analysis; nutrition evaluation; processing-induced changes; and food project functionality.

700. Seminar in Nutrition (3)
Prerequisite: Family Studies and Consumer Sciences 302.
Reading and analysis of basic and applied research in nutrition.

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French

Library East 325, (619) 594-6491

Faculty

Alvord G. Branan, Ph.D., Professor of French
Didier F. Coste, Ph.D., Professor of French
Thomas J. Cox, Ph.D., Professor of French, Chair of Department
Janis M. Glasgow, Ph.D., Professor of French (Graduate Adviser)
Edith J. Benkov, Ph.D., Associate Professor of French
Laurie D. Edson, Ph.D., Associate Professor of French
James L. Schorr, Ph.D., Associate Professor of French
JoAnne Cornwell-Giles, Ph.D., Assistant Professor of French

Assistantships

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

General Information

The Department of French and Italian Languages and Literatures, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in French.

The faculty 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. Research areas of the graduate faculty cover all periods of French literature as well as French linguistics. In particular, the department includes specialists on Louise Labé, Racine, Justus van Effen, Flora Tristan, George Sand, and in fields such as Romanticism, modern French poetry, theatre, Francophone literature, novel, and applied French linguistics. The library collection provides up-to-date research resources—books, periodicals, microfilms and video materials in all of these areas. A foreign language laboratory with modern equipment is available to both undergraduate and graduate students.

Admission to Graduate Study

The student must satisfy the general requirements for admission to the University with classified standing, as described in Part Two of this bulletin. In addition, the student must satisfy the following requirements: (1) an undergraduate major in French, or its equivalent, including 24 upper division units, at least six units of which must be in a survey course in French literature; (2) a GPA of 3.0 (on a 4-point scale) in all upper division French courses; (3) three letters of recommendation from professors, at least two of which should be from professors of French at the institution where the degree was granted.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as stated in Part Two of this bulletin, and students will 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

(Major Code: 11021)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units which includes a major consisting of at least 24 units in French, of which at least 18 units must be in 600- and 700-numbered courses in French, including French 799A, Thesis, for those following Plan A. Students, with the consent of the graduate adviser, may elect Plan A, which includes French 799A, Thesis, or Plan B, which includes a written comprehensive examination in lieu of the thesis.
Courses Acceptable on Master's Degree Programs in French

Related courses (500 and graduate level) in other departments may be taken for a total of six units credit with prior approval of the Graduate Adviser.

UPPER DIVISION COURSES

501. Translation (3)
Prerequisite: French 302.
Stylistic comparison of French and English through translation of a variety of prose styles from English to French and from French to English.

521. Seventeenth Century French Literature (3)
Prerequisites: French 302 and either 305A or 305B.
Major authors of the seventeenth century

531. Eighteenth Century French Literature (3)
Prerequisites: French 302 and either 305A or 305B.
Major eighteenth century writers of fiction, with emphasis on Voltaire, Diderot and Rousseau.

541. Nineteenth Century French Novel (3)
Prerequisites: French 302 and either 305A or 305B.
Major novelists of the nineteenth century.

543. Modern French Theatre (3)
Prerequisites: French 302 and either 305A or 305B.
Major dramatists of modern France.

545. Modern French Poetry (3)
Prerequisites: French 302 and either 305A or 305B.
Representative French poets of the modern era.

551. Twentieth Century French Novel (3)
Prerequisites: French 302 and either 305A or 305B.
Major novelists of the twentieth century.

560. Applied French Linguistics (3)
Prerequisites: French 302 and 401.
Phonemics, morphemics, syntax and semantics of present day French. Taught in English.
(Formerly numbered French 431.)

561. Methods in Teaching French as a Second Language (3)
Prerequisite: French 560.
Teaching of French as a second language; contemporary theory and methods. Not open to students with credit or concurrent enrollment in Spanish 561. Taught in English.

596. Topics in French Studies (1-4)
Prerequisite: French 302.
Topics in French language, literature and linguistics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 596, 496, 598 courses applicable to a bachelor's degree. Maximum credit of nine units of 596. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

621. Critical Methods (3)
Prerequisite: Eighteen upper division units in French.
Methods and theories of critical analysis and their application to the works of a major French author or literary genre.

696. Topics in French Studies (3)
Prerequisite: Eighteen upper division units in French.
Intensive study in specific areas of French. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.
(Formerly numbered French 796.)

701. Seminar in Medieval French (3)
Prerequisite: Eighteen upper division units in French.
Directed research in the works of a representative author, genre or movement. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

711. Seminar in Literature of the French Renaissance (3)
Prerequisite: Eighteen upper division units in French.
Directed research in the works of a representative author, genre or movement. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

721. Seminar in Seventeenth Century French Literature (3)
Prerequisite: Eighteen upper division units in French.
Directed research in the works of a representative author, genre or movement. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

731. Seminar in Eighteenth Century French Literature (3)
Prerequisite: Eighteen upper division units in French.
Directed research in the works of a representative author, genre or movement. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

741. Seminar in Nineteenth Century French Literature (3)
Prerequisite: Eighteen upper division units in French.
Directed research in the works of a representative author, genre or movement. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

751. Seminar in Twentieth Century French Literature (3)
Prerequisite: Eighteen units of upper division French.
Directed research in the works of a representative author, genre or movement. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisites: Advancement to candidacy and approval of graduate advisor. Individual study. Maximum credit three units applicable to a master's degree.

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

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

Nasatir Hall 233, (619) 594-5437

Faculty
Lawrence R. Ford, Ph.D., Professor of Geography
Ned H. Greenwood, Ph.D., Professor of Geography
Emst C. Griffin, Ph.D., Professor of Geography, Chair of Department
Warren A. Johnson, Ph.D., Professor of Geography
Elmer A. Keen, Ph.D., Professor of Geography
David S. McArdle, Ph.D., Professor of Geography
Bob R. O'Brien, Ph.D., Professor of Geography
Philip R. Prude, Ph.D., Professor of Geography
Imre E. Quastler, Ph.D., Professor of Geography
Frederick P. Stutz, Ph.D., Professor of Geography
Richard D. Wright, Ph.D., Professor of Geography
Edward Aguado, Ph.D., Associate Professor of Geography (Graduate Adviser)
Barbara E. Fredrieh, Ph.D., Associate Professor of Geography
Douglas A. Slow, Ph.D., Associate Professor of Geography
Stuart C. Aitken, Ph.D., Assistant Professor of Geography
Allan H. Hope, Ph.D., Assistant Professor of Geography
John F. O'Leary, Ph.D., Assistant Professor of Geography

Assistantships
Graduate teaching assistantships and graduate research assistantships in geography are available to highly qualified students. Applications and additional information may be secured from the department. The deadline for submitting applications for teaching assistantships or research assistantships is March 1. Applications for assistantships must include transcripts, three letters of recommendation, and Graduate Record Examination (GRE) scores.

General Information
The Department of Geography, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Geography. In addition to the standard program, it is possible to pursue a concentration in either conservation of environmental quality or transportation.

The Master of Arts degree is designed to provide advanced training for (a) students who plan to terminate their graduate studies at the master's level, and (b) those who anticipate additional work leading to the doctoral degree in geography or related fields. Research and instructional facilities provided by the Department of Geography include an excellent map library, a research center, laboratories for physical geography, soils, cartography, meteorology, and remote sensing and aerial interpretation and equipment for field studies. The Social Science Research Laboratory provides specialized data collections in the social sciences and a well-equipped data processing center.

Admission to Graduate Study
All students must satisfy the general requirements for admission to the University with classified standing as described in Part Two of this bulletin. Normally to be considered for admission to graduate study, the department requires a minimum grade point average of 3.0 in the last sixty units taken as an undergraduate and a minimum combined score of 1000 on the verbal and quantitative sections of the Graduate Record Examination (GRE). Candidates whose preparation is deemed insufficient by the graduate advising committee will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy, as stated in Part Two 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 higher area of specialization.

Specific Requirements for the Master of Arts Degree
(Major Code: 22061)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two 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 Advising Committee.

Standard Program
Students electing the standard geography program must complete at least 30 units, of which at least 24 units shall be selected from courses in geography listed below as acceptable on master's degree programs. The student's program must include a minimum of 18 units in 600- and 700-numbered geography courses including Geography 600 and 610.

Students in the program may elect one of two plans, A or B, to complete the requirements for the degree. Plan A requires the writing of a thesis under Geography 799A as part of the outlined course program. If Plan B is elected, the student must complete two research papers, a minimum of three units in Geography 797, and pass a comprehensive written examination in lieu of the thesis.

Concentration in Conservation of Environmental Quality
The requirements for students electing a concentration in conservation of environmental quality are as follows:
1. A minimum of 30 units, including 18 units of 600- and 700-numbered courses.
2. Geography 600, 610, 670, and 671.
3. Twelve units of courses numbered 500 or above as approved by the Geography Department Graduate Advising Committee. A maximum of nine of these units may be in departments other than Geography.
4. Three units of 700-level independent study in a department and on a subject approved by the Graduate Advising Committee. Geography 595, Geographic Internship, may be included.
5. Geography 799A Thesis (3) Cr/NC/SP if following Plan A or Geography 797 Research (3) Cr/NC/SP if following Plan B.
6. A student should have completed a quantitative methods course prior to initiating the program, or take Geography 585, Quantitative Methods in Geographic Research, or an equivalent course, concurrently.

Concentration in Transportation
The requirements for students electing a concentration in transportation are as follows:
1. A minimum of 30 units including 15 units of 600- and 700-numbered courses.
2. Geography 600, 610, 656, and at least nine additional units to be taken from 500- and 600-level geography courses, as approved by the Graduate Advising Committee.
3. At least six units selected from:
   - Civil Engineering 620 Traffic Engineering (3)
   - Civil Engineering 622 Mass Transit Engineering (3)
   - Civil Engineering 781 Seminar in Transportation Engineering (2 or 3)
   - City Planning 720 Seminar in Urban Transportation Planning (3)
   - Geography 798 Special Study (3) Cr/NC/SP
Graduate or 500-level courses in other departments that are not listed above may be taken if approved by the Graduate Advising Committee.
4. Geography 595 Geographic Internship (3) (Must be in approved transportation activity.)
5. Geography 799A Thesis (3) Cr/NC/SP if following Plan A or Geography 797 Research (3) Cr/NC/SP if following Plan B.
6. A student should have completed a quantitative methods course prior to initiating the program, or take Geography 585, Quantitative Methods in Geographic Research, concurrently.
Courses Acceptable on Master’s Degree Programs in Geography

**UPPER DIVISION COURSES**

504. Coastal and Submarine Physiography (3)
   Prerequisite: Geography 378 or 401.
   Analysis of wave types and processes and their modification in shallow waters, coastal currents and waves. Interpretation of coastal and submarine physiography in relation to environmental processes and their modification by man. Field trips may be arranged.

505. Geography of Soils (3) II
   Prerequisite: Geography 101.
   The nature, properties, and distribution of soils and their relationships to the influence of climate, landforms, and human activity. Field trips may be arranged.

506. Geography of Soils Laboratory (1)
   Three hours of laboratory.
   Prerequisite: Credit or concurrent registration in Geography 505.
   The natural vegetation associations of the world, their distribution, classification, and development, including relationship to human activities. Field trips may be arranged.

507. Geography of Natural Vegetation (3) I, II
   Prerequisite: Geography 101.
   The natural vegetation associations of the world, their distribution, classification, and development, including relationship to human activities. Field trips may be arranged.

508. Physical Climatology (3) I
   Prerequisites: Geography 103, Mathematics 121 or 150.
   Physical processes of energy transfer to and from the atmosphere. Solar and thermal radiation, turbulent heat transfer, soil heat transfer, global distributions of energy balance components, and bioclimatology.

509. Regional Climatology (3) II
   Prerequisite: Geography 103.
   The causes of climatic types as they occur throughout the world. Principles of several climatic classifications.

510. Advanced Meteorology (3) II
   Prerequisites: Geography 103, Mathematics 121 or 150.
   Physical characteristics of the atmosphere including thermodynamics, moisture and condensation, atmospheric aerosol, and cloud processes.

511. Hydroclimatology (3)
   Prerequisites: Geography 101 or 103; Mathematics 122 or 150; Physics 180A or 195.
   Hydrological cycle, energy and mass fluxes from the earth to the atmosphere and land-atmosphere interactions. Agricultural and hydrologic significance of spatial variability of energy and mass fluxes.

522. Historical Geography of Latin America (3) (Offered at IVC only)
   Prerequisites: Geography 102, 323 or 324.
   Changes in the Latin American cultural landscape over time. The peopling, exploration, settlement and changing geographical patterns of all or a part of the region. Origin and diffusion studies will be stressed.

540. Regional Geography (3)
   Prerequisite: At least one upper division course in the subject region.
   Intensive study of a major country or subregion. May be repeated with different course content for a maximum of six units. See Class Schedule for specific content.

545. Arid Lands (3)
   Prerequisites: Geography 101 and 370; Biology 100 or 200.

554. World Cities: Comparative Approaches to Urbanization (3) II
   Prerequisite: Geography 354.
   Worldwide trends in urbanization. Case studies of selected cities from various culture areas with focus on international variations in city structure and urban problems.

555. Historic Preservation and Urban Design (3)
   Prerequisite: Geography 102.
   Processes of growth and change in cities. Techniques of preserving, renovating, rehabilitating, and recycling valued buildings and neighborhoods. International comparisons of preservation policies and practices and analyses of urban patterns resulting from them.

556. Location and Spatial Structure of Cities (3)
   Prerequisite: Geography 354 or three units of upper division coursework in a related field.
   Principles and characteristics of urban growth and settlement; the internal structure and functioning of urban centers; spatial models of urban land use; growth management, transportation problems, and sociopolitical urban problems. Field trips may be arranged.

557. Intermediate Transportation Geography (3)
   Prerequisite: Geography 358 or 559.
   Topics in the spatial analysis of transportation, e.g., spatial interaction patterns, diffusion process, models in spatial analysis. Field trips may be arranged.

559. Urban Transportation Geography (3)
   Prerequisite: Three units of upper division urban or transportation coursework in geography or related field.
   Urban transportation networks and their effects, past, present and future, on the economy and physical structure of the urban region. Field trips may be arranged.

560. Behavioral Geography (3)
   Prerequisites: Geography 102, Psychology 101, and Geography 385 or Psychology 270.

569. Environmental Resource Conservation (3)
   Prerequisite: Geography 370.
   Management of environmental and natural resources. Effective programs and the institutional frameworks in which they occur.

571. Energy Resources and the Environment (3)
   Prerequisite: Geography 371. Recommended: Physics 107 or 301.
   Location and distribution of conventional and renewable energy resources, their environmental effects, and policy questions regarding future development and use of energy resources.

572. Land Use Analysis (3)
   Prerequisite: Geography 370.
   Problems of maintaining environmental quality in the process of land conversion from rural to urban uses with emphasis on land capability and suitability studies. Field trips may be arranged. (Formerly numbered Geography 570.)

573. Geography as Human Ecology (3)
   Prerequisite: Geography 370.
   Human ecology related to resource geography. Field trips may be arranged.

574. Water Resources (3) I
   Prerequisite: Geography 370 or 371.
   Occurrence and utilization of water resources and the problems of water resource development. Field trips may be arranged.

575. Geography of Recreational Land Use (3) I, II
   Prerequisite: Geography 101 or 102.
   Importance of location and environment in the use, management, and quality of recreation areas. Field trips may be arranged.

576. Geography of Marine Resources (3)
   Prerequisite: Geography 101 or 102.
   Spatial distribution, use, and management of marine resources. Field trips may be arranged.

577. Geography of the National Parks (3)
   Prerequisite: Geography 370 or 371.
   Human and land relationships in the national parks of the United States. Emphasis on problems arising from the preservation and use mandate under which parks are managed.
650. Seminar in Systematic Geography (3)
Prerequisite: Approval of departmental graduate advisory committee.
Intensive study of an aspect of systematic geography, such as climatology, economic geography, or graphic presentation. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Occasional field trips may be arranged.

654. Seminar in Urban and Settlement Geography (3)
Prerequisites: Geography 556 and approval of departmental graduate advisory committee.
Selected topics in urban geography. Field reconnaissance in the local urban "laboratory" is essential part of the research undertaken. Maximum credit three units applicable to a master's degree. Occasional field trips may be arranged.

658. Seminar in Geographic Transportation (3)
Prerequisite: Geography 358.
Principles, concepts, and theories in transportation geography.

670. Seminar in Environment and Resource Conservation Theory (3)
Prerequisites: Geography 370 and 371, and approval of departmental graduate advisory committee.
Theory and general principles involved in natural resources conservation and in attaining and preserving a high level of environmental quality. Maximum credit three units applicable to a master's degree. Occasional field trips may be arranged.

671. Seminar in Problems of Environment and Resource Conservation (3)
Prerequisites: Geography 670 and approval of departmental graduate advisory committee.
Investigation of specific problem areas in natural resources conservation or in the maintenance of environmental quality. May be repeated with different content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Occasional field trips may be arranged.

680. Seminar in Cartography (3)
Prerequisites: One course in cartography and approval of departmental graduate advisory committee.
The use of the map in geographic analysis. Problems and recent trends in cartography. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

687. Seminar in Remote Sensing of the Environment (3)
Prerequisite: Geography 586.
The use of remote sensing techniques in the study of man's cultural and biophysical environment.

696. Special Topics Seminar (3)
Intensive study in specific areas of geography. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

797. Research (1-3) Cr/NC/SP
Research in one of the fields of geography. Maximum credit six units applicable to a master's degree.

799A. Thesis (3) Cr/NC/SP
Prerequisites: Consent of staff; to be arranged with department chair and instructor. Individual study. Maximum credit six units applicable to a master's degree.

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

Chemistry/Geology 205, (619) 594-5586

Faculty

Patrick L. Abbott, Ph.D., Professor of Geological Sciences
Richard W. Berry, Ph.D., Professor of Geological Sciences
Kathie K. Berline, Ph.D., Professor of Geological Sciences
Steven M. Day, Ph.D., The Ecks Endowed Chair in Geology
Clive E. Dorman, Ph.D., Professor of Geological Sciences
R. Gordon Gastil, Ph.D., Professor of Geological Sciences
David Huntley, Ph.D., Professor of Geological Sciences
George R. Jiracek, Ph.D., Professor of Geological Sciences
J. Philip Kern, Ph.D., Professor of Geological Sciences
Richard H. Miller, Ph.D., Professor of Geological Sciences
Gary L. Peterson, Ph.D., Professor of Geological Sciences
Michael J. Walawender, Ph.D., Professor of Geological Sciences, Chair of Department (Graduate Adviser)
Eric G. Frost, Ph.D., Associate Professor of Geological Sciences
Monte Marshall, Ph.D., Associate Professor of Geological Sciences
Anton D. Placek, Ph.D., Associate Professor of Geological Sciences
Thomas K. Rockwell, Ph.D., Associate Professor of Geological Sciences
David L. Kimbrough, Ph.D., Assistant Professor of Geological Sciences

Adjunct Faculty

Victor E. Camp, Ph.D., Geological Sciences
Ricardo Fernandez, Ph.D., Geological Sciences
Mario Martinez, Ph.D., Geological Sciences
Frederick R. Schram, Ph.D., Geological Sciences

Assistantships

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

General Information

The Department of Geological Sciences, in the College of Sciences, offers graduate study leading to the Master of Science degree in Geological Sciences. The program emphasizes research and an advanced set of courses. Faculty research activities comprise a broad spectrum of expertise, including both theoretical and applied interests. Opportunities exist for geophysics, groundwater hydrology, oceanography and geochemistry as well as the classic devoted to Geochronology, Isotopes, Clay Mineral Analysis, Soils, Paleomagnetism, and Whole program. Cooperation with Mexican scientists and institutions facilitates research at an international level.

Admission to Graduate Study

All students must satisfy the general requirements for admission to classified graduate standing as described in Part Two of this bulletin. In addition, all students should satisfy the following requirements in order to achieve classified standing and enroll in graduate courses.

1. Have preparation in geological sciences, mathematics, chemistry, and physics at least equivalent to the minimum required for the bachelor’s degree in geological sciences at San Diego State University. Undergraduate grade point average should be at least 2.5, with a 2.75 in the last 60 units. Students with degrees in majors other than geological sciences may be admitted with postbaccalaureate standing while deficiencies are being remedied.
2. Have successfully completed all courses listed as deficiencies.
3. Have a minimum GRE General Test combined verbal and quantitative score of 1000, with no less than 450 in either verbal or quantitative sections.
4. Have a minimum Advanced GRE Subject Test (Geology) score of 650.
5. Have a minimum grade point average of 3.0 in any courses taken as a postbaccalaureate student at San Diego State University.
6. Have two letters of reference submitted by individuals familiar with their professional background. Letters should be sent to the Graduate Adviser, Department of Geological Sciences.

All student applications are evaluated competitively and no fixed numerical standards automatically qualify or disqualify a student for graduate study in the Department of Geological Sciences. Students will be admitted on the basis of merit in relation to space and faculty availability.

NOTE: Some students with bachelor’s degrees in geological sciences may be admitted with postbaccalaureate standing for one semester only during which time they must take senior-level classes and earn at least a 3.0 grade point average and complete any missing qualifications for graduate study (e.g. GRE scores).

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as stated in Part Two of this bulletin.

Specific Requirements for the Master of Science Degree

(Major Code: 19141)

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 Two of this bulletin. The student’s graduate program must include 24 units of approved 600- and 700-numbered courses to include Geological Sciences 797 (3 units Cr/NC/SP), and 799A, Thesis (3 units Cr/NC/SP), and six units of upper division or graduate electives approved by the departmental adviser. With approval of the graduate adviser, students specializing in geophysics or hydrogeology may include 18 units of approved 600-700 numbered courses and 12 units of upper division graduate electives, with no more than 6 units of upper division graduate electives taken from courses in the Department of Geological Sciences. Geology Sciences 308 and 508 or their equivalent as approved by the graduate adviser, are required as prerequisite to the program if they were not a part of the student’s undergraduate work. The student is required to pass a final oral examination on the thesis.

Courses Acceptable on Master’s Degree Program

In Geological Sciences

UPPER DIVISION COURSES

502. Geology of North America (3) I

Prerequisite: Geological Sciences 105.
A regional analysis of North American geology, its structural, stratigraphic, and tectonic patterns and hypotheses concerning their origin and evolution.

505. Photogeology (3) II

Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 305 and 314.
Geologic interpretation of aerial photographs, elementary stereoscopy and stereometry applied to structural and stratigraphic problems, and compilation of geologic maps from annotated aerial photographs.
506. Paleontology (3) I, II
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 105 and either Biology 100-100L or 110-110L.
Principles and methods, exemplified by a study of the morphology, classification, habit, and
genic significance of fossil invertebrates.
Vertebrate Paleontology, see Biology 526.

507. Stratigraphy (3) II
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 105 and 224.
Stratigraphic principles and practices. Consideration of the North American stratigraphic
record.

508. Field Geology (4) II (4 or 6) S
One lecture and three hours of laboratory and seven weekend field sessions.
Summer: Twenty-four days in the field (4 units); ten additional days of field and laboratory
work (6 units).
Prerequisites: Geological Sciences 308. Summer: Geological Sciences 308 and 524.
Geological investigation of an assigned area with preparation of an individual report and a
geologic map.
Summer: Geological investigation of an assigned area with preparation of an individual
report and a geologic map. Students enrolling for six units will undertake additional petro-
graphic and geochemical studies as part of their report. A fee covers transportation and meals.

510. Petroleum Geophysics (3) I
Two lectures and three hours of laboratory. Occasional field trips.
Prerequisites: Geological Sciences 305, Mathematics 252, Physics 195, 196, 197. Recommen-
ded: Physics 195L, 196L, 197L.
Airborne, surface, and bore-hole geophysical techniques as presently used in oil explo-
ration.

512. Mining Geophysics (3) II
Two lectures and three hours of laboratory or occasional field trips.
Prerequisites: Geological Sciences 305, Mathematics 252, Physics 195, 196, 197. Recom-
mented: Physics 195L, 196L, 197L.
Airborne, surface, and bore-hole geophysical techniques used for delineation of ore bodies.

516. Micropaleontology (3) II
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 506.
The morphology, classification and geologic significance of the various microfossils.

520. Ore Deposits (3) I
Prerequisites: Credit or concurrent registration in Geological Sciences 224 and 305.
Geologic relations, origin, distribution, and economies of metallic and nonmetallic mineral
deposits.

521. Petroleum Geology (3) II
Prerequisites: Geological Sciences 224 and 305.
Geologic occurrence of petroleum and the application of geologic principles in exploration
and production.

524. Optical Mineralogy (3) I
Two lectures and three hours of laboratory.
Prerequisite: Geological Sciences 221.
Theory and use of the polarizing microscope for determining optical properties of minerals
as an aid to their identification.

525. Petrography (3) II
Two lectures and three hours of laboratory.
Prerequisite: Geological Sciences 524.
A study of rocks with the polarizing microscope, identification of mineral constituents,
interpretation of textures, classification of rocks; problems of genesis.

526. Sedimentology (3) I
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 105 and 224.
Origin, description, and interpretation of sedimentary rocks and structures.

528. Seismic Stratigraphy (3) I
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 230, 305, and 507.
Principles involved in shooting, processing, and interpreting seismic reflection profiles.
Laboratory exercises with stratigraphic interpretations from reflection data.

530. Geochemistry (3) I, II
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 224; Chemistry 201; Mathematics 121 and 122, or 150.
The relationship of basic chemical principles to geologic phenomena and environments,
including applications to geologic exploration problems.

540. Marine Geology (3) I
Prerequisites: Geological Sciences 105, and either Geological Sciences 224, 314, 502, or
566.
Plate tectonic origin and history of the ocean basins. Formation and distribution of sedi-
ments in response to biological, chemical, and geologic processes.

545. Descriptive Physical Oceanography (3) I
Prerequisites: Mathematics 121 and 122 or 150; Physics 180A or 195.
Physical environment of oceans including meteorology, ocean circulation, currents and
waves, wave refraction and diffraction, mechanics of sediment transport, and the physical
properties of water, sea ice, air-sea interactions, and the ocean as a dynamic system.

548. Coastal and Estuarine Physical Oceanography (3) II
Prerequisites: Mathematics 121 and 122 or 150; Physics 180A or 195.
Physical processes of marine coastal areas and estuaries. Includes longshore currents, rip
currents, and wave action in shallow water, wave refraction and diffraction, mechanics of sediment
transport, and the physical properties of water, sea ice, air-sea interactions, and the ocean as a dynamic system.

550. Engineering Geology (3) II
Two lectures and three hours of laboratory.
Prerequisite: Geological Sciences 305.
Relationships between geologic processes and works of humans. Topics include rock and
soil mechanics, groundwater flow, slope stability, seismicity, and subsidence, and the evaluation
of geologic materials with respect to dam sites, tunnel alignments, and building foundations.

551. Hydrogeology (3) I
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 305 and Mathematics 150.
Theory of ground water flow. Exploration for and development of the ground water resource.
Aquifer tests, water quality, and water resource management. Occurrence of water in alluvial,
olderedimentary, volcanic, plutonic, and metamorphic terrains.

596. Advanced Topics in Geology (1-4)
Prerequisite: Consent of instructor.
Advanced special topics in the geological sciences. See Class Schedule for specific
content. Limit of nine units of any combination of 596, 496, 596 courses applicable to a
bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree.
Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

600. Seminar (1-3)
Refer to Class Schedule for lecture/labatory format.
Prerequisite: Consent of instructor.
An intensive study in advanced geology. May be repeated with new content. Topic to be
announced in the Class Schedule. Maximum credit six units applicable to a master's degree.
Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.
609. Igneous Petrology (3)
Two lectures and three hours of laboratory.
Prerequisite: Geological Sciences 525.
Investigation of problems in igneous petrology, using petrography, geochemistry, and experimental methods.

611. Metamorphic Petrology (3)
Two lectures and three hours of laboratory.
Prerequisite: Geological Sciences 525.
Investigation of problems in metamorphic petrology using petrography, geochemistry, and experimental methods.

612. Carbonate Depositional Systems (3)
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 507 and 524.
Nature of carbonate deposition in marine environments. Examination of thin sections, hand samples, and outcrops. Literature examples of regional aspects of modern and ancient carbonate deposition. Mandatory field trip.

615. Geology of Clays (3)
Two lectures and three hours of laboratory.
Prerequisite: Geological Sciences 526 or 530.
Systematic mineralogy of clays and routine methods of identification. Geologic interpretation of clay minerals with respect to environmental conditions or origin, deposition and diagenesis.

620. Biostratigraphy (3)
Two lectures and three hours of laboratory.
Prerequisite: Geological Sciences 507.
Development of concepts and practices in stratigraphic and geochronologic synthesis critically reviewed in context of current knowledge of the fossil record.

625. Paleocology (3)
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 506 and Biology 354.
Problems and methods in the study of relationships between fossil organisms and their environment: interpretation of paleoenvironment, paleoclimate, and biologic relationships among fossil organisms.

629. Seminar: Advanced Studies in Stratigraphy (3)
Two lectures and three hours of laboratory.
Prerequisite: Geological Sciences 507.
Regional stratigraphic patterns in North America and their historical implications.

630. Selected Topics In Geophysics (3)
Prerequisites: Geological Sciences 510 or 512 and consent of instructor.
Research topics in seismic, gravity, magnetic, electrical, and electromagnetic methods. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

633. Quaternary Geology (3)
Two lectures and three hours of laboratory.
Prerequisite: Geological Sciences 314.
Quaternary climate, geochronometric dating and soil stratigraphy.

635. Petrology of Terrigenous Rocks (3)
Two lectures and three hours of laboratory.
Prerequisite: Geological Sciences 524.
Thin-section and hand-specimen description and classification of sandstones, conglomerates, and mudrocks. Emphasis on mineralogy, provenance, diagenesis, and paleogeographic reconstructions.

640. Geotectonics (3)
Prerequisite: Geological Sciences 305.
A consideration of topics on continental genesis and evolution, orogeny, plate tectonics theory, and a survey of classic geologic provinces.

642. Neotectonics (3)
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 305 and 314.
Observation, interpretation and significance of late Quaternary crustal deformation.

645. Advanced Structural Geology (3)
Prerequisite: Geological Sciences 305.
Topics in advanced structural geology in the light of petrographic, geophysical, and experimental data, combined with classic field observations.

648. Plate-Tectonic Development of California (3)
Prerequisite: Geological Sciences 305.
Analysis of sequential genesis of major tectonic terrains of California and adjacent states. Problem-oriented literature study will integrate stratigraphic, tectonic, and geochronologic development.

651. Numerical Modeling of Ground-Water Flow (3)
Prerequisites: Geological Sciences 551 and experience in computer programming.
Finite difference approximations of ground water and mass transport equations. Direct and iterative solutions to simultaneous equations. Calibration, verification and application of numerical models to analyze ground water hydrologic problems.

653. Exploration Techniques in Ground-Water Geology (4)
One lecture, three hours of laboratory, and twelve Saturday field sessions.
Prerequisites: Geological Sciences 551 and either 230, 510 or 512.
Practical techniques of ground-water exploration and resource evaluation. Topics may include geophysical techniques, field aquifer testing, hydrochemistry, surface hydrologic measurements, photo interpretation, surface mapping, and subsurface correlation.

655. Paleomagnetism and Plate Tectonics (3)
Prerequisites: Geological Sciences 100 and Physics 180B or 196.
Contribution of paleomagnetism to origin and current models of plate tectonics, estimating paleolatitude, magnetostratigraphy, and structural deformation. Review of rock magnetism, magnetic stratigraphy, and the geomagnetic field.

660. Isotope Geology (3)
Two lectures and three hours of laboratory.
A survey of isotopic and geochronologic topics with individual projects in isotopic analysis.

669. Terrigenous Depositional Systems (3)
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 506, and 507 or 526.
Analysis of sedimentary structures, facies relationships, and geometries of sedimentary rock bodies to achieve recognition and understanding of ancient depositional environments and geologic history.

675. Ground Water Geochemistry (4)
Three lectures and three hours of laboratory.
Prerequisites: Geological Sciences 530 and 551.
Theory and practical application of chemical, diffusion, and dispersion processes to the natural evolution of ground water and contaminant transport in the ground water environment. Applications to geothermometry, toxic waste disposal, heat flow in geothermal systems, and sea water intrusion.

680. Sedimentary Geochemistry (3)
Two lectures and three hours of laboratory.
Prerequisite: Geological Sciences 530.
Topics in low temperature geochemistry, in particular diagenesis.

686. Genesis of Ore Deposits (3)
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 525, and Geological Sciences 530 or four units of physical chemistry.
Application of mineralogy, petrography, and chemistry to an understanding of the origin of ore deposits.
797. Research (1-3) Cr/NC/SP
Prerequisite: Consent of the department.
Supervised research in an area of geology. Maximum credit six units applicable to a master's degree.

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

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

German

Library East 468B, (619) 594-6313

Faculty
Harry W. Paulin, Ph.D., Professor of German (Graduate Adviser)
Steven C. Schaber, Ph.D., Professor of German and Classics
Yoshio Tanaka, Ph.D., Professor of German
Julian H. Wulbern, Ph.D., Professor of German, Chair of Department
Erich W. Skwara, Ph.D., Associate Professor of German

General Information
The Department of German and Russian Languages and Literatures, in the College of Arts and Letters, offers advanced coursework in German. Graduate courses in German may be used to fulfill requirements for advanced degrees in other departments with the approval of the student's graduate adviser.

UPPER DIVISION COURSES

505. Applied German Linguistics (3)
Prerequisites: German 301 and 302.
Linguistic study of modern German; integration of modern linguistic theory with the language classroom.

510. German Phonetics (3)
Prerequisites: German 200A; 200B or 200C; 212.
Sounds and intonation of German.

540. German Literature from Its Beginning to the Baroque Period (3)
Prerequisite: German 310.
Literature from the eighth century to about 1700.

545. German Literature of the Eighteenth Century (3)
Prerequisite: German 310.
Reading and discussion of representative works of significant authors and movements of the eighteenth century.

555. German Literature of the Nineteenth Century (3)
Prerequisite: German 310.
Reading and discussion of representative works of significant authors and movements of the nineteenth century.

561. German Literature of the Twentieth Century (3)
Prerequisite: German 310.
Reading and discussion of representative works of significant authors and movements of the twentieth century.

596. Topics in German Studies (3)
Prerequisites: German 310 (for literary topics) or 505 (for linguistic topics).
Topics in German language, literature, or linguistics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, and 596 courses applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

696. Topics in German Studies (1-3)
Prerequisite: Eighteen upper division units in German.
Intensive study in specific areas of German. May be repeated with new content. See Class Schedule for specific content. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisites: Eighteen upper division units in German and consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master's degree.
799A. Thesis (3) Cr/NC/SP
Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.

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

Health Science

Hepner Hall 136, (619) 594-5528

Faculty

Stephen J. Bender, H.S.D., M.P.H., Professor of Health Science
William C. Burgess, Ed.D., Professor of Health Science
Aubrey C. McTaggart, Ph.D., Professor of Health Science
David A. Steet, Ph.D., Professor of Health Science
Walter D. Sorochan, H.S.D., M.P.H., Professor of Health Science
Warren D. Boggs, Ed.D., Associate Professor of Health Science
Lois P. Kessler, M.A., Associate Professor of Health Science
James V. Noto, H.S.D., Associate Professor of Health Science
Karen L. Senn, Ed.D., M.P.H., Associate Professor of Health Science, Chair of Department
Catherine J. Atkins-Kaplan, Ph.D., Assistant Professor of Health Science

Assistantships

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

General Information

The Department of Health Science, in the College of Health and Human Services, offers advanced coursework in health science. Graduate courses in health science may be used to fulfill requirements for advanced degrees in other departments with the approval of the student’s graduate adviser.

UPPER DIVISION COURSES

520. Administration of the School Health Program (3)
Administrative responsibilities of the school health program. Principles, policies, and practices involved in health instruction, health services, environment, legal implications, and community relationships.

521. Health Education for School Nurses (3)
Prerequisite: Nursing 504.
School nurse's function in different aspects of school health program; emphasis on planning and presentation of health instruction material, community resources and relationships, and disease prevention and health promotion.

560. Introduction to Public Health (3)
Prerequisite: Health Science 290.
Philosophy, development, organization, administration, and legal aspects of public health in the United States. Disease prevention and control, health education, and other functions and activities of official health departments, voluntary agencies, private physicians and other professionals engaged in professional health work.

561. Health and Medical Care (3) I, II
Prerequisite: Senior or graduate standing with a major or minor in health education or a closely related area.
Health values, concepts, and attitudes; health products and facilities; hospital care and hospitalization plans; governmental health controls; economic and cultural influences on health and medical care; professional contributions, relationships, and careers; national and international health programs.

573. Health in Later Maturity (3) I
An approach to the conservation of human resources, with emphasis on understandings, attitudes, and practices related to health in later maturity. Designed for those with a personal or professional interest in the field.

574. Habit-Forming Substances (3) I, II
Tobacco, alcohol, and other drugs; their use, misuse and abuse.
575. Sex Education (3) II
Prerequisite: Health Science 475.
Philosophy, current procedures, and materials needed for development of healthy attitudes and scientific knowledge appropriate for the understanding of human sexuality.

596. Workshop in Health Science (1-3)
Selected problems in health science are used as a basis for workshop experiences. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596; maximum credit of three units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSE

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with department special study adviser and instructor.
Individual study. Maximum credit six units applicable to a master's degree.
Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. As an additional requirement, the student must have completed a bachelor's degree with an average of 2.75 in history or have taken enough history and related fields in the past that would demonstrate sufficient preparation for the program. The grade point average required for admission to the M.A. program in history is 2.75 for the last 60 units of the student's undergraduate work and 3.0 in the major (or history) plus a score of 950 on the GRE General Test. Students with a grade point average in the major of 2.75-3.0 will be admitted if their score on the GRE General Test is 1000 or better. Conditional admission is possible pending the receipt of the GRE General Test scores during the first semester of enrollment and the attainment of a satisfactory score.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as stated in Part Two of this bulletin, as well as the specific requirements of the department. All students should consult the graduate adviser. Students may not be advanced to candidacy until they have met the foreign language requirement or an approved substitute.

Specific Requirements for the Master of Arts Degree in History

(Major Code: 22051)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of 30 units which includes a major consisting of at least 24 units. The M.A. program in history is 2.75 for the last 60 units of the student's undergraduate work and 3.0 in the major (non-necessarily history), plus a score of 950 on the GRE General Test. Students with a grade point average in the major of 2.75-3.0 will be admitted if their score on the GRE General Test is 1000 or better. Conditional admission is possible pending the receipt of the GRE General Test scores during the first semester of enrollment and the attainment of a satisfactory score.

Courses Acceptable on Master's Degree Programs in History

Field (a). Ancient, Medieval and Early Modern Europe

UPPER DIVISION COURSES

500A-500B. Ancient History (3-3)
Semester I: Greece to the Roman Conquest. Semester II: Rome to the fifth century A.D.

501. History of Ancient Near Eastern Civilization (3)
Major civilizations of the Near East from the origin of civilization to Roman Conquest, including Egyptians, Babylonians, Hebrews and Persians. Social, political, and religious problems.

530A-503B. Europe in the Middle Ages (3-3)
European social, cultural, and political developments from the fall of Rome to the Renaissance.

504. Medieval Spain (3)
Survey of the Spanish regions to the early sixteenth century. Social and economic developments.

506. The Renaissance (3)
The intellectual, artistic, and social transformation of Europe from the fourteenth through the early sixteenth century.

507. The Reformation (3)
Continental Europe in the sixteenth century: split of Christendom, the religious wars, national rivalries, the expansion of Europe and the beginnings of the scientific revolution.

513A. Early Scandinavia (3)
Formation and development of Scandinavian kingdoms from Viking Age to end of Napoleonic Wars.

Field (b). Modern Europe

UPPER DIVISION COURSES

509. Europe in the Seventeenth Century (3)
Continental Europe from 1600 to the death of Louis XIV. Shift of power from southern and central Europe to northern Atlantic countries; the growth of the state, and the expansion of commerce.

510A-510B. Europe's Age of Enlightenment (3-3)
Semester I: Monarchies and monarchs at peace and war; economic and social transformations; the Baroque and the growth of the Enlightenment from 1660 to 1700. Semester II: The Enlightenment from 1700 to 1760. Students must meet the foreign language requirement or an approved substitute. Required courses are History 601, 603, 640, 650, or 680; three units selected from History 699A. Students electing Plan A must complete a thesis, or, in special circumstances and with the prior approval of the graduate adviser, one additional, three-unit history course numbered from 620 to 680 in lieu of History 699A.

511A. The Age of European Revolution (3)
Major political, social, and economic developments in Europe from 1780 to 1848. Effects of French Revolution, Industrial Revolution, and Romanticism on European history.

511B. The Age of Nationalism in Europe (3)
Economic, social, and intellectual developments in Europe from 1848 to 1890 that contributed to the age of nation building.

512A. The Great War: A Turning Point in European History (3)
Forces and events that shaped Europe in period prior to and during World War I, 1914-1919.

512B. The Age of Dictators and Contemporary Europe (3)
Europe in the age of dictatorship, world war, decline, and recovery.

513B. Modern Scandinavia (3)
Major political, social and economic developments in Scandinavia from 1814 to present, emphasis on contemporary society.

514A. The French Revolution and Napoleonic Era (3)
Prerequisites: History 105 and 106.

Field (b). Modern Europe

UPPER DIVISION COURSES

509. Europe in the Seventeenth Century (3)
Continental Europe from 1600 to the death of Louis XIV. Shift of power from southern and central Europe to northern Atlantic countries; the growth of the state, and the expansion of commerce.

510A-510B. Europe's Age of Enlightenment (3-3)
Semester I: Monarchies and monarchs at peace and war; economic and social transformations; the Baroque and the growth of the Enlightenment from 1660 to 1700. Semester II: The Enlightenment from 1700 to 1760. Students must meet the foreign language requirement or an approved substitute. Required courses are History 601, 603, 640, 650, or 680; three units selected from History 699A. Students electing Plan A must complete a thesis, or, in special circumstances and with the prior approval of the graduate adviser, one additional, three-unit history course numbered from 620 to 680 in lieu of History 699A.

511A. The Age of European Revolution (3)
Major political, social, and economic developments in Europe from 1780 to 1848. Effects of French Revolution, Industrial Revolution, and Romanticism on European history.

511B. The Age of Nationalism in Europe (3)
Economic, social, and intellectual developments in Europe from 1848 to 1890 that contributed to the age of nation building.

512A. The Great War: A Turning Point in European History (3)
Forces and events that shaped Europe in period prior to and during World War I, 1914-1919.

512B. The Age of Dictators and Contemporary Europe (3)
Europe in the age of dictatorship, world war, decline, and recovery.

513B. Modern Scandinavia (3)
Major political, social and economic developments in Scandinavia from 1814 to present, emphasis on contemporary society.

514A. The French Revolution and Napoleonic Era (3)
Prerequisites: History 105 and 106.
514B. Modern France (3)
Prerequisite: History 105 and 106.
The development of France since 1815.

515. Modern Spain (3)
Social, economic and political developments from the sixteenth century to the present.
Overseas expansion.

516. Modern Germany (3-3)
Political, social, and economic history of Germany. Semester I: From the Reformation to
the outbreak of World War I. Semester II: 1914 to the present.

518A-S18B. Russia and the Soviet Union (3-3)
Semester I: Political, social and economic development of Russia in Europe and Asia from
the earliest times to the close of the nineteenth century. Semester II: Emphasis on the twentieth
century.

519. Modern Italy (3)
The development of Italy from 1815 to the present.

521. History of the British Constitution (3)
Prerequisites: Upper division standing and six units in history.
Historical development of British political institutions which are a reflection of the constitution
from Anglo-Saxon period to present. (Formerly numbered History 521A-521B.)

522A-S22B. Tudor and Stuart England (3-3)
Semester I: The Age of the Tudors. Semester II: England during the Stuart Dynasty.
1603-1714.

523A-S23B. Modern Britain (3-3)
Semester I: The development of constitutional and social patterns from the Glorious
Revolution to the French Revolution, emphasizing the immediate background to the American
Revolution. Semester II: From the nineteenth century to the present, including the rise of
Parliamentary democracy, imperialism and the Victorian age, and political thought from the
Utilitarians.

524. History of Ireland (3) I, II
Social and cultural history of Ireland from earliest historical times to the present, including
formation of a national character, literature from the Saga Cycles to the modern literary
world.

526. Ideas and Attitudes of Modern Europe (3)
Selected problems in European intellectual history beginning with the seventeenth century,
with attention to social and political thought. May be repeated with new content. See Class
Schedule for specific content. Maximum credit six units.

527. Diplomatic History of Modern Europe (3)
Diplomatic relations of the various European states with European and non-European
powers. The diplomatic backgrounds and results of World Wars I and II. (Formerly numbered
History 527B.)

528. Social History of Modern Europe (3)
Historical survey of European society emphasizing changes in the family, health, diet, the
standard of living, urbanism, crime, migration, and literacy, from 1550 to the beginning of the
Industrial Revolution. (Formerly numbered History 528A.)

Field (c). United States

UPPER DIVISION COURSES

530. Colonial America (3)
Settlement and development of the English colonies in North America through the
mid-eighteenth century. Contact of cultures, social structure, labor systems, religion, popular
values, problems of imperial control, and political culture.

531. The American Revolution (3)
Explores how "revolutionary" the American Revolution was. Causes, dynamics, and results
of the American Revolution, from imperial reform and colonial resistance after 1760, through
Constitution.

532. The Early Republic (3)
Political, economic, and social development of United States from Washington through John
Quincy Adams. This course meets the requirements in United States Constitution.

533A. The Jacksonian Era (3)
Territorial expansion, democratic politics, revivalism, and the slavery controversy.

533B. Civil War and Reconstruction (3)
The Civil War and Reconstruction, emphasizing political affairs and the role of Lincoln.

534. The Rise of Modern America, 1868-1900 (3)
Economic, social, political, and intellectual developments from the end of the Civil War to the
close of the 19th century.

535A. The Age of Reform (3)
The United States from the 1890s to the Crash of 1929.

535B. The Age of Roosevelt (3)
The United States in Depression, War, and Cold War.

536. The United States Since World War II (3) I, II, S
Major foreign and domestic issues confronting the United States, and the government
policies and popular movements generated in response.

537A-S37B. The Westward Movement (3-3)
The American frontier: Expansion, exploration, settlement and building of the new states,
with emphasis on frontier problems of defense, communications, finance, etc.; the political
policies and popular movements generated in response.

538A-S38B. The American Southwest (3-3)
Semester I: Exploration, colonization and development of the Southwest under Spanish and
American rule. Emphasis on frontier institutions and Indian policy. Semester II: Anglo-American
penetration and the acquisition of the Southwest. Themes such as boundary problems, mining,
transportation, water, ranching and ethnic relations.

540. Environmental History of the United States (3)
The relationship of Americans to their environment from colonial times to the present with
emphasis on how attitudes and values have affected personal behavior and public policy
emphasized toward the land.

541A-S41B. California (3-3)
Political institutions; social, cultural, economic and intellectual development; international
relations. Semester I: To 1850; Spanish and Mexican heritage. Semester II: 1850 to the
present. History 541B will fulfill the requirement in California state and local government.

543. American Involvement in Vietnam 1941-75 (3)
Prerequisite: Upper division standing and six units in history.
Causation and consequences of America's longest war, the war in Southeast Asia. Relations
between U.S. government and media in Vietnam. Role of antiwar movement in U.S.

544A-S44B. American Foreign Policy (3-3)
Semester I: The development of American foreign policy from the Colonial Period to the First
World War. Semester II: Developments from the First World War to the present. This year course
meets the requirements in American history, institutions, and ideas.

545A-S45B. Constitutional History of the United States (3-3)
American constitutional history since the establishment of the federal government. This year course
meets the requirements in U.S. Constitution and in American history, institutions, and ideas.

546A-S46B. Development of American Capitalism (3-3)
The changes in agriculture, industry, labor, banking, transportation and commerce in a
capitalist society with emphasis on the prominent personalities who made the changes
possible.
547A-547B. Intellectual History of the American People (3-3)
Survey of American thought from 1620 to the present, focusing on the ideas of individuals, groups, and movements in religion, politics, society, and the arts and reform. Emphasis on liberal and conservative impulses and their role in the making of the modern American mind. This year course meets the graduation requirements in American institutions, U.S. Constitution, and California state and local government.

548A-548B. Social History of the United States (3-3)
Historical survey of American society emphasizing demographic trends, the changing role of the family, social structure, immigration patterns, religious movements, developments in education, the economy, and entertainment.

549. History of San Diego (3)
Prerequisites: Upper division standing and six units in history. Development of San Diego from European contact to the present.

Field (d). Latin America

UPPER DIVISION COURSES

551A-551B. Mexico (3-3)
Prerequisite: History 115A-115B or 415A-415B.
Semester I: Colonial and modern Mexico. Semester II: Emphasis on the twentieth century.

552. Brazil (3)
Survey of history of Brazil from Portuguese backgrounds to present. Brazil as a tropical society. Recommended for students minoring in Portuguese.

553. Caribbean Island Nations (3)
History of island nations of Caribbean with emphasis on Cuba, Haiti, and Dominican Republic in the nineteenth and twentieth centuries.

554. The Andean Republics of South America (3)
The historical development of Chile, Bolivia, Peru and Ecuador with emphasis on race relations and social revolutions in the twentieth century.

555. Modernization and Urbanization in Latin America (3)
Historical treatment of the phenomena of urbanization and modernization in Latin America with attention to pre-Columbian and Iberian traditions and influence of education, church, military, and foreign investment.

556. Guerrilla Movements in Latin America (3)
History of sociopolitical conditions which culminated in guerrilla movements in twentieth century Latin America. Use of guerrilla writings and accounts as well as recent Latin American films and U.S. Defense Department counterinsurgency training films.

557. History of Latin American Popular Culture and Social Thought (3)
Examination of the ways Latin Americans have historically viewed their cultures and popular culture—the Latin American self-image reflected in family relations, folklore, myths, legends, popular music and art and mass expression.

558. Latin America in World Affairs (3)
History of Latin America's political and economic relations with Europe, the Soviet Union, the United States, and the Third World.

559. Central America (3)
Prerequisites: Upper division standing and six units in history. Historical development of the republics of Central America with emphasis on twentieth century. Contemporary revolutionary movements and role of United States in Central American affairs.

Field (e). South, Southeast and East Asia

UPPER DIVISION COURSES

561A-561B. Asia and the West (3-3)
History of Asian-Western relations with emphasis on China and Japan. Semester I: Through the nineteenth century. Semester II: The twentieth century.

562. Civilization of India: The Great Traditions (3)
From earliest times to the eighteenth century including Hindu, Buddhist, and Muslim contribution to Indian society, changing political ideas and institutions, and historic trends in art and literature.

563. Modern India and Its Neighbors (3)
British conquest and colonial policy, Hindu and Muslim nationalism, Gandhi's significance, and the emergence of independent India, Pakistan, and Bangladesh.

564A-564B. Southeast Asia (3-3)
Semester I: Cultural traditions of Southeast Asian peoples. Indigenous institutions and the influence of China, India, and Islam. Semester II: Southeast Asia in the modern world. Patterns of foreign stimulus and local response among the peoples of the area.

565. Revolution and Social Change in Asia (3)
Comparative study of contemporary problems in Asia emphasizing how indigenous peoples responded to the challenges of nationalism, reform, revolution, modernization, and foreign influence. Topics include social structure, education, peasant movements, urbanization, search for cultural identity, and national integration.

566. Chinese Civilization: The Great Traditions (3)
China's modernization process from the early nineteenth century Opium War through the People's Republic of China.

568. Communist Party and the Chinese Revolution (3)
Mao and the evolution of Chinese Communist Party since 1920, including Red Army, rural soviet, socialist economic and cultural systems, and foreign policy.

569. Japanese Civilization (3)
Japanese historical institutions and institutions during the period of indigenous development and Chinese influence including religions, philosophy, literature, and the arts.

570. Modern Japan (3)
Japan's development as a modern state, particularly in the nineteenth and twentieth centuries.

Field (f). Africa and Middle East

UPPER DIVISION COURSE

574. The Arab-Israeli Question, Past and Present (3)
Arab-Israeli conflict over Palestine in perspective of Zionism, Arab nationalism, and Great Power relations from nineteenth century to present.

Field (g). Topical Subjects

UPPER DIVISION COURSES

580. Great Historians and Historical Literature (3) I; II
Prerequisite: History 100, 105, or 120. History of historical writing and works of major historians. Recommended for history and social science majors. (Formally numbered History 425.)

590. Archives (3)
Prerequisite: Six upper division units in history. Archival methods for collection, preservation, management, and use of written, visual, and aural materials. (Formally numbered History 720.)

596. Selected Studies in History (1-4)
Topics in the various fields of history, such as biography, war, science, technology, and social science majors. See Class Schedule for specific urbanization, minority groups, immigration, and capitalism. See Class Schedule for specific urbanization, minority groups, immigration, and capitalism. See Class Schedule for specific specialization. (Formerly numbered History 720.)

Maximum combined credit of six units of 596 applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 applicable to a bachelor's degree.
GRADUATE COURSES

All graduate courses in the Department of History have a prerequisite of 12 units of upper division courses in history, or consent of the instructor.

601. Seminar in Historical Method (3)
General historical bibliography. The use of libraries and archives. Methods of critical historical investigation. The interpretations of history.

620. Directed Reading in European History (3)
Prerequisite: Six upper division units in European history. Selected readings in source materials and historical literature in a designated area of European history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

625. Seminar in European History (3)
Prerequisites: Six upper division units in European history and History 601. Directed research on topics selected from a designated area of European history. Maximum credit six units applicable to a master's degree.

630. Directed Reading in United States History (3)
Prerequisite: Six upper division units in United States history. Selected readings in source materials and historical literature in a designated area of United States history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

635. Seminar in United States History (3)
Prerequisites: Six upper division units in United States history and History 601. Directed research on topics selected from a designated area of United States history. Maximum credit six units applicable to a master's degree.

640. Directed Reading in Latin American History (3)
Prerequisite: Six upper division units in Latin American history. Selected readings in source materials and historical literature in a designated area of Latin American history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

650. Directed Reading in Asian History (3)
Prerequisite: Six upper division units in Asian history. Selected readings in source materials and historical literature in a designated area of Asian history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

655. Seminar in Asian History (3)
Prerequisites: Six upper division units in Asian history and History 601. Directed research on topics selected from a designated area of Asian history. Maximum credit six units applicable to a master's degree.

660. Directed Reading in Selected Topics (3)
Prerequisite: Consent of the instructor. Selected readings in source materials and historical literature of various fields of history such as war, science, technology, urbanization, minority groups, immigration, capitalism, and imperialism. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

705. Seminar in Local History (3)
Prerequisite: History 601. Theories, sources and methods of local history, using San Diego as an example. Includes research paper on a local history topic.

715. Seminar in Public History (3)
Prerequisite: History 705. Group research and writing on a topic typical of public history.

722. Historical Museums (3)
Prerequisite: Consent of instructor. General functions and administrative components of museums, with focus on historical museums.
Courses Acceptable on Master's Degree Programs in Industrial Arts

UPPER DIVISION COURSES

517. Thermoset Plastics (3-2) II
Six hours of laboratory.
Prerequisite: Industrial Arts 115 and Chemistry 100 or higher.
Composition and selection of materials; evaluation of physical and mechanical properties of various thermoset plastics; special techniques for processing and production of thermoset plastics.

523. Industrial Arts Drawing (3-2) II
Six hours of laboratory.
Prerequisite: Industrial Arts 320.
Practice in and analysis of modern industrial drafting techniques and theories.

533. Applied Metal Forming Operations (3-2) I
Six hours of laboratory.
Prerequisite: Industrial Arts 131.
Theory of conventional and high energy industrial forming processes augmented with laboratory forming experiences.

542. Commercial/Industrial Photography (3-2) I
Six hours of laboratory.
Prerequisites: Commercial Photography 140 and upper division standing.
Theory and laboratory techniques, composition and lighting with emphasis on large format photography. Industrial applications, architecture, illustrative, advertising, portrait, and commercial photography.

553. Residential Building Construction (3-2) II
Six hours of laboratory.
Prerequisite: Industrial Arts 351.
Residential building construction principles encompassing the study of state and national building codes, foundation systems, framing techniques, and waterproofing applications. Emphasis on product development, testing, and reporting.

563. Industrial Control Circuits (3-2) I
Six hours of laboratory.
Prerequisite: Industrial Arts 361.
Advanced problems in industrial electronics circuit development, analysis, theory, and application.

573. Power Systems Technology (3-2) II
Six hours of laboratory.
Prerequisite: Power Systems Technology 371.
Advanced techniques in developing skills involved in graphic arts facilities.

596. Experimental Topics in Industrial Arts (1 or 2)
Prerequisite: Consent of instructor.
Individual laboratory work on complex projects on an experimental basis. See Class Schedule for specific content. Limit of nine units of any combination of 596, 496, and 596 courses applicable to a bachelor's degree. Maximum credit of nine units of 596 applicable to a 30-unit master's degree. Maximum combined credit of six units of 596 applicable to a 30-unit master's degree.

600. Seminar (3-2) I
An intensive study in industrial arts, see Class Schedule for specific content.
601. Advanced Research (3)  
Prerequisite: Consent of instructor.  
Materials and advanced techniques of research in specific activity areas, such as: (a) industrial drawing; (b) general metalworking; (c) general woodworking; (d) electricity-electronics; (e) transportation; (f) graphic arts; (g) photography; (h) industrial crafts; (i) plastics. Stress on original design and visual materials. May be repeated with new content. Maximum credit six units applicable to a master's degree.

699. Selected Topics in Industrial Studies (1-3)  
Prerequisite: Bachelor's degree in industrial, technical or vocational education.  
Intensive study in specific areas of industrial arts. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

720. History and Philosophy of Industrial Education (3)  
A study of the philosophical foundations and development of industrial education and its continuing role in American culture. Contemporary practices and trends will be given consideration.

721. Curriculum Construction in Industrial Arts Education (3)  
Selection of teaching content for school situations in compliance with the best known procedures regarding analysis, objectives, methods and learning, and development of instructional devices related directly to course content.

722. Instructional Resources for Industrial Arts Education (3)  
Survey, selection, and compilation of materials used in the development of resource units for instruction in industrial education, involving publications, organized talks, field trips, visual materials, technical literature and related materials. Organization and evaluation of such materials.

723. Evaluation in Industrial Arts Education (3)  
Principles, methods, and criteria of evaluation including the special problems of measuring growth, achievement, and performance in various phases of industrial education.

724. Organization, Administration and Supervision of Industrial Education Programs (3)  
The principles, objectives, methods and techniques employed in the supervision of industrial education programs. Emphasis on organizing and administering programs at all levels in industry and education.

725. Vocational Education (3)  
Prerequisite: Admission to M.A. program in Industrial Arts.  
Federal and state legislation and funding of vocational education.

790. Research Procedures in Industrial Arts (3)  
Location, selection and analysis of scientific and professional literature, research data and specialized bibliographies.

796. Field Work in Industrial Arts (3)  
Prerequisite: Consent of instructor. 
Application of the principles of laboratory organization, management and planning in reference to the objectives of industrial arts in development of school programs.

798. Special Study (1-3) Cr/NC/SP  
Prerequisite: Consent of instructor and graduate adviser.  
Individual study. Maximum credit six units applicable to a master's degree.

799A. Thesis (3) Cr/NC/SP  
Prerequisites: An officially appointed thesis committee and advancement to candidacy.  
Preparation of a project or thesis in industrial arts for the master's degree.

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

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**Latin American Studies**

Storm Hall 148, (619) 594-6686

**Faculty Committee for Latin American Studies**

Joseph W. Ball, Ph.D., Professor of Anthropology  
Ernesto M. Barrera, Ph.D., Professor of Spanish  
Thomas E. Case, Ph.D., Professor of Spanish  
C. Ben Christensen, Ph.D., Professor of Spanish  
Norris C. Clement, Ph.D., Professor of Economics  
Roger L. Cunniff, Ph.D., Professor of History  
Thomas M. Davies Jr., Ph.D., Professor of History, Chair of Committee, Graduate Coordinator

Janet B. Eisner, Ph.D., Professor of Art  
Ernst C. Griffin, Ph.D., Professor of Geography  
Ricardo Griswold del Castillo, Ph.D., Professor of Mexican American Studies  
Barbara W. Hartung, Ph.D., Professor of Journalism, Executive Assistant to the President  
Gerald L. Head, Ph.D., Professor of Spanish  
Theodore V. Higgins, Ph.D., Professor of Spanish  
Joseph B. Kelley, D.S.W., Professor of Social Work  
George Lemus, Ph.D., Professor of Spanish  
Brian E. Loveman, Ph.D., Professor of Political Science  
Allan W. Miller, M.F.A., Professor of Art  
L. Vincent Padgett, Ph.D., Professor of Political Science  
Rubén G. Ramírez, Ph.D., Professor of Sociology  
Lawrence M. Segard, Ph.D., Professor of History  
Paul J. Yandrew, Ph.D., Professor of History  
William C. Wasterson, Ph.D., Professor of Anthropology  
Maria-Barbara Watson, Ph.D., Professor of Women's Studies  
John R. Weeks, Ph.D., Professor of Sociology  
Susana D. Castelló, Ph.D., Associate Professor of Spanish  
Kathee M. Christensen, Ph.D., Associate Professor of Communication Disorders  
Stephen A. Cost, Ph.D., Associate Professor of History  
Philip F. Flemion, Ph.D., Associate Professor of Geography  
Barbara E. Friederich, Ph.D., Associate Professor of History  
Will C. Kennedy, Ph.D., Associate Professor of Sociology  
José D. Rodriguez, Ph.D., Associate Professor of Mexican American Studies  
José R. Villarino, Ph.D., Associate Professor of Spanish  
Raymond D. Wetter, Ph.D., Associate Professor of Spanish  
Ronald R. Young, Ph.D., Associate Professor of Spanish, Associate Dean of Undergraduate Studies  
Undergraduate Studies:  
D. Emily Hicks, Ph.D., Assistant Professor of English and Comparative Literature  
Paul Ganster, Ph.D., Director, Institute for Regional Studies  
Iliana L. Sonntag, M.L.S., M.A., Librarian, Latin American Studies Bibliographer  
Wayne Stromberg, Ph.D., Director, Foreign Language Laboratory

**General Information**

Since 1976 the Center for Latin American Studies has been designated a National Resource Center for Latin American Studies (one of only eleven in the nation) by the United States Department of Education and funded through a Title VI grant. The Master of Arts degree in Latin American Studies is one of the programs offered by the Center. The Center is interdisciplinary, drawing on the expertise of faculty from the following departments: Anthropology, Art, English, Economics, Geography, History, Political Science, Public Administration, Urban and Regional Studies, Sociology, and Spanish and Portuguese Language and Literature. The Center's program is one of seven Latin American Studies Programs in the United States which offers a master's degree. The program is designed to acquaint students with the social and political history of Latin America and with the problems of cultural development and social change in the region. The Center's program is one of seven Latin American Studies Programs in the United States which offers a master's degree.
Research interests and areas of expertise of the faculty include: demography, drama, economic development, folk art, Indians and peasants, land tenure systems, the Latin American press, mental health and aging in Mexico, militarism and guerrilla warfare, Spanish American prose, poetry and criticism, U.S.-Latin American relations, and the U.S.-Mexico border.

Admission to Graduate Study

In addition to meeting the requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, the student must present the Bachelor of Arts degree with not less than 18 units of courses of Latin American content in three areas. A student whose preparation is deemed insufficient by his graduate adviser or by the Latin American Studies Committee will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Two of this bulletin. In addition, students must demonstrate an oral and reading proficiency in either Spanish or Portuguese through either the satisfactory completion of an oral and written examination, or (1) satisfactory completion of Spanish 100C and 202, and a reading and oral examination administered by the Department of Spanish and Portuguese Languages and Literatures, or (2) satisfactory completion of three units of upper division or graduate coursework in Spanish or Portuguese. Coursework at or above the 500 level may be included as a part of the official program with the approval of the graduate coordinator. Students are further encouraged to acquire a reading knowledge of the alternate language.

Specific Requirements for the Master of Arts Degree

(Major Code: 03081)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Two of this bulletin, the student must complete at least 30 units of upper division and graduate coursework with not less than 24 units numbered 700 or higher. The total program shall include a minimum of 18 units in 700- and 600-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 B must complete the 799A (Thesis) course offered by the department selected for the 12-unit concentration (Department A). Students electing Plan B must pass a comprehensive written and oral examination in lieu of the thesis. All programs will be approved by the Latin American Studies Committee.

Courses Acceptable on Master's Degree Programs in Latin American Studies

UPPER DIVISION COURSES
Latin American Studies Courses

560. Latin America After World War II (3) II
Prerequisites: Latin American Studies 101, History 115A, 115B, and either Political Science 566 or consent of the instructor.
Major socioeconomic and political changes in Latin America since World War II and inter-American relations during the same period. Includes guest lecturers.

565. Latin America: The Hunger Crisis (3)
Prerequisites: Latin American Studies 101, History 115A, 115B, and either Political Science 566 or consent of the instructor.
Threats of food insufficiency and personal and national malnutrition are the themes of this course. The economic, political, and social consequences of the hunger crisis will be examined. A reading knowledge of Spanish or Portuguese is recommended.

566. Latin America: After World War II (3) II
Prerequisites: Latin American Studies 101, History 115A, 115B, and either Political Science 566 or consent of the instructor.
Major socioeconomic and political changes in Latin America since World War II and inter-American relations during the same period. Includes guest lecturers.

567. Latin America: The Hunger Crisis (3)
Prerequisites: Latin American Studies 101, History 115A, 115B, and either Political Science 566 or consent of the instructor.
Threats of food insufficiency and personal and national malnutrition are the themes of this course. The economic, political, and social consequences of the hunger crisis will be examined. A reading knowledge of Spanish or Portuguese is recommended.

568. Latin America: After World War II (3) II
Prerequisites: Latin American Studies 101, History 115A, 115B, and either Political Science 566 or consent of the instructor.
Major socioeconomic and political changes in Latin America since World War II and inter-American relations during the same period. Includes guest lecturers.

569. Latin America: The Hunger Crisis (3)
Prerequisites: Latin American Studies 101, History 115A, 115B, and either Political Science 566 or consent of the instructor.
Threats of food insufficiency and personal and national malnutrition are the themes of this course. The economic, political, and social consequences of the hunger crisis will be examined. A reading knowledge of Spanish or Portuguese is recommended.

570. Latin America: The Hunger Crisis (3)
Prerequisites: Latin American Studies 101, History 115A, 115B, and either Political Science 566 or consent of the instructor.
Threats of food insufficiency and personal and national malnutrition are the themes of this course. The economic, political, and social consequences of the hunger crisis will be examined. A reading knowledge of Spanish or Portuguese is recommended.

571. Latin America: The Hunger Crisis (3)
Prerequisites: Latin American Studies 101, History 115A, 115B, and either Political Science 566 or consent of the instructor.
Threats of food insufficiency and personal and national malnutrition are the themes of this course. The economic, political, and social consequences of the hunger crisis will be examined. A reading knowledge of Spanish or Portuguese is recommended.

572. Latin America: The Hunger Crisis (3)
Prerequisites: Latin American Studies 101, History 115A, 115B, and either Political Science 566 or consent of the instructor.
Threats of food insufficiency and personal and national malnutrition are the themes of this course. The economic, political, and social consequences of the hunger crisis will be examined. A reading knowledge of Spanish or Portuguese is recommended.

573. Latin America: The Hunger Crisis (3)
Prerequisites: Latin American Studies 101, History 115A, 115B, and either Political Science 566 or consent of the instructor.
Threats of food insufficiency and personal and national malnutrition are the themes of this course. The economic, political, and social consequences of the hunger crisis will be examined. A reading knowledge of Spanish or Portuguese is recommended.

574. Latin America: The Hunger Crisis (3)
Prerequisites: Latin American Studies 101, History 115A, 115B, and either Political Science 566 or consent of the instructor.
Threats of food insufficiency and personal and national malnutrition are the themes of this course. The economic, political, and social consequences of the hunger crisis will be examined. A reading knowledge of Spanish or Portuguese is recommended.

575. Latin America: The Hunger Crisis (3)
Prerequisites: Latin American Studies 101, History 115A, 115B, and either Political Science 566 or consent of the instructor.
Threats of food insufficiency and personal and national malnutrition are the themes of this course. The economic, political, and social consequences of the hunger crisis will be examined. A reading knowledge of Spanish or Portuguese is recommended.

576. Latin America: The Hunger Crisis (3)
Prerequisites: Latin American Studies 101, History 115A, 115B, and either Political Science 566 or consent of the instructor.
Threats of food insufficiency and personal and national malnutrition are the themes of this course. The economic, political, and social consequences of the hunger crisis will be examined. A reading knowledge of Spanish or Portuguese is recommended.

577. Latin America: The Hunger Crisis (3)
Prerequisites: Latin American Studies 101, History 115A, 115B, and either Political Science 566 or consent of the instructor.
Threats of food insufficiency and personal and national malnutrition are the themes of this course. The economic, political, and social consequences of the hunger crisis will be examined. A reading knowledge of Spanish or Portuguese is recommended.

578. Latin America: The Hunger Crisis (3)
Prerequisites: Latin American Studies 101, History 115A, 115B, and either Political Science 566 or consent of the instructor.
Threats of food insufficiency and personal and national malnutrition are the themes of this course. The economic, political, and social consequences of the hunger crisis will be examined. A reading knowledge of Spanish or Portuguese is recommended.

579. Latin America: The Hunger Crisis (3)
Prerequisites: Latin American Studies 101, History 115A, 115B, and either Political Science 566 or consent of the instructor.
Threats of food insufficiency and personal and national malnutrition are the themes of this course. The economic, political, and social consequences of the hunger crisis will be examined. A reading knowledge of Spanish or Portuguese is recommended.

580. Special Topics (1-4)
Prerequisites: Six upper division units in Latin American content courses.
Interdisciplinary study of selected Latin American topics. Credit will vary depending on the scope and nature of the topic. Whenever appropriate, the course will be taught by a team of instructors representing two or more disciplines. May be repeated with different content. See Class Schedule for specific content. Maximum credit eight units.

Anthropology Course

582. Regional Anthropology (3)*

583. Art Courses

584. Economics Courses

585. History Courses

586. Law

587. Political Science Courses

588. Portuguese Course

589. Sociology Courses

590. Topics in Comparative Societies (3)

591. Current Topics in Sociology (1-3)*

* Acceptable when of relevant content.
### Spanish Courses
- 515A-515B. Mexican Literature (3-3)
- 520. Caribbean Area Countries Literature (3)
- 522. Andean Countries Literature (3)
- 524. Contemporary Argentine Literature (3)
- 570. Spanish American Poetry (3)
- 571. Spanish American Short Story (3)
- 572. Spanish American Theater (3)
- 596. Selected Studies in Spanish (3)*

### Telecommunications and Film Courses
- 562. Documentary and Propaganda Film/Television (3)
- 590. International Broadcasting (3)
- 596. Selected Topics in Telecommunications and Film (1-3)

### GRADUATE COURSES
#### Latin American Studies Course
- 798. Special Study (1-3) Cr/NC/SP
  Prerequisite: Consent of staff, to be arranged with the director and instructor. Individual study. Maximum credit six units applicable to a master's degree.

#### Anthropology Courses
- 600. Seminar in Regional Anthropology (3)*
- 620. Seminar in Regional Anthropology (3)*
- 797. Research (3) Cr/NC/SP
- 798. Special Study (1-3) Cr/NC/SP
- 799A. Thesis (3) Cr/NC/SP
- 799B. Thesis Extension (0) Cr/NC

#### Art Courses
- 798. Special Study (1-3) Cr/NC/SP
- 799A. Thesis or Project (3) Cr/NC/SP
- 799B. Thesis or Project Extension (0) Cr/NC

#### Comparative Literature (English Course)
- 798. Special Study (1-3) Cr/NC/SP

#### Economics Courses
- 660. Seminar in International Economics (3)*
- 665. Seminar in the Economics of Underdeveloped Countries (3)
- 758. Seminar in Urban and Regional Economics (3)*
- 797. Research (3) Cr/NC/SP
- 798. Special Study (1-3) Cr/NC/SP
- 799A. Thesis (3) Cr/NC/SP
- 799B. Thesis Extension (0) Cr/NC

#### Geography Courses
- 620. Seminar in Regional Geography (3)*
- 650. Seminar in Systematic Geography (3)*
- 654. Seminar in Urban and Settlement Geography (3)*
- 797. Research (1-3) Cr/NC/SP
- 798. Special Study (1-3) Cr/NC/SP
- 799A. Thesis (3) Cr/NC/SP
- 799B. Thesis Extension (0) Cr/NC

* Acceptable when of relevant content.

### History Courses

#### Political Science Courses
- 655. Seminar in General Comparative Political Systems (3)*
- 661. Seminar in the Political Systems of the Developing Nations (3)*
- 667. Seminar in Latin American Political Systems (3)
- 675. Seminar in International Relations (3)*
- 795. Problem Analysis (3)*
- 797. Research in Political Science (3) Cr/NC/SP
- 798. Special Study (1-3) Cr/NC/SP
- 799A. Thesis (3) Cr/NC/SP
- 799B. Thesis Extension (0) Cr/NC

### Public Administration and Urban Studies Course
- 798. Special Study (1-3) Cr/NC/SP

### Sociology Courses
- 770. Seminar in Population and Demography (3)
- 798. Special Study (1-3) Cr/NC/SP

### Spanish Courses
- 640. The Spanish American Novel (3)
- 650. The Gaucho Epic (3)
- 660. Modernism (3)
- 665. The Spanish American Essay (3)
- 695. Contemporary Spanish American Prose Fiction (3)
- 710. Images of Women in Spanish American Literature (3)
- 750. Seminar in Spanish American Literature (3)
- 755. Seminar in Spanish American Culture and Thought (3)
- 798. Special Study (1-3) Cr/NC/SP
- 799A. Thesis (3) Cr/NC/SP
- 799B. Thesis Extension (0) Cr/NC

### Telecommunications and Film Course
- 798. Special Study (1-3) Cr/NC/SP

### Women's Studies Courses
- 696. Selected Topics in Women's Studies (3-6)*
- 798. Special Study (1-3) Cr/NC/SP

* Acceptable when of relevant content.
Adams Humanities 3172, (619) 594-4426

Faculty
Michael J. Carella, Ph.D., Professor of Philosophy
Andrew L. Feenber, Ph.D., Professor of Philosophy
Elsa Feiner, Ph.D., Professor of Natural Science
Charles D. Hamilton, Ph.D., Professor of Classics and History
Anne-Charlotte Harvey, Ph.D., Professor of Drama, Assistant Dean for Curriculum,
College of Professional Studies and Fine Arts
Henry L. Janssen, Ph.D., Professor Emeritus of Political Science
Albert W. Johnson, Ph.D., Professor of Biology, Vice President for Academic Affairs
Howard I. Kushner, Ph.D., Professor of History (Director, MALA Program)
Fred S. Moramarco, Ph.D., Professor of English and Comparative Literature
Stephen B. W. Roeder, Ph.D., Professor of Physics and Chemistry
Alan R. Sweder, Ph.D., Professor of Physics
Edward W. Warren, Ph.D., Professor of Philosophy
Deborah G. Chaffin, Ph.D., Associate Professor of Philosophy
Kathleen G. Jones, Ph.D., Associate Professor of Women's Studies
Joanne Cornwall-Gilas, Ph.D., Assistant Professor of French and Afro-American Studies
Floyd W. Hayes III, Ph.D., Assistant Professor of Afro-American Studies
Cynthia Lewis, Ph.D., Lecturer in Biology

Committee on Graduate Liberal Arts
The Master of Arts degree in Liberal Arts is administered through the Graduate Liberal Arts Committee. Faculty assigned to teach courses in the program are drawn from departments throughout the University.

General Information
The College of Arts and Letters offers a Graduate Liberal Arts program that is one of the few in the western United States. The Master of Arts degree in Liberal Arts is an interdisciplinary graduate education program administered by the Graduate Liberal Arts Committee. Even though this approach to teaching and learning keeps it vital and flexible, students are encouraged to customize their degree by selecting coursework relevant to their interests and life experiences.

The Master of Liberal Arts degree is an interdisciplinary program intended to provide an alternative approach to continued adult learning by offering a curriculum that crosses departmental boundaries and aims for breadth and scope. It provides the unique combination of a highly individualized program of study centered around personal interests combined with a strong grounding in interdisciplinary methods for problem solving. The student body is drawn from diverse backgrounds, thus adding to the unique character of the program.

Admission to Graduate Study
Applicants seeking admission to the program leading to the Master of Arts degree in Liberal Arts should contact the Chair of Graduate Liberal Arts Committee requesting appropriate materials. Detailed information concerning application procedures will be sent to interested students.

In addition to satisfying the requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin, the student seeking admission must: (1) have a grade point average of 3.0 or better on work completed during the last 60 units (Quantitative plus Verbal) or an equivalent score on the GRE General Test, (2) have a score of 950 or better on the GRE General Test, (3) complete a statement of purpose essay, and (4) complete a personal interview with a member of the Graduate Liberal Arts Committee. Students who do not meet all of the above requirements for admission with classified graduate standing may be admitted with conditional classified graduate standing upon the recommendation of the MALA Chair and Committee. Students so admitted will be advised as to the nature of their deficiency and the time to be allowed to achieve full classified graduate standing.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as described in Part Two of this bulletin. In addition, the students must (1) satisfactorily complete as a minimum the student's core seminars as stipulated (MALA 600A, 600B, 600C, 600D), (2) elect Plan A or Plan B, (3) complete a thesis or project proposal which has received the approval of the Graduate Liberal Arts Committee and its Chair.

Specific Requirements for the Master of Arts Degree in Liberal Arts
In addition to meeting the basic requirements for the Master of Arts degree in Liberal Arts as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units in residence at San Diego State University in the MALA program, of which at least 15 must be in 600- and 700-numbered courses. The total program must include:

1. Three units each of MLA 600A, 600B, 600C, or 600D for a total of 9 units.
2. Three units of MLA 601.
3. A theme of study composed of 15 units of graduate coursework, selected with the approval of the MALA Chair and normally must be in at least two different colleges of the University, with no more than 6 units in any given department. Some 500-level courses may be used in partial fulfillment of this requirement. The MALA Chair, in consultation with the MALA Director, may approve a student's graduate program in lieu of the 3-unit thematic component. Under special circumstances, and with permission of the MALA Chair, a student may compose a theme that deviates in structure from the criteria stipulated above.

Students may elect either Plan A or Plan B in consultation with the MALA Chair. In addition to meeting the distribution requirements given above, students electing Plan A must complete MLA 799A (Thesis or Project): Students electing Plan B must complete MLA 795 (Studies in the Liberal Arts) and pass a written comprehensive examination in lieu of the thesis.

All programs will be approved by the MALA Chair in consultation with the Graduate Liberal Arts Committee.

GRADUATE COURSES

MLA 600A-600B-600C-600D. Interdisciplinary Study in the Liberal Arts (3-3-3-3)

Prerequisite: Admission to the Master of Arts degree in Liberal Arts program and consent of MALA director.

Interdisciplinary seminars to explore issues that require integration of the perspective of various areas of the liberal arts.

A. Social Sciences and Humanities
B. Social Sciences and Natural Sciences
C. Humanities and Natural Sciences
D. Fine Arts and Social Sciences, Humanities, or Natural Sciences

601. Liberal Arts Colloquium (1) Cr/NC
Prerequisite: Admission to the Master of Arts degree in Liberal Arts program or graduate standing.

Issues in interdisciplinary studies. May be repeated with new content. See Class Schedule

785. Studies in the Liberal Arts (1-3) Cr/NC
Prerequisite: Officially appointed examining committee and advancement to candidacy.

786. Special Study (1-3) Cr/NC/SP
Prerequisite: Advancement to candidacy and consent of MALA director

Maximum credit three units. Maximum credit individual study on a given topic through interdisciplinary perspectives. Maximum credit of three units.
799A. Thesis or Project (3) Cr/NC/SP
Prerequisite: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the Master of Arts degree in Liberal Arts.

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

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Linguistics

Campanile Drive 174A, (619) 594-5268

Faculty
Zev Bar-Lev, Ph.D., Professor of Linguistics
Thomas S. Donahue, Ph.D., Professor of Linguistics, Chair of Department
Ann M. Johns, Ph.D., Professor of Linguistics
Robert Underhill, Ph.D., Professor of Linguistics
Jeffrey P. Kaplan, Ph.D., Associate Professor of Linguistics
Orin D. Seright, Ph.D., Associate Professor of Linguistics
Charlotte Webb, Ph.D., Associate Professor of Linguistics (Graduate Adviser)
Soonja Choi, Ph.D., Assistant Professor of Linguistics

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

General Information
The Department of Linguistics, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Linguistics. The interdisciplinary instructional program emphasizes research in linguistics as both a social and a cognitive science. Fields of study include the investigation of language structure, with courses in phonology, morphology, syntax, and semantics, together with historical linguistics, psycholinguistics, and sociolinguistics. The specializations and language research interests of faculty members in this program are:

Soonja Choi — Psycholinguistics, First and Second Language Acquisition, Cognition and Language, ESL, Materials Development; Korean, French.
Thomas S. Donahue — American Dialectology, Sociolinguistics, Historical Linguistics; Old English, Middle English.
Ann M. Johns — ESL Methodology, Materials Development, Discourse Analysis, Psycholinguistics; Arabic and Chinese.
Jeffrey P. Kaplan — Syntax, Semantics, ESL, Bilingualism; Swahili.
Orin D. Seright — Comparative Morphology, Historical Linguistics; Latin, Romance languages, Northern Germanic languages.
Robert Underhill — Descriptive Linguistics, Phonology, Syntax; Turkish, Native American languages, Southeast Asian languages.
Charlotte Webb — Phonology, Psycholinguistics, Sociolinguistics; Spanish, Chinese, Lapp.

Admission to Graduate Study
In addition to meeting the requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, the student must present the Bachelor of Arts degree in Liberal Arts and Sciences at San Diego State University, or its equivalent with a grade point average of 3.0 in the last 60 semester units attempted. A student whose preparation is deemed insufficient by his graduate adviser will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

Advancement to Candidacy
All candidates must satisfy the general requirements for advancement to candidacy as described in Part Two of this bulletin. Students selecting the Plan A (Thesis) option must have a thesis proposal which has received the approval of the department. Students selecting the Plan B (written comprehensive examination) option must submit a research paper for the approval of the department. In addition, a reading knowledge of at least one foreign language must be demonstrated prior to advancement to candidacy.
Specific Requirements for the Master of Arts Degree  
(Major Code: 15051)  
In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Two of this bulletin, the student must complete at least 30 units of upper division and graduate coursework to include the following required courses:  
1. Linguistics 621, Phonology; and Linguistics 622, Advanced Syntax.  
2. Three units of graduate seminar—Linguistics 795, Seminar in Linguistics.  
3. From 9 to 18 units in linguistics from courses listed below as acceptable on master’s degree programs.  
4. A maximum of nine units selected from Anthropology 604; German 505, 510; Philosophy 531; Russian 580, 581, 610, 650A, 650B, 680; Spanish 610, 770; or other electives outside of linguistics approved by the graduate adviser.  
   B. Plan B (the non-thesis option): see the description of Plan B below.  
6. At least 15 units, which under Plan A may include the thesis, must be from 600- and 700-numbered courses.  

Plan A or Plan B  
With approval of the Graduate Adviser, a student may choose either Plan A, which requires a thesis, or Plan B, non-thesis. With Plan B, the student must take a written comprehensive examination. In selecting Plan B, the student will be required to complete 30 units of coursework (a total of 10 courses) for the Master of Arts degree. The Linguistics Department has developed a policy for Plan B, detailing examination structure, committee composition, and grading system. Please consult the department.  

Applied Linguistics and English as a Second Language (ESL) Certificate  
The Linguistics Department offers a Basic and an Advanced Certificate in Applied Linguistics and English as a Second Language (ESL). The Advanced Certificate is 12 units to include Linguistics 525, 621, 622, and 650. The prerequisite to the Advanced Certificate is the Basic Certificate or its equivalent. Under certain circumstances comparable courses taken at other institutions may count towards the Certificate. Such courses must be evaluated and approved by the Certificate adviser. For information on the Basic Certificate, please see the General Catalog.  

Courses Acceptable on Master’s Degree Programs in Linguistics  

UPPER DIVISION COURSES  
520. Fundamentals of Linguistics (3) I, II, S  
Prerequisite: Upper division standing.  
Principles of modern linguistics, with attention to English grammar (syntax, morphology, phonology). Language change, dialects, sociolinguistics, psycholinguistics, language acquisition.  
521. Phonology (3) I, II  
Prerequisite: Linguistics 420 or 520.  
Introduction to the theoretical principles of transformational-generative phonology.  
522. Syntax (3) I, II  
Prerequisite: Linguistics 420 or 520.  
Introduction to the theoretical principles of transformational-generative syntax.  
523. Phonemics and Morphemics (3)  
The study of procedures for arriving at the phonetic inventory of languages and the structuring of sound units (both linear and intonational) into phonemic systems; the study of morphemic hierarchies and their arrangements in forming words.  
524. American Dialectology (3) I, II  
Prerequisite: Upper division standing.  

525. Semantics and Pragmatics (3)  
Prerequisite: Linguistics 420 or 520.  
Advanced semantic theory; systematic analysis of the interaction of sequences of language with real world context in which they are used.  
530. English Grammar (3)  
Prerequisite: Six upper division units in linguistics.  
English morphology, syntax, and discourse structure, including simple and complex sentence structure; lexical categories and subcategories; discourse functions of selected constructions. Problems and solutions in teaching English grammar.  
550. Theory and Practice of English as a Second Language (3) I, II  
Prerequisite: Linguistics 420 or 520.  
The nature of language learning; evaluation of techniques and materials for the teaching of English as a second language.  
551. Sociolinguistics (3) I, II  
Prerequisite: A course in introductory linguistics.  
Investigation of the correlation of social structure and linguistic behavior.  
552. Psycholinguistics (3) I, II  
Prerequisite: A course in introductory linguistics.  
Psychological aspects of linguistic behavior.  
553. Bilingualism (3)  
Prerequisite: Linguistics 420 or 520 or Communicative Disorders 500.  
The nature of bilingual societies and bilingual language acquisition; effects of bilingualism on language structure and use.  
554. Linguistics and Computers (3) I, II  
Prerequisites: Linguistics 420 or 520, and experience in any programming language.  
The study of man-computer communication from a linguistic perspective. Comparison of human issues of man-machine communication from a linguistic perspective.  
596. Selected Topics in Linguistics (1-3)  
Prerequisite: Upper division standing.  
Advanced study of selected topics. See Class Schedule for specific content. May be repeated with new content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum combined credit six units of 596 and 596 applicable to a 30-unit master’s degree.  

GERMAN COURSES  
505. Applied German Linguistics (3)  
510. German Phonetics (3)  
580. Russian Syntax and Stylistics (3)  
581. Russian Phonetics and Morphology (3)  

RUSSIAN COURSES  
520. Indo-European (3)  
Prerequisite: Anthropology 304 or Linguistics 622.  
Phonology, morphology, and syntax of the Indo-European language family, with special attention to “Celtic” and “Semitic” relationships.  
511. Early English (3)  
Prerequisite: Linguistics 420 or 520.  
Phonology, morphology and syntax of Old and Middle English. Reading and analysis of selected texts. May be repeated with new content. See Class Schedule for specific content.  

GROW ADUATE COURSES  
621. Phonology (3)  
Prerequisite: Linguistics 520 or 521.  
Phonetics, phonetic transcription, theories of phonology and phonological description.  

UPPER DIVISION COURSES  
505. Applied German Linguistics (3)  
510. German Phonetics (3)  
580. Russian Syntax and Stylistics (3)  
581. Russian Phonetics and Morphology (3)  

GRADUATE COURSES  
610. Indo-European (3)  
Prerequisite: Anthropology 304 or Linguistics 622.  
Phonology, morphology, and syntax of the Indo-European language family, with special attention to “Celtic” and “Semitic” relationships.  
611. Early English (3)  
Prerequisite: Linguistics 420 or 520.  
Phonology, morphology and syntax of Old and Middle English. Reading and analysis of selected texts. May be repeated with new content. See Class Schedule for specific content.
622. Advanced Syntax (3)
Prerequisite: Linguistics 522.
Advanced study of linguistic theory and its application to the analysis of English.

640. Field Methods in Linguistics (3)
Prerequisites: Three units of linguistics, including some knowledge of phonetic transcription and consent of instructor.
Principles and techniques of linguistic analysis working directly with native informants, including phonemic, grammatical, and syntactic analysis and text collection and interpretation.

650. Materials Development in Applied Linguistics (3)
Prerequisite: Linguistics 550.
Materials development and adaptation for teaching English as a second language and foreign language. Reading and composition in a variety of approaches.

651. Sociology of Language (3)
Prerequisite: Linguistics 551.
Public and private reasons for planned language behavior. Creoles, personal speech interaction patterns, bilingualism, cultural diversity in language use, social-theoretical background, language planning, and social uses of sexism in language.

652. Second Language Acquisition (3)
Prerequisites: Linguistics 552 or 452; and 550.
Analyses of theories of second language acquisition; theoretical and empirical bases of current second language teaching methodologies.

660. History of Linguistics (3)
Prerequisite: Two courses in linguistics or equivalent background.
Background and development of modern linguistic theory.

740. Internship in English as a Second Language and Foreign Language Teaching (3)
Cr/NC
Prerequisites: Linguistics 650 and classified graduate standing.
Internship in teaching English as a second language and English as a foreign language, offering work experience with practicing professionals or with a company in the community.

750. Directed Language Study (3)
Prerequisite: Consent of instructor.
Directed independent study of a foreign language not offered within the course structure at San Diego State University with the aim of applying the techniques of intensive linguistic analysis to the syntax, phonology and/or semantic structure of that language. No instruction in speaking or understanding the spoken language is included in this course. Maximum credit six units applicable to a master's degree.

795. Seminar in Linguistics (3)
Prerequisite: Completion of three units of 600- and 700-numbered courses in the master's program for linguistics. Research in linguistics, course content varying according to instructor. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with department chair and instructor. Individual study. Maximum credit six units applicable to a master's degree.

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

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

Anthropology Course
Mass Communication

For faculty members in other departments participating in the degree program (Journalism, Psychology, Sociology, Speech Communication, and Telecommunications and Film), see the appropriate sections of this bulletin.

Faculty Committee for Mass Communication

Peter A. Andersen, Ph.D., Professor of Speech Communication
Harlan L. Anderson, Ph.D., Professor of Telecommunications and Film
Glen M. Broom, Ph.D., Professor of Journalism
Mohamed M. E. El-Assal, Ph.D., Professor of Sociology
Susan A. Hellweg, Ph.D., Professor of Speech Communication
John P. Witherspoon, M.A., Professor of Telecommunications and Film
David M. Doolin, Ph.D., Associate Professor of Journalism, Chair of Committee and Graduate Coordinator
Judy S. Reilly, Ph.D., Assistant Professor of Psychology

General Information

The Master of Science degree in Mass Communication 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 Communication 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 Communication or in disciplines emphasizing areas of Mass Communication; (2) who plan a career in secondary or community college teaching; or (3) who seek a broad background for careers in the mass media, business, or government service.

Research interests in Mass Communication include studies of media organizations and professionals, new technologies, message and program strategies, audience uses of media, and individual and social effects. Approximately half the students completing the program do thesis research on a topic related to their professional interests.

Admission to Graduate Study

Students will be admitted to the graduate program in Mass Communication only after careful consideration of their qualifications by the Mass Communication Committee. Initial applications must be received prior to March 1 for the fall semester, and November 1 for the spring semester, in order to be considered.

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. In addition, a student applying for admission to the graduate program in Mass Communication must meet the following requirements:

1. A bachelor's degree in journalism, radio-television, advertising, communications, sociology, or psychology.
2. A grade point average of not less than 2.75 overall, and 3.0 in the last 60 units of the undergraduate program.
3. A minimum score (verbal and quantitative) on the GRE General Test of 920.

To be considered for admission to the graduate program in Mass Communication, an applicant must submit the following, in addition to the common admissions forms:

1. Two copies of all undergraduate transcripts as required by Part Two of this bulletin.
2. Three letters of recommendation, one of which must be from an academic reference and another from an occupational reference.
3. A written personal statement by the applicant discussing background, interests, abilities, and career goals as they apply to the applicant's desire for an advanced degree, and in particular a graduate degree in Mass Communication.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Two of this bulletin.

Specific Requirements for the Master of Science Degree

(Major Code: 06011)

In addition to meeting the requirements for the Master of Science degree as described in Part Two of this bulletin, the student must complete a minimum of 30 units in coursework acceptable on master's degree programs. At least 18 units of the total program must be in courses numbered 600 to 799. Twenty-seven units must be distributed between two of the departments cooperating in the degree program, with 18 units in one department (Department A) and nine units in another (Department B). The remaining three units can be taken in any department (other than Department A), provided the units are acceptable for graduate credit in the department in which they are taken and approved by the student's graduate adviser and the Mass Communication Committee.

Of the 18 units taken in Department A, at least 12 units must be at the 600 and 700 levels. At least six units in Department B must be numbered 600 to 799.

A student whose preparation is deemed insufficient by his adviser or by the Mass Communication Committee for graduate level study in his selected A and B departments will be given conditionally classified graduate standing. Students with conditionally classified graduate standing will be required to complete specified courses to remove any deficiencies in addition to the minimum of 30 units required for the degree. All such deficiencies must be completed within one year after admission to the graduate program and with a minimum grade average of "B" before the student will be given full classified graduate standing.

Candidates may elect to follow Plan A, requiring a thesis, or Plan B, which requires a written comprehensive examination agreed upon by the Mass Communication Committee in lieu of the thesis.

All programs must be approved by both the A and B departments, and the Mass Communication Committee.

Courses Acceptable on Master's Degree Programs in Mass Communication

UPPER DIVISION COURSES

Journalism Courses

500. Current Problems in Mass Communication (3)
Prerequisites: Journalism 220 or Telecommunications and Film 100 or Economics 100 or Political Science 101 or Sociology 101; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

Forces affecting American mass communication today: government restrictions, economics, pressure groups, censorship, mechanical developments, interrelationships of the media and society; professional ethics.

502. Law of Mass Communication (3)
Prerequisites: Journalism 220 or Political Science 102 or Telecommunications and Film 100; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.


503. History of Mass Communication (3)
Prerequisites: Journalism 220 or History 110; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

American journalism from colonial times to the present, with special attention to twentieth century trends and developments, including the emergent concept of social responsibility.

509. Research Methods in Mass Communication (3)
Prerequisites: Journalism 320 or 450 or 460 or 470 or 480; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

Investigative tools and evaluation methods of mass media research: content analysis, investigative tools and evaluation methods of mass media research: content analysis.
529. Investigative Reporting (3)
One lecture and four hours of activity.
Prerequisite: Journalism 320; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.
Development of articles of substance and depth in specialized areas. Research, analysis and interpretation of complex issues in the news. Special problems of the sustained, reportorial effort. Field and laboratory practice.

530. Media Management (3)
Prerequisite: Senior standing and twelve upper division units in journalism.
Role of manager in journalism and journalism-related organizations: Interaction of news, entertainment, advertising, circulation, production and promotion functions as related to economic demands.

585. Problems and Practices in Public Relations (3)
Prerequisite: Journalism 481; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.
Current public relations practices and problems in a wide variety of commercial, industrial, financial, governmental, cultural and social organizations.

Sociology Courses

General Sociology Area
531. Working and Society (3)
537. Political Sociology (3)

Family and Intimate Relations Area
527. Aging and Society (3)

Social Change Area
556. Topics in Comparative Societies (3)
557. Urban Sociology (3)

Speech Communication Courses

530. Language Analysis (3)
531. Social Psychology (3)
580. Communication and Politics (3)
589. Ethical Issues in Communication (3)
590. Quantitative Methods in Communication (3)
592. Persuasion (3)

Telecommunications and Film Courses

500. Broadcast Management (3)
505. Government and Broadcasting (3)
530. Radio Programming (3)
540. Broadcast Advertising (3)
590. International Broadcasting (3)

GRADUATE COURSES

Journalism Courses

600A-600B. Seminar in Theory and Method of Mass Communication (3-3)
Preparation in theory and research methods applicable to studies of the press, journalism and mass communication. Analysis of previous research, concepts, models and theory numbered Journalism 600.

700. Seminar: Media Problems (3)
Prerequisite: Six units in courses applicable to the Master of Science degree in Mass Communication. Reading, investigation, and research concerning current topics in problems of mass media.
### Speech Communication Courses

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<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>700</td>
<td>Seminar in Research and Bibliography (3)</td>
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<td>706</td>
<td>Seminar in Organizational Communication (3)</td>
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<td>730</td>
<td>Seminar in the Analysis of Language (3)</td>
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<td>735</td>
<td>Seminar in Communication Theory (3)</td>
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<td>775</td>
<td>Seminar in Intercultural Communication (3)</td>
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<td>790</td>
<td>Seminar in Experimental Procedures in Speech Communication (3)</td>
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<td>791</td>
<td>Seminar in Group Communication (3)</td>
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<td>792</td>
<td>Seminar in Persuasion (3)</td>
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<td>798</td>
<td>Special Study (1-3) Cr/NC/SP</td>
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<td>799A</td>
<td>Thesis or Project (3) Cr/NC/SP</td>
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<td>799B</td>
<td>Thesis or Project Extension (0) Cr/NC</td>
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### Telecommunications and Film Courses

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<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>600</td>
<td>Seminar in Research and Bibliography (3)</td>
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<tr>
<td>615</td>
<td>Seminar in Criticism of Broadcasting and Cinema (3)</td>
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<td>620</td>
<td>Seminar in the Development of Telecommunications Systems (3)</td>
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<td>640</td>
<td>Seminar in Broadcast Advertising Problems (3)</td>
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<td>670</td>
<td>Seminar in Public Telecommunications (3)</td>
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<td>700</td>
<td>Seminar in Telecommunications Management (3)</td>
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<td>705</td>
<td>Seminar in Telecommunications Policy and Regulation (3)</td>
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<td>798</td>
<td>Special Study (1-3) Cr/NC/SP</td>
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<td>799B</td>
<td>Thesis or Project Extension (0) Cr/NC</td>
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</table>

### Mathematical Sciences

#### (Courses in Computer Science and Mathematics)

**Business Administration/Mathematics 203**  
(619) 594-6191

**Faculty**

**Computer Science**

- Kasi Anantha, Ph.D., Professor of Mathematical Sciences
- Sara Baase, Ph.D., Professor of Mathematical Sciences
- Leland L. Beck, Ph.D., Professor of Mathematical Sciences
- Edmund I. Deaton, Ph.D., Professor of Mathematical Sciences
- John D. Donald, Ph.D., Professor of Mathematical Sciences
- Nenad Marovac, Ph.D., Professor of Mathematical Sciences
- Roman W. Swiniarski, Ph.D., Professor of Mathematical Sciences
- Marko Vuskovic, Ph.D., Professor of Mathematical Sciences
- John L. Carroll, Ph.D., Associate Professor of Mathematical Sciences
- Carl F. Eckberg, Ph.D., Associate Professor of Mathematical Sciences (M.S. Computer Science Graduate Adviser)
- Vernor S. Vinge, Ph.D., Associate Professor of Mathematical Sciences
- Roger E. Whitney, Ph.D., Associate Professor of Mathematical Sciences
- Sevki Serkan Erdogan, Ph.D., Assistant Professor of Mathematical Sciences
- Goker Gursel, Ph.D., Assistant Professor of Mathematical Sciences
- Kris W. Stewart, Ph.D., Assistant Professor of Mathematical Sciences

**Mathematics and Applied Mathematics**

- Henry G. Bray, Ph.D., Professor of Mathematical Sciences
- David H. Carlson, Ph.D., Professor of Mathematical Sciences
- Ronald W. Davis, Ph.D., Professor of Mathematical Sciences
- Saul I. Drobniak, Ph.D., Professor of Mathematical Sciences
- Kurt Elsemann, Ph.D., Professor of Mathematical Sciences
- John D. Ewol, Ph.D., Professor of Mathematical Sciences, Chair of Department
- Leonard D. Fountain, Ph.D., Professor of Mathematical Sciences
- Betty B. Garrison, Ph.D., Professor of Mathematical Sciences
- Tunc Geveci, Ph.D., Professor of Mathematical Sciences
- Herbert A. Glindler, Ph.D., Professor of Mathematical Sciences
- Robert D. Grone, Ph.D., Professor of Mathematical Sciences
- Richard A. Hager, Ph.D., Professor of Mathematical Sciences
- Hung-Tai Ho, Ph.D., Professor of Mathematical Sciences
- Calvin V. Holmes, Ph.D., Professor of Mathematical Sciences
- Edgar J. Howard, Ph.D., Professor of Mathematical Sciences
- Frank D. Lesley, Ph.D., Professor of Mathematical Sciences
- Donald A. Lutz, Ph.D., Professor of Mathematical Sciences
- Stephen J. Pierce, Ph.D., Professor of Mathematical Sciences
- James F. Reynolds, Ph.D., Professor of Mathematical Sciences
- Peter Salamon, Ph.D., Professor of Mathematical Sciences
- Daniel Saltz, Ph.D., Professor of Mathematical Sciences
- Donald R. Short Jr., Ph.D., Professor of Mathematical Sciences, Dean of the College of Sciences
- R. Lee Van de Wetering, Ph.D., Professor of Mathematical Sciences
- Arnold L. Vilone, Ph.D., Professor of Mathematical Sciences
- William R. Hintzman, Ph.D., Associate Professor of Mathematical Sciences
Graduate standing, as described in Part Two of this bulletin.

Admission to Graduate Study

The Department of Mathematical Sciences, in the College of Sciences, offers graduate study leading to the Master of Arts degree in Mathematics, the Master of Arts degree in Statistics, and the Master of Science degree in Computer Science.

Faculty active in research direct theses and research projects in most general areas of the mathematical sciences: in approximation theory, complex analysis, differential equations, analysis, operator theory and ring theory within mathematics; in cognitive science, computer physics, modeling and optimization within applied mathematics; in control theory, mathematical inference, stochastic processes, survival analysis and time series within statistics; in intelligence, database management, distributed processing, graphics and operating systems.

Specific Requirements for the Master of Arts Degree in Mathematics

(Major Code: 17011)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must meet the following requirements:

1. Complete 30 units of 600- and 700-numbered courses in mathematical sciences, of which at least 21 units must be at the 600 level or above. Mathematics 600, 601, and 602 may not be part of this degree. No more than six units of Mathematics 797 and 798 will be accepted toward the degree.

2. Among the 30 units of coursework, students must include at least two courses in the area of algebra chosen from courses 620, 621, 622, 623, and at least two courses in analysis chosen from courses 630A, 630B, 631A, and 631B.

3. Students must present evidence that they have completed French 200A, German 200A, or Russian 200A, or Spanish 100C or equivalent; or demonstrate a reading knowledge of French, German, Russian, or Spanish.

4. Students must pass the departmental qualifying examinations in the areas of algebra and analysis. The algebra examination is based on material in Mathematics 532A, 521B, and 524, and the analysis examination is based on material in Mathematics 532, 534A, 534B, and 534B.

5. With departmental approval, students may select Plan A and complete Mathematics 798, or Plan B requiring a written comprehensive examination, and complete three units of Mathematics 797 and prepare a paper on some aspect of mathematics under the supervision of a faculty adviser.

Specific Requirements for the Master of Arts Degree for Teaching Service

(Major Code: 17011)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must meet the following requirements:

1. Complete 30 units of 600- and 700-numbered courses in mathematical sciences, of which at least 21 units must be at the 600 level or above. Mathematics 600, 601, and 602 may not be part of this degree. No more than six units of Mathematics 797 and 798 will be accepted toward the degree.

2. Among the 30 units of coursework, students must include at least two courses in the area of algebra chosen from courses 620, 621, 622, 623, and at least two courses in analysis chosen from courses 630A, 630B, 631A, and 631B.

3. Students must present evidence that they have completed French 200A, German 200A, or Russian 200A, or Spanish 100C or equivalent; or demonstrate a reading knowledge of French, German, Russian, or Spanish.

4. Students must pass the departmental qualifying examinations in the areas of algebra and analysis. The algebra examination is based on material in Mathematics 532A, 521B, and 524, and the analysis examination is based on material in Mathematics 532, 534A, 534B, and 534B.

5. With departmental approval, students may select Plan A and complete Mathematics 798, or Plan B requiring a written comprehensive examination, and complete three units of Mathematics 797 and prepare a paper on some aspect of mathematics under the supervision of a faculty adviser.

Specific Requirements for the Master of Science Degree in Applied Mathematics

(Major Code: 17031)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Parts Two and Three of this bulletin, the student must meet the following requirements:

1. Have completed before entering the program, the following courses or their equivalents: Mathematics 524, 531, 532, 534B or 533, 537, 541, and 551A, and programming.

2. Complete a graduate program consisting of at least 21 units in Mathematics 797 and prepare a paper on some aspect of mathematics under the supervision of a faculty adviser.

3. Students must present evidence that they have completed French 200A, German 200A, or Russian 200A, or Spanish 100C or equivalent; or demonstrate a reading knowledge of French, German, Russian, or Spanish.

4. Students must pass the departmental qualifying examinations in the areas of algebra and analysis. The algebra examination is based on material in Mathematics 532A, 521B, and 524, and the analysis examination is based on material in Mathematics 532, 534A, 534B, and 534B.

5. With departmental approval, students may select Plan A and complete Mathematics 798, or Plan B requiring a written comprehensive examination, and complete three units of Mathematics 797 and prepare a paper on some aspect of mathematics under the supervision of a faculty adviser.

Specific Requirements for the Master of Science Degree in Statistics

(Major Code: 17021)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must meet the following requirements:

1. Complete 30 units of 600- and 700-numbered courses in mathematical sciences, of which at least 21 units must be at the 600 level or above. Mathematics 600, 601, and 602 may not be part of this degree. No more than six units of Mathematics 797 and 798 will be accepted toward the degree.

2. Among the 30 units of coursework, students must include at least two courses in the area of algebra chosen from courses 620, 621, 622, 623, and at least two courses in analysis chosen from courses 630A, 630B, 631A, and 631B.

3. Students must present evidence that they have completed French 200A, German 200A, or Russian 200A, or Spanish 100C or equivalent; or demonstrate a reading knowledge of French, German, Russian, or Spanish.

4. Students must pass the departmental qualifying examinations in the areas of algebra and analysis. The algebra examination is based on material in Mathematics 532A, 521B, and 524, and the analysis examination is based on material in Mathematics 532, 534A, 534B, and 534B.

5. With departmental approval, students may select Plan A and complete Mathematics 798, or Plan B requiring a written comprehensive examination, and complete three units of Mathematics 797 and prepare a paper on some aspect of mathematics under the supervision of a faculty adviser.
2. Complete a minimum of 30 units of approved 500-, 600-, and 700-numbered courses, at least 21 in Mathematical Sciences, and no more than six units from any other single department. No more than six units in Mathematics 797 and 798 will be accepted for credit toward the degree. A program of study must be approved by the Graduate Adviser.
   a. Twelve units must be selected from the following core areas: Numerical Analysis, Mathematics 542 or 693A; Statistics, Mathematics 551B or 554A or 670A; Mathematical Modeling, Mathematics 636; and Optimization, Mathematics 662. Where students can demonstrate strong academic preparation in one or more of the core areas, other courses may be substituted with the consent of the graduate adviser.
   b. With departmental approval, the student may select Plan A, and complete Mathematics 799A, Thesis or Project. The student must have an oral defense of the thesis or project, open to the public. Otherwise, Plan B will be followed, and the student must complete 3 units of Mathematics 797, Research.

Specific Requirements for the Master of Science Degree in Computer Science
(Major Code: 07011)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must meet the following departmental requirements:
1. Complete 15 units of 600- and 700-numbered courses, including twelve units from any two of the following year-course sequences:
   - Computer Science 690A and 690B
   - Computer Science 691A and 691B
   - Computer Science 692A and 692B
2. Complete nine additional units of graduate level or approved upper division computer science courses, not including Computer Science 799A.
3. Complete six units of approved electives.
4. Pass two written examinations as determined by the department.
5. Pass a final oral examination. With the approval of the department, a student may select Plan A. In other cases, Plan B will be followed, and the student must complete three units of Computer Science 797.

Specific Requirements for the Master of Science Degree in Statistics
(Major Code: 17021)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must meet the following departmental requirements:
1. Complete 21 units in mathematics to include:
   a. Mathematics 553, 670A, 670B.
   b. Six units selected from Mathematics 672, 673, 674, 675, 676, and 677.
   c. Six units of 600- and 700-numbered mathematics courses, excluding Mathematics 600, 602, and 799A.
2. Complete three additional units of graduate level or approved upper division mathematics courses, not including Mathematics 799A.
3. Complete six units of approved electives.
4. Pass the departmental comprehensive examinations in mathematical statistics. With the approval of the department, a student may select Plan A and complete Mathematics 799A, Thesis or Project. In other cases, Plan B will be followed, requiring a written comprehensive examination, and the student must complete three units of Mathematics 797.

Concentration in Biostatistics within the Master of Science in Statistics

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree described in Parts Two and Three of this bulletin, the student must meet the following requirements:
1. The student must have completed before entering the program the following undergraduate coursework: three semesters of calculus, one semester each of linear algebra and probability theory, and two semesters of bioscience (e.g., biology, ecology, physiology, zoology). Ideally, the student should have an undergraduate major in mathematics, statistics, or a field of application of biostatistics (e.g., bioscience, health sciences, or medical sciences). The student must also have programming proficiency in a computer language before entering the program. Admission to the concentration may require that an approval form be granted conditionally without some of the requirements above, contingent on the student removing any deficiencies by the end of the first year in the program (these courses will not count toward the degree course requirements).
2. The student must complete a minimum of 33 units of coursework as described below.
3. Upon entry to the program, the student will be assigned to a graduate adviser from the department in Applied Mathematics, Computer Science, Mathematics, and Statistics. The adviser will meet with the student each semester and discuss the student's academic program. The program of study described below must be approved by the graduate adviser in biostatistics.
   a. Nine units of core statistics courses, including the following: Mathematics 553, 670A-670B.
   b. Six units of biostatistics concentration courses, including the following: Mathematics 680A-680B.
   c. At least six units of courses in biostatistics and statistics, to be selected from the following:
      - Mathematics 554A, 554B, 555, 671, 672, 673, 674, 675, 676, 677, 678, 696, 720, 798.
   d. At least six units of upper division or graduate courses from a science of application of biostatistics (e.g., bioscience, health science, or medical sciences) selected with the approval of the graduate adviser in biostatistics. The student must have the approval of the graduate adviser in biostatistics. If the student has an upper division or graduate degree, then course sequences must be approved by the graduate adviser in biostatistics.
   e. At least six units of research, including Mathematics 797 and 799A.
4. Plan B will be followed. The student must pass an oral defense of the thesis, open to the public. The chair of the thesis committee must be a faculty member from the division of statistics. The third member of the thesis committee must be a faculty member from a statistics. The third member of the thesis committee must be a faculty member from a statistics. The third member of the thesis committee must be a faculty member from a mathematics, computer science, or a field of application of biostatistics.

Courses Acceptable on Master's Degree Programs in Applied Mathematics, Computer Science, Mathematics, and Statistics

UPPER DIVISION COURSES IN MATHEMATICS

509. Computers in Teaching Mathematics (3)
   Prerequisites: Computer Science 107, Mathematics 252, and either 521A or 524.

510. Introduction to the Foundations of Geometry (3) II
   Prerequisite: Mathematics 122 or 151.
   The foundations of Euclidean and hyperbolic geometries. Highly recommended for all prospective teachers of high school geometry.
531. Partial Differential Equations (3) I
Prerequisite: Mathematics 254 and 252.
Convergence of series and sequences of functions and their applications, functions of several variables and their continuity, differentiability and integrability properties.
Prerequisite: Mathematics 337.

532. Functions of a Complex Variable (3)
Prerequisite: Mathematics 252.
Analytic functions, Cauchy-Riemann equations, theorem of Cauchy, Laurent series, calculus of residues.
Prerequisites: Mathematics 245 and 254; or 342A.

533. Vector Calculus (3)
Prerequisite: Mathematics 254 or 342A.
Scalar and vector fields; gradient, divergence curl, line and surface integrals; Green's, Stokes', and divergence theorems. Green's identities. Applications to potential theory or fluid mechanics or electromagnetism.
Prerequisites: Mathematics 254 and 252.

535. Introduction to Topology (3)
Prerequisite: Mathematics 534A.

537. Ordinary Differential Equations (3)
Prerequisite: Mathematics 337.
Theory of ordinary differential equations: elementary existence and uniqueness, dependence on initial conditions and parameters, linear systems, stability and asymptotic behavior, plane autonomous systems, series solutions at regular singular points. Not open to students with credit in Mathematics 530.

541. Introduction to Numerical Analysis and Computing (3) I, II, S
Prerequisites: Mathematics 254 or 342A; and Computer Science 107 or Engineering 120.
Solution of equations of one variable, direct methods in numerical linear algebra, least squares approximation, interpolation and uniform approximation, quadrature. (Formerly numbered Mathematics 541A.)

542. Introduction to Numerical Solutions of Differential Equations (3) II
Prerequisites: Mathematics 337 and 541.
Initial and boundary value problems for ordinary differential equations. Partial differential equations. Iterative methods, finite difference methods, and the method of lines. (Formerly numbered Mathematics 541B.)

550. Probability (3) I, II, S
Prerequisite: Mathematics 151 or Philosophy 120, and Mathematics 245.
Prerequisites: Mathematics 340B and one of the following: Mathematics 254, 252.

551A. Mathematical Statistics (3) I, II
Prerequisite: Mathematics 252.
Probability models in the theory of statistics, sampling distributions with applications in statistical inference.
Prerequisite: Mathematics 551A.

551B. Mathematical Statistics (3) II
Prerequisite: Mathematics 551A.
Point and interval estimation and hypothesis testing in statistical models with applications to problems in various fields.
553. Stochastic Processes (3) I, II
Prerequisite: Mathematics 551A.
Introduction to stochastic processes with selected applications.

554A. Computer Oriented Statistical Analysis (3) I, II
Prerequisite: Mathematics 350A.
Using statistical computer packages such as BMOP and SAS to analyze problems in univariate ANOVA, multiple regression, contingency tables, nonparametric methods and discriminate analysis. (Formerly numbered Mathematics 554.)

554B. Advanced Computer Oriented Statistical Analysis (3) II
Prerequisite: Mathematics 554A.
Analyze problems in multivariate ANOVA, factor analysis, repeated measures, logistic regression, log-linear models, cluster analysis. Using statistical computer packages.

555. Multivariate Statistical Methods in Biology (3)
(Same course as Biology 597B.)
Two lectures and three hours of laboratory.
Prerequisite: Mathematics 350A.
Application of multivariate statistical methods in the biological sciences.

GRADUATE COURSES IN MATHEMATICS

621. Theory of Groups (3)
Prerequisite: Mathematics 521B.
Permutation groups, isomorphism theorems, Sylow theorems, solvable groups, fundamental theorem of finitely generated Abelian groups.

622. Theory of Fields (3)
Prerequisite: Mathematics 521B. Recommended: Mathematics 621.
Galois theory, finite fields, cyclotomic and cyclic extensions, solvability by radicals, transcendence degree, Hilbert's Nullstellensatz.

623. Linear Algebra and Matrix Theory (3)
Prerequisite: Mathematics 524.
Characteristic and minimal polynomials, Cayley-Hamilton theorem, canonical forms, hermitian matrices, Sylvester's law, norms, singular values, stability, non-negative matrices.

624. Rings and Ideals (3)
Prerequisite: Mathematics 521B. Recommended: Mathematics 621.
Rings and ideals, unique factorization, modules, chain conditions, Wedderburn's theorem, Jacobson radical. (Formerly numbered Mathematics 620.)

630A-630B. Functions of a Real Variable (3-3)
Prerequisite: Mathematics 524 and 534B. Mathematics 630A is prerequisite to Mathematics 630B.
Lebesgue measure and integration, metric spaces, Banach spaces, Hilbert spaces, spectral theory.

631A-631B. Functions of a Complex Variable (3-3)
Prerequisite: Mathematics 524 and 534B. Mathematics 631A is prerequisite to 631B.

633. Combinatorial Topology (3)
Prerequisite: Mathematics 535.
Introduction to combinatorial topology. The fundamental group, plane homology and Jordan curve theorem. Vector fields and Poincaré index theorem.

636. Mathematical Modeling (3)
Prerequisites: Mathematics 524, 537, and 551A.
Advanced models from the physical, natural, and social sciences. Emphasis on classes of models and corresponding mathematical structures.

637. Theory of Ordinary Differential Equations (3)
Prerequisites: Mathematics 524, 532, 534B, and either Mathematics 531 or 537.
Existence, uniqueness, and continuation of solutions from an advanced standpoint. Linear systems and their stability and asymptotic behavior, regular and irregular singularities, and regular boundary value problems.

642. Partial Differential Equations (3)
Prerequisite: Mathematics 531.

662. Advanced Optimization Theory (3)
Prerequisites: Mathematics 382 and 524.
Formulating the optimization problem and constructing proper models. Sequential optimization, integer programming, dynamic programming, nonlinear programming. Duality theory and sensitivity analysis. Sample applications and numerical implementation. (Formerly numbered Mathematics 662A.)

663. Methods of Applied Analysis (3)
Prerequisites: Mathematics 524 and 534B.
Functional analysis with applications to applied mathematics. Metric and normed linear spaces, bounded and compact operators, inner product and Hilbert spaces, self-adjoint operators and orthogonal expansions.

664. Methods of Applied Algebra (3)
Prerequisites: Mathematics 524 and either Mathematics 521A or two courses with algebraic content such as Mathematics 245, 542.

665. Algorithms for Mathematical Programming (3)
Prerequisite: Mathematics 662.
Computational complexity of algorithms. Efficient algorithms for network flow, matching, spanning trees and matroids.

667. Mathematical Aspects of Systems Theory (3)
Prerequisites: Mathematics 524 and 537.
Linear and nonlinear systems, nonlinear differential equations, equilibrium equations. Linearization, state transition matrix, stability theory, feedback control systems.

668. Applied Artificial Intelligence (3)
Prerequisite: Mathematics 667.
Computer vision systems, expert systems, intelligent robotics, man-machine communication, sensor integration.

693A. Advanced Numerical Analysis (3)
Prerequisites: Mathematics 524 and 542.

693B. Advanced Numerical Analysis (3)
Prerequisites: Mathematics 531, 537, and 693A.

696. Selected Topics in Mathematical Sciences (3)
Prerequisite: Graduate standing. Intensive study in specific areas of mathematical sciences. May be repeated with new content.

720. Seminar (1-3)
Prerequisite: Consent of instructor.
An intensive study in advanced mathematics. May be repeated with new content. See Class Schedule for specific content. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

730. Seminar (1-3)
Prerequisite: Consent of instructor.
An intensive study in advanced mathematics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.
797. Research (1-3) Cr/NC/SP  
Prerequisite: Six units of graduate level mathematics.  
Research in one of the fields of mathematics. Maximum credit six units applicable to a master’s degree.

798. Special Study (1-3) Cr/NC/SP  
Prerequisite: Consent of staff; to be arranged with department chair and instructor.  
Individual study. Maximum credit six units applicable to a master’s degree.

799A. Thesis or Project (3) Cr/NC/SP  
Prerequisites: An officially appointed thesis committee and advancement to candidacy.  
Preparation of a project or thesis for the master’s degree.

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

GRADUATE COURSES IN MATHEMATICS

MATHEMATICS EDUCATION

600. Geometrical Systems (3)  
Prerequisites: Mathematics 521A and an upper division course in geometry.  
Ordered and affine geometries, decompositions, dilations. Projectivities and projective space. Absolute geometry, isometries, groups generated by inversions.

601. Topics in Algebra (3)  
Prerequisites: Mathematics 521A and 534A.  
Unique factorization domains, rings and ideals, groups, algebraic field extensions. A course designed for secondary school teachers.

602. Topics in Analysis (3)  
Prerequisites: Mathematics 521A and 534A.  
Topics in analysis, including the real number system, convergence, continuity, differentiation, the Riemann-Stieltjes integral, complex analysis, designed to give the secondary teacher a broad understanding of the fundamental concepts.

GRADUATE COURSES IN MATHEMATICS

STATISTICS

670A-670B. Advanced Mathematics Statistics (3-3)  
Prerequisites: Mathematics 534A and 550 or 551A. Mathematics 670A is prerequisite to 670B.  
Distribution of random variables, characteristic functions, limiting distributions, sampling distributions, Hypothesis testing and estimation: optimality considerations, applications of the linear hypothesis, invariance and unbiasedness to analysis of variance and regression problems; sequential techniques, decision theory.

671. Statistical Computing (3)  
Prerequisite: Mathematics 551B.  
Machine computation of various entities related to development, application, and evaluation of advanced statistical techniques. Multivariate probability integrals; power functions; multiway contingency tables; advanced nonparametric statistics simulation; random number generation; Monte Carlo methods.

672. Nonparametric Statistics (3)  
Prerequisite: Mathematics 551B.  
Tolerance regions, randomness problems, most powerful rank tests, the invariance methods, consistency and efficiency of tests.

673. Sample Surveys (3)  
Prerequisite: Mathematics 551A.  
The methods and applications of sample surveys, stratification and sampling, subsamples of clusters.

674. Multivariate Analysis (3)  
Prerequisites: Mathematics 524 and 551B.  
Multivariate normal distributions, multivariate analysis of variance, factor analysis, canonical correlation.

675. Linear Statistical Hypothesis Testing (3)  
Prerequisites: Mathematics 524 and 551A.  
The multivariate normal distribution; distribution of quadratic forms; linear and curvilinear models; general linear hypothesis of full rank, regression models.

677. Design of Experiments (3)  
Prerequisites: Mathematics 524 and 551A.  
Experimental design models, a basic approach as well as a matrix algebra approach.

678. Survival Analysis (3)  
Prerequisites: Mathematics 551B.  
Survival distributions; inference in parametric survival model; life tables; proportional hazards model; time-dependent covariates; accelerated time model and inference based on ranks; multivariate time data and competing risks.

680A-680B. Advanced Biostatistical Methods (3-3)  
Prerequisites: Mathematics 550 or 551A. Mathematics 680A is prerequisite to 680B.  

UPPER DIVISION COURSES IN COMPUTER SCIENCE

(Listed in the Class Schedule under Computer Science)

514. Database Theory and Implementation (3)  
Prerequisites: Computer Science 310 and Mathematics 245.  
Abstract data structures and techniques for their implementation. Review of sentential and predicate logic, relational view of data, relational calculus and algebra, normalization of relations; hierarchical and network views of data; review of some existing database systems; SQL. (Formerly numbered Mathematics 582.)

520. Programming Languages: Alternative Designs (3)  
Prerequisites: Computer Science 237 and 310.  
Formal definition of programming languages including specification of syntax and semantics. A selection of languages from general purpose, functional, object oriented, logic and vector oriented languages. Programming assignments in several languages.

524. Compiler Construction (3)  
Prerequisites: Computer Science 237, 310, and either 320 or 520.  
Syntax specification of languages. Scanners and parsers. Precedence grammars. Run-time storage organization. Code generation and optimization. (Formerly numbered Mathematics 575.)

530. Systems Programming (3)  
Prerequisites: Computer Science 237 and 310.  
Design and implementation of systems software. Relationship between software design and machine architecture. Topics from assemblers, loaders and linkers, macro processors, compilers, and operating systems. Topics from implementation of files. Topics from implementation of processes, file systems, file permissions, databases. Projects required. (Formerly numbered Mathematics 560.)

532. Software Engineering (3)  
Prerequisites: Computer Science 310 and either 320 or 520.  
Theory and methodology of programming complex computer software. Analysis, design, implementation and implementation of programs. Team projects required. (Formerly numbered Mathematics 586.)

550. Artificial Intelligence (3)  
Prerequisites: Computer Science 106 and either Mathematics 245 or 523.  
Heuristic approaches to problem solving. Systematic methods of search of the problem state space. Theorem proving by machine. Resolution principle and its applications. (Formerly numbered Mathematics 576.)
552. Advanced Artificial Intelligence (3)
Prerequisites: Computer Science 310, 550, and either 320 or 520.
Presentation of logic based programming languages and their usefulness in artificial intelligence, including areas such as expert systems and natural language translation. Implementation and use of chaining, recursion, lists. Substantial programming practice. (Formerly numbered Mathematics 577.)

554. Aspects of Interactive Computer Graphics (3)
Prerequisites: Computer Science 310 and Mathematics 254.
Theoretical and practical concepts and software requirements related to use of interactive computer graphics. Mathematical functions used in 3D graphics; data structures and languages both for programming graphical system and for communication between a user and a graphical system. (Formerly numbered Mathematics 586.)

556. Robotics: Mathematics, Programming, and Control (3)
Prerequisites: Computer Science 320 or 520, Mathematics 254; knowledge of the C programming language.
Robotic systems including manipulators, actuators, sensors, and controllers. Algebraic methods for spatial description of solid objects, manipulator kinematics and control. Robot programming languages and robot programming systems.

558. Computer Simulation (3)
Prerequisites: Computer Science 310 and Mathematics 550.
Methodology of simulation for discrete and continuous dynamic systems. State-of-the-art programming techniques and languages. Statistical aspects of simulation. Students will design, program, execute, and document a simulation of their choice. (Formerly numbered Mathematics 583.)

560. Algorithms and Their Analysis (3) I, II
Prerequisites: Computer Science 310 and Mathematics 245.
Algorithms for solving frequently occurring problems. Analysis techniques, lower bounds. Sorting, merging, graph problems (shortest path, depth-first and breadth-first search), and others. NP-complete problems. (Formerly numbered Mathematics 578.)

562. Automata Theory (3)
Prerequisite: Mathematics 245 or 521A.
Definition and algebraic description of finite automata. Reduced forms for sequential machines. Regular sets and expressions, introduction to context-free languages. (Formerly numbered Mathematics 573.)

564. Introduction to Computability (3)
Prerequisite: Mathematics 245 or 523.
Definition of algorithm by abstract (Turing) machines and by recursion. Application of this definition to the limitations and capabilities of computing machines. Applications to logic, algebra, analysis. (Formerly numbered Mathematics 574.)

566. Queuing Theory (3)
Prerequisites: Computer Science 106 and Mathematics 550.
Performance prediction of computer networks and other systems (e.g., inventory control, customer service lines) via queuing theory techniques. Operational analysis. (Formerly numbered Mathematics 571.)

570. Operating Systems (3) I, II
Prerequisites: Computer Science 310, 370, and knowledge of the C programming language.
File systems, processes, CPU scheduling, concurrent programming, memory management, protection. Relationship between the operating system and underlying architecture. (Formerly numbered Mathematics 585.)

572. Microprocessor Architecture (3)
Prerequisites: Computer Science 370 and knowledge of the C programming language.
Organization and applications of microprocessors. Software aspects and detailed descriptions of several popular microcomputers. Hands-on experience with microprocessors. (Formerly numbered Mathematics 561.)

574. Computer Security (3)
Prerequisites: Computer Science 310; Mathematics 245, 550, and credit or concurrent registration in Computer Science 570.
Principles of computer security and application of principles to operating systems, database systems, and computer networks. Topics include encryption techniques, access controls, and information flow controls.

576. Computer Networks and Distributed Systems (3)
Prerequisite: Credit or concurrent registration in Computer Science 570.
Local area networks and wide area networks; mechanisms for interprocess communication; rules for the distribution of data and program functions. (Formerly numbered Mathematics 588 and 682.)

596. Advanced Topics in Computer Science (1-4) I, II
Prerequisite: Consent of instructor.
Selected topics in computer science. May be repeated with the approval of the instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

For additional courses useful to computer scientists, see:
Mathematics 541. Introduction to Numerical Analysis and Computing
Mathematics 542. Introduction to Numerical Solutions of Differential Equations
Mathematics 561. Applied Graph Theory
Mathematics 579. Combinatorics

GRADUATE COURSES IN COMPUTER SCIENCE
(Listed in the Class Schedule under Computer Science.)

556. Advanced Robotics (3)
Prerequisite: Computer Science 556.
Computer-based techniques for low-, medium-, and high-level robot control including robot programming and robot task planning.

676. Seminar in Artificial Intelligence (3)
Prerequisite: Computer Science 550.
691A-691B. Formal Languages and Syntactic Analysis (3-3)
Prerequisites: Computer Science 310, 320, and 562 or 564.
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. (Formerly numbered Mathematics 691A-691B.)

Prerequisites: Computer Science 310, 320 and 530.
Topics to include computer architecture, operating systems, performance analysis techniques, time sharing systems and security and protection of information. (Formerly numbered Mathematics 692A-692B.)

695A-695B. Computer Performance Evaluation (3-3)
Prerequisites: Mathematics 550 or 551 A. Mathematics 695A is prerequisite to 695B. Recommended: Computer Science 558 and 566.
Modelling, simulation, operational analysis, queueing techniques, and performance evaluation. (Formerly numbered Mathematics 695A-695B.)

696. Selected Topics in Computer Science (3)
Prerequisite: Graduate standing.
Intensive study in specific areas of computer science. May be repeated with new content. See Class Schedule for specific content. Maximum combined credit of six units of 596 and 696 applicable to a master's degree.

700. Applications of Computer Science (3)
Prerequisite: Classified graduate standing in mathematics or computer science.
Topics to be chosen from such applications as theorem proving simulation, learning theory, graphics, definition languages. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. (Formerly numbered Mathematics 700.)

720. Seminar (1-3)
Prerequisite: Consent of instructor.
An intensive study in advanced computer science. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

797. Research (1-3) Cr/NC/SP
Prerequisite: Six units of graduate level computer science courses.
Research in computer science. Maximum credit six units applicable to a master's degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master's degree.

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

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

For additional courses useful to computer scientists, see:
Mathematics 693A-693B. Advanced Numerical Analysis

Music

Music 111, (619) 594-6031

Faculty
Frank W. Almond, Ph.D., Professor of Music
Donald P. Barra, Ed.D., Professor of Music
Robert E. Brown, Ph.D., Professor of Music
Conrad Bruderer, D.M., Professor of Music
Theodore R. Brunson, D.M.A., Professor of Music
Martin J. Chambers, M.M., Professor of Music, Chair of Department
Brenton P. Dutton, M.M., Professor of Music
Russell G. Estes, Ed.D., Professor of Music
Cleve K. Ganzinger, M.M., Professor of Music
Merle E. Hogg, Ph.D., Professor of Music
Jack D. Logan, Ph.D., Professor of Music
Eddie S. Meadows, Ph.D., Professor of Music
Danlee G. Mitchell, M.S., Professor of Music
Jaroslav J. S. Mace, Ph.D., Professor of Music
Terry L. O'Donnell, D.M.A., Professor of Music
John M. Sheldon, Ed.D., Professor of Music
David Ward-Steinman, D.M.A., Professor of Music
Howard Hill, M.A., Associate Professor of Music
Jane M. Kolar, Ph.D., Associate Professor of Music
Jack R. Estes, Ph.D., Associate Professor of Music
Karen J. Folingstad, M.M., Assistant Professor of Music
Marian Liebowitz, D.M.A., Assistant Professor of Music
Thomas D. Stauffer, M.A., M.M., Assistant Professor of Music (Graduate Adviser)

Applied Music Instruction
Piano: Bruderer, Folingstad, Kolar
Harpsichord: Paul
Organ: Fall, Speelman
Voice: Chambers, Ganzinger, MacKenzie
Flute: Lukas
Oboe: Michel
Clarinet: Liebowitz
 Saxophone: Rotter
Early Instruments: Peterman
Bassoon: Michel
French Horn: Cable
 Trumpet: Sieber
Trombone: Friedrichs, Hogg, Yeager
Baritone Horn: Dutton
Tuba: Dutton
Violin/Viola: Brunson, Hill
Cello: Stauffer
Contrabass: G. Biggs
Harp: Hays
Classical Guitar: Estes, Kilmer, Romero
Composition: Dutton, Hogg, Stauffer, Ward-Steinman
Non-Western Instruments: Specialists from specific cultures as available
Musical Theatre: Dutton
Jazz Studies: Heizer, Yeager
Opera: Chambers, Eaton, O'Donnell

Scholarships
Information on music scholarships may be obtained by writing to the Chair, Music Scholarship Committee, Music Department, San Diego State University.

General Information
The Department of Music, in the College of Professional Studies and Fine Arts, offers graduate study leading to the Master of Arts degree in Music and the Master of Music degree. The department is a member of the National Association of Schools of Music.
With approval of the department, students electing to pursue the Master of Arts degree may specialize in one of the following fields: composition, ethnomusicology, music education, music history and literature, musicology, Suzuki string pedagogy, piano pedagogy, and theory.
Research opportunities are also available in these areas: ethnomusicology, music education, music history and literature, musicology, Suzuki string pedagogy, and music theory.

Specializations of the music faculty include:

**Composition and theory:** aesthetics, comprehensive musicianship; contemporary music; electronic music; interrelationships among the arts; music and instruments of Harry Partch.

**Conducting:** literature and score analysis, hand techniques, rehearsal techniques, general preparation and performance.

**Ethnomusicology:** African, Afro-American, American folk, East Asian, European, South Asian, and Southeast Asian music. Students may elect research in other areas with approval of the faculty adviser.

**Music education:** educational administrative practices; multicultural music; Orff, Kodaly, Dalcroze techniques, and philosophy of music.

**Music history/literature, and musicology:** Contemporary, Czech classical, early, French Baroque, Italian Renaissance, Nationalist and Slavic music. Students may select (with the approval of the faculty) a topic in Medieval, Renaissance, Baroque, Classical, Romantic, Twentieth century music or American music.

**Suzuki string pedagogy:** This field is under the direction of a Suzuki Association of the Americas Registered Teacher Trainer.

The 78,000 square foot music building, completed 1970, includes a 200-seat recital hall, rehearsal rooms for instrumental and vocal organizations, an electronic music studio, three-class-piano rooms, a listening library with a collection of over 13,000 titles available for faculty/student study and 21 listening rooms, 71 individual practice rooms, and approximately 160 pianos and 800 other musical instruments. The University library contains an extensive collection of 70,000 music books and scores.

The Department of Music houses the unique collection of music and instruments by Harry Partch as well as the numerous instruments, scores, and books owned by the Center for World Music. This collection includes 10 Balinese and Javanese Gamelans and numerous other musical instruments of the world. The department's holdings also include an extensive collection of early western musical instruments.

## Admission to Graduate Study

### 1. As a part of the application for admission to the University, applicants will submit a one-page statement to set forth aims and goals in their graduate studies.

### 2. Applicants who plan to emphasize music education will be required to provide evidence of successful teaching experience or submit letters from two master teachers or supervisors of practice teaching.

### 3. Applicants admitted to the department will be accepted with conditional graduate standing. Placement examinations will be administered in western music history, western music theory, and performance practice. Normally two semesters will be allowed to remove deficiencies indicated by the examinations through no-credit remedial work in the form of undergraduate courses or other projects and instruction.

In addition to the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, students must satisfy the following requirements before they will be recommended for classified graduate standing:

1. **Complete a bachelor's degree with a major in music including full preparation in performance, theory, music history and literature, or hold a bachelor's degree from an accredited institution with present sufficient evidence of study and experience in music to demonstrate the equivalency of a bachelor's degree with a major in music.**

2. **Satisfactorily complete examination in western music history, theory, and literature, and performance practice.** Details may be obtained from the Department of Music.

3. **Be accepted in the degree and emphasis of their choice by the departmental graduate committee.**

### Master of Music Degree

In addition to meeting the admission requirements listed above, students who seek a conducting specialization must submit musical scores of their original work. Those seeking a performance specialization must submit evidence (programs, videotape) of their conducting expertise.

## Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Two of this bulletin, and must have removed any deficiencies assigned on the basis of the placement examinations.

## Specific Requirements for the Master of Arts Degree

(Major Code: 10051)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a 30-unit graduate program which includes the following core: Music 613A, 613B, 613C, 613D, 613E or 613F, 652A, 652B, 652C, 652D, 652E or 652F, and 690. The M.A. student may choose either Plan A or B.

**Plan A** is required of those students selecting programs in composition, theory, music education, and musicology. Students are required to enroll in Music 759, Thesis or Project, and to pass a final oral comprehensive examination on the thesis. Students whose field is composition will submit an original composition with analysis.

**Plan B** is for students in the music history and literature program. These students are required to give a lecture-recital presented to the Department of Music. Students are required to complete a graduate program of 30 units from courses listed below as acceptable on master's degree programs in music, of which at least 18 must be in 600- and 700-numbered courses. Students whose field is ethnomusicology, piano pedagogy, Suzuki string pedagogy, or music education, and musicology must have a reading ability in at least one foreign language, preferably German or French.

In addition to the requirements stated above, students must complete specific courses in the particular program selected. Compositions: Music 607 (2 units), 613A, 613B, 613D, 650Y (4 units), 658, three units of electives.

**Ethnomusicology:** Music 561 (6 units), 562 (2 units), 614, 650Z (4 units), 656.

**Music education:** Music 601, 604, at least six units selected from Music 600A, 600B, 600C, 602; six units of electives.

**Music History and Literature:** Music 650 (4 units), at least twelve units selected from Music 600A, 600B, 600C.

**Music Theory:** At least twelve units selected from Music 600A, 600B, 600C, 602; six units of electives.

**Musicology:** At least twelve units selected from Music 650, 600 (at least nine units from Music 652), six units of electives.

**Piano Pedagogy:** Music 541A, 542A, and either 641 or 642; at least three units from Music 650A; three units of electives.

**Suzuki String Pedagogy:** Music 541B, 542A, 600A, 600D (4 units); six units of electives.

Refer to Student Handbook for further details.

## Specific Requirements for the Master of Music Degree

(Major Code: 10041)

In addition to the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of 30 units from courses listed below as acceptable on master's degree programs in music, of which at least 18 must be in 600- and 700-numbered courses. The student must also satisfy the following specific requirements:

### Composition:

- **Music 607 (2 units), 613A, 613B, 613D, 650Y (4 units), 658, three units of electives.**
- **Ethnomusicology:** Music 561 (6 units), 562 (2 units), 614, 650Z (4 units), 656.
- **Music Education:** Music 601, 604, at least six units selected from Music 600A, 600B, 600C, 602; six units of electives.
- **Music History and Literature:** Music 650 (4 units), at least twelve units selected from Music 600A, 600B, 600C.
- **Music Theory:** At least twelve units selected from Music 600A, 600B, 600C, 602; six units of electives.
- **Musicology:** At least twelve units selected from Music 650, 600 (at least nine units from Music 652), six units of electives.
- **Piano Pedagogy:** Music 541A, 542A, and either 641 or 642; at least three units from Music 650A; three units of electives.
- **Suzuki String Pedagogy:** Music 541B, 542A, 600A, 600D (4 units); six units of electives.

Refer to Student Handbook for further details.

## Advancement to Master of Music

Students who seek a performance specialization must pass an audition. Students seeking a composition specialization must submit musical scores of their original work. Those seeking a conducting specialization must submit evidence (programs, videotape) of their conducting expertise. Please consult the Department of Music for further information concerning admission.

### Specific Requirements for the Master of Music Degree

(Major Code: 10041)

In addition to the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of 30 units from courses listed below as acceptable on master's degree programs in music, of which at least 18 must be in 600- and 700-numbered courses.
Courses Acceptable on Master's Degree Program in Music

UPPER DIVISION COURSES

507. Composition Laboratory (1)
Three hours of laboratory.
Prerequisites: Music 207 and consent of instructor.
Continuation of Music 207. Maximum credit two units.

510. Advanced Electronic Music (3)
Two lectures and three hours of laboratory.
Prerequisite: Music 310.
Complex waveform generation, remote voltage control generation, and historic aspects of electronic music.

511. Performance Studies Pedagogy (3)
Two lectures and three hours of laboratory.
Prerequisite: Consent of instructor.
Teaching beginning and intermediate applied music. Survey and evaluation of teaching materials. Observation of individual or group lessons.
A. Piano
B. Strings
C. Voice

512. Performance Studies Laboratory (3)
One lecture and three hours of laboratory.
Prerequisite: Music 541A is prerequisite to 542A and 541B is prerequisite to 542B.
Practical experience in the teaching of individual or group lessons.
A. Piano
B. Strings
C. Voice

513. Diction (1)
Principles of pronunciation and enunciation.
Application to song and opera, in English, Italian, German, and French.

514. Advanced Electronic Music (3)
Continuation of Music 510. Maximum credit six units.

520. World Music in Context (2)
One lecture and two hours of activity.
Prerequisites: Music 351E or 351F and consent of instructor.
Analysis of scores and music of a specific culture. May be repeated with new content.

521. Area Studies: Ethnomusicology (3)
Prerequisites: Music 351E and 351F.
Music of a specific culture. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

522. World Music in Context (2)
One lecture and two hours of activity.
Prerequisites: Music 351E or 351F and consent of instructor.
Practical experience in the performance of specialized traditional genres of world music.

523. Advanced Chamber Music (1) I, II
Prerequisite: Music 351E or 351F.
Preparation and performance of representative works by a specific medieval or Renaissance composer on historical instruments. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

524. Advanced Chamber Music (1) I, II
Three hours.
Prerequisite: Consent of instructor.
Study and public performance of established repertory as well as new compositions. May be repeated with new content.

525. Symphonic Band (1) I, II
Five hours.
Prerequisite: Consent of instructor.
Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.
577. Wind Ensemble (1)
Five hours.
Prerequisite: Consent of instructor.
Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

580. Analogos in Music, Art, and Literature (3)
Prerequisite: At least one survey course in music history or appreciation, art history, or comparative literature.
Cross-influences and correspondences in the arts from the standpoints of style, texture, rhythm, and form.

581. Symphony Orchestra (1) I, II
Five hours.
Prerequisite: Consent of instructor.
Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

585. Concert Choir (1) I, II
Five hours.
Prerequisite: Consent of instructor.
Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

589. Jazz Ensemble (1) I, II
Three hours.
Prerequisite: Consent of instructor.
Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

591. Theory and Practice of Musical Expression and Interpretation (2)
Prerequisite: Music 258B.
Musical perception as it pertains to expressive aspects of performance. Theories of interpretation and ways in which performers can create the impulse to shape its inherent architectural structure.

596. Special Topics in Music (1-3)
A specialized study of selected topics from the several areas of music. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a 30-unit master’s degree.

GRADUATE COURSES

600. Seminar in Music Education (3)
Prerequisite: Consent of instructor.
Seminars in music education are offered to provide an opportunity for concentrated study in the several areas listed:
A. Development and Teaching of Strings
B. Choral and Vocal Techniques
C. General Music

601. Seminar in Foundations of Music Education (3)
History and philosophy of music education in relation to current trends in the teaching of music.

602. Seminar in Administration and Supervision of Music Education (3)
Curriculum, scheduling, finance, human relations, organizational aspects, and the role of the supervisor-consultant.

604. Seminar in Comparative Music Education (3)
Various international philosophic and technical approaches to teaching music to include the Orff, Kodaly, Suzuki and other systems.

607. Seminar in Composition (2-3)
Three hours of laboratory and public performance of an extended original work as a project.
Prerequisite: Music 507.
Advanced composition for various media, development of original idiom, intensive study of modern music.

613. Seminar in Music Theory (3)
Prerequisite: Music 553 is prerequisite to 613F.
Current advanced analytic techniques in various areas of music.

642. Plan for Pedagogy: The Adult (3)
Two lectures and three hours of laboratory.
Prerequisites: Music 541A and 542A.
Study of music for teaching the advanced teenager, college student or adult student.

644A. Seminar in Advanced Choral Conducting (2)
Prerequisite: Music 448A.
Course designed to develop skills at professional level; study of different styles of choral literature and their relationship to conductor’s art; score analysis and experience in conducting.

644B. Seminar in Advanced Instrumental Conducting (2)
Prerequisite: Music 449A.
Course designed to develop skills at professional level; study of conducting style related to band and orchestra literature score analysis and experience in conducting.

650. Advanced Performance Studies (2) (1-3 units for 650D) (3 units for Master of Music candidates)
Fifteen one-hour private lessons (2 units); twenty-two hours private lessons (3 units).
Advanced studies in technical, stylistic and aesthetic elements of artistic performance.

Music / 311
652. Seminar In Music History (3)
Prerequisites: Music 452B and consent of instructor. Music 351F is prerequisite to 652F.
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 Eighteenth and Nineteenth Centuries
D. Twentieth Century Music
E. American Music
F. History of Asian Music

655. Seminar In Musicology (3)
Prerequisite: Music 452B.
Problems and research in musicology. Projects in bibliography, source materials, music history, criticism, aesthetics and related fields. Writing and presentation of a scholarly paper.

656. Seminar In Ethnomusicology (3)
Prerequisite: Music 556.
Variable topics. Maximum credit nine units applicable to a master's degree.

658. Advanced Practicum In Music (3)
One lecture and six hours of activity.
Prerequisites: Completion of undergraduate requirements in an area related to one of the specializations in the M.A. or M.M. degrees, and consent of instructor in the area.
Students will be assigned to appropriate class sections within selected undergraduate area as instructional assistants under staff supervision. Maximum credit six units applicable to a master's degree.

660. Seminar: A Major Composer (3)
Prerequisite: Music 452B. Completion of a seminar in Music 652A is recommended.
The life, milieu and works of a major composer, such as Bach, Mozart or Schubert will be studied. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

665. Seminar: Notation of Polyphonic Music (3)
Prerequisite: Music 452B. Completion of Music 652A is recommended.
Selected problems related to the notation of Medieval, Renaissance, and Baroque music: Scores and Tablatures; White Mensural Notation; Black Notation to the End of Franconian Notation; French, Italian, Mixed and Mannered Notation. Examples will be transcribed into modern notation. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

670. Seminar: Interpretation of Early Music (3)
Prerequisites: Completion of Music 652A and 652B is recommended.
Performance practice in Medieval, Renaissance and Baroque music; projects in music editing; reports; performance on historical instruments. Participation in the Collegium Musicum required.

690. Seminar In Research Procedures In Music (3)
Reference materials, bibliography, investigation of current research in music, processes of thesis topic selection and techniques of scholarly writing.

696. Special Topics In Music (1-3)
Prerequisite: Graduate standing.
Intensive study in specific areas of music. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

767. Graduate Recital (3)
Prerequisites: Advancement to candidacy. Consent of department chair.
Selection of literature for recital program of at least one hour in length; theoretical analysis and historical study of scores chosen; preparation and public performance; and examination performance. Conductors must conduct a public performance.

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

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

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

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

Campanile Drive 164, (619) 594-5157

Faculty
Norman F. Dessel, Ph.D., Professor of Natural Science (Graduate Adviser)
Michael J. Dowler, Ph.D., Professor of Natural Science
Elsa Feher, Ph.D., Professor of Natural Science
Kathleen M. Fisher, Ph.D., Professor of Natural Science
Fred M. Goldberg, Ph.D., Professor of Natural Science
David E. Ingmanson, Ed.D., Professor of Natural Science
Robert P. Metzger, Ph.D., Professor of Natural Science, Chair of Department
Charles F. Philpott, Ph.D., Professor of Natural Science
Thomas L. May, Ph.D., Associate Professor of Natural Science
Arthur Springer, Ph.D., Associate Professor of Natural Science
William J. Wallace Jr., Ph.D., Associate Professor of Natural Science
Wills H. Thompson Jr., M.A., Assistant Professor of Natural Science

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

General Information
The Department of Natural Science, in the College of Sciences, offers advanced coursework in natural science and science education. Graduate courses in natural science and science education may be used to fulfill requirements for advanced degrees in other departments with the approval of the student's graduate adviser.

UPPER DIVISION COURSES

500. Seminar in Curriculum and Instruction in Science (3)
Prerequisite: Teacher Education 453
Factors directing the changing science curriculum in secondary schools; recent trends and current research in the teaching of science in secondary schools and in science curriculum development; current practices in science teaching in secondary schools.

596. Special Topics in Natural Science (1-4) I, II, S
Prerequisite: Minimum 10 units of natural science
Selected topics in natural science for preservice and inservice elementary and secondary teachers and candidates for the M.A. in Education. May be repeated with consent of instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a 30-unit master's degree.

GRADUATE COURSES

600. Seminar in Science Education (3)
An intensive study in advanced science education. May be repeated with new content. See Class Schedule for specific content. Maximum credit of six units applicable to a master's degree.

796. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with department chair and instructor. Individual study. Maximum credit of six units applicable to a master's degree.

Nursing

Hardy Tower 58, (619) 594-5357

Faculty
Janet R. Heinaken, Ph.D., Professor of Nursing
John M. Lantz, Ph.D., Professor of Nursing, Director of School
Dolores A. Wozniak, Ed.D., Professor of Nursing, Associate Dean of the College of Health and Human Services
Janet L. Biener, Ph.D., Associate Professor of Nursing
Lorraine T. Fitzsimmons, D.N.S., Associate Professor of Nursing
Joan M. Flagg, Ph.D., Associate Professor of Nursing
Lorraine Freitas, Ph.D., Associate Professor of Nursing
Claire Gulric, Ed.D., Associate Professor of Nursing
Jeanette D. Hines, D.N.S., Associate Professor of Nursing
Catherine E. Loveridge, Ph.D., Associate Professor of Nursing
Hedy F. Mechanic, Ed.D., Associate Professor of Nursing
Richard C. Reed, Ed.D., Associate Professor of Nursing
Martha J. Shively, Ph.D., Associate Professor of Nursing
Sue A. Hadley, D.N.S., Assistant Professor of Nursing
Lembi Saarmann, Ed.D., Assistant Professor of Nursing (Graduate Adviser)
Carolyn L. Walker, Ph.D., Assistant Professor of Nursing

General Information
The School of Nursing in the College of Health and Human Services offers a two-year graduate curriculum leading to the Master of Science in Nursing. The graduate program requires a minimum of 42 units. Graduates of the program will be prepared to function as executive-level nursing administrators or clinical specialists.

Application for Admission
Appropriate application materials to obtain tentative admission to the program leading to the Master of Science degree in Nursing can be secured by writing directly to the School of Nursing. Detailed instructions including information concerning application procedures will accompany the application form. STUDENTS ARE ADMITTED IN THE FALL AND SPRING SEMESTERS OF EACH YEAR. THE APPLICANT MUST FILE AN APPLICATION FOR ADMISSION TO THE SAN DIEGO STATE UNIVERSITY OFFICE OF ADMISSIONS.

Admission to Graduate Study
In addition to the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, a student must satisfy the following requirements before being recommended for admission to a program with classified standing:

1. Have a baccalaureate degree with a major in nursing from a baccalaureate program not having an upper-division major in nursing or who have deficiencies will be considered on an individual basis and may be required to enroll in designated undergraduate courses and meet the minimum credits necessary for advanced degrees.
2. Have a minimum cumulative grade point average of 3.0 in undergraduate upper division nursing courses.
3. Have a minimum score of 850 on the GRE General Test (verbal and quantitative sections).
4. Have a license to practice registered nursing.
5. Have a minimum of one year full-time nursing experience in a hospital, ambulatory care facility, or public health agency.
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6. Have satisfactorily completed Nursing 500, Client Assessment, or equivalent.
7. Have satisfactorily completed a course in statistics (Mathematics 250 or equivalent.)
8. Submit three references attesting to capability to do graduate work in nursing.

Conditional Admission

Students who do not satisfy all admission requirements to the School of Nursing may, with special consideration, be admitted in a conditionally classified graduate standing. At the deadline date specified on the conditional form (at time of acceptance), the faculty of the School of Nursing shall recommend to the Graduate Dean that the student:
1. Be disqualified from further study in the program, or
2. Be continued in conditionally classified status, or
3. Be granted full graduate classified standing.

Special Instructions

Students enrolled in the graduate program in nursing are required to provide their own professional liability insurance (minimum $200,000-$600,000) and transportation to off-campus health care agencies.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Two of this bulletin. Students must satisfactorily complete all four core courses (Nursing 602, 604, 606, and 608) with a minimum grade point average of 3.0, and no less than a B- grade in each of the four core courses, and be recommended by the graduate faculty. Students enrolled in the cross-cultural specialization must demonstrate Spanish competency through a score of 2 or better on the Oral Proficiency Examination. Testing will be conducted by a member of the Spanish and Portuguese Languages and Literatures Department who will also counsel students on appropriate courses to assist in achieving desired score on the Oral Proficiency Examination.

Specific Requirements for the Master of Science Degree

(Major Code: 12031)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree, as described in Part Two of this bulletin, the student must complete an officially approved 42-unit course of study. The program includes:
1. 15 units of core courses, Nursing 602, 604, 606, 608, and 740.
2. A minimum of 18-21 units of graduate courses in the area of concentration.
3. 3-6 units of electives.

The student is required to pass a final oral examination in defense of the thesis. Up to twelve semester units may be accepted in transfer from an accredited School of Nursing.

Community Health Nursing Concentration

Required courses for the Master of Science degree with a concentration in Community Health Nursing are as follows:

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 602 Issues in Nursing and Health Care</td>
<td>3</td>
</tr>
<tr>
<td>NURS 604 Theory Development and Nursing Theories</td>
<td>3</td>
</tr>
<tr>
<td>NURS 606 Research Methods in Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 608 Nursing Care System as an Organization</td>
<td>3</td>
</tr>
<tr>
<td>NURS 740 Advanced Research Methods in Nursing</td>
<td>3</td>
</tr>
</tbody>
</table>

Total: 15 units

Area of Concentration Courses

<table>
<thead>
<tr>
<th>Area of Concentration Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH 601 Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>NURS 630 Community Health Nursing Theory</td>
<td>3</td>
</tr>
<tr>
<td>NURS 631 Community Health Nursing Practice</td>
<td>3</td>
</tr>
<tr>
<td>NURS 730 Advanced Community Health Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 732 Advanced Community Health Nursing Practice</td>
<td>3</td>
</tr>
<tr>
<td>NURS 736 Seminar in Community Health Problems</td>
<td>3</td>
</tr>
<tr>
<td>Three units of electives selected from Public Health 603, 605, 622, 641, 645, 646, 661A, 664, 742A</td>
<td>21</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
<tr>
<td>NURS 799A Thesis</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Units: 42

Specialization in Cross-Cultural Nursing

Required courses for the Master of Science degree with a specialization in Cross-Cultural Nursing are as follows:

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 602 Issues in Nursing and Health Care</td>
<td>3</td>
</tr>
<tr>
<td>NURS 604 Theory Development and Nursing Theories</td>
<td>3</td>
</tr>
<tr>
<td>NURS 606 Research Methods in Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 608 Nursing Care System as an Organization</td>
<td>3</td>
</tr>
<tr>
<td>NURS 740 Advanced Research Methods in Nursing</td>
<td>3</td>
</tr>
</tbody>
</table>

Area of Specialization Courses

<table>
<thead>
<tr>
<th>Area of Specialization Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH 601 Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>NURS 610 Social and Cultural Dynamics of Health Care</td>
<td>3</td>
</tr>
<tr>
<td>NURS 642 Cross-Cultural Nursing Theory</td>
<td>3</td>
</tr>
<tr>
<td>NURS 644 Cross-Cultural Nursing Practice</td>
<td>3</td>
</tr>
<tr>
<td>NURS 742 Advanced Cross-Cultural Nursing Theory</td>
<td>3</td>
</tr>
<tr>
<td>NURS 744 Advanced Cross-Cultural Nursing Practice</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives: 6 units selected from Anthropology 503, 508, 531; History 557, Public Health 603, 605, 622, 641, 645, 646, 661A, 664, 742A; Sociology 522, 527 | 24 |

NURS 799A Thesis | 3 |

Total Units: 42

Critical Care Nurse Specialist Concentration

Required courses for the Master of Science degree with a concentration in Critical Care Nursing are as follows:

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 602 Issues in Nursing and Health Care</td>
<td>3</td>
</tr>
<tr>
<td>NURS 604 Theory Development and Nursing Theories</td>
<td>3</td>
</tr>
<tr>
<td>NURS 606 Research Methods in Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 608 Nursing Care System as an Organization</td>
<td>3</td>
</tr>
<tr>
<td>NURS 740 Advanced Research Methods in Nursing</td>
<td>15</td>
</tr>
</tbody>
</table>

Total: 15 units
Area of Concentration Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 650 Critical Care Nurse Specialist</td>
<td>3</td>
</tr>
<tr>
<td>NURS 651 Psychosocial Aspects of Critical Care Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 652 Critical Care Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 653 Critical Care Nursing Practicum</td>
<td>3</td>
</tr>
<tr>
<td>NURS 752 Advanced Critical Care Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 753 Advanced Critical Care Nursing Practicum</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>18</td>
</tr>
<tr>
<td>NURS 799A Thesis</td>
<td>6</td>
</tr>
</tbody>
</table>

Total Units 42

Nursing Systems Administration Concentration

Required courses for the Master of Science degree with a concentration in Nursing Systems Administration are as follows:

Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 602 Issues in Nursing and Health Care</td>
<td>3</td>
</tr>
<tr>
<td>NURS 604 Theory Development and Nursing Theories</td>
<td>3</td>
</tr>
<tr>
<td>NURS 606 Research Methods in Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 608 Nursing Care System as an Organization</td>
<td>3</td>
</tr>
<tr>
<td>NURS 740 Advanced Research Methods in Nursing</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives 12

Health Services Credential

(Credential Code: 00600)

San Diego State University offers curricula leading to the Health Services Credential. This program is approved by the Commission on Teacher Credentialing.

Program

The following program elements are required of all health services credential candidates:

Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 500 Client Assessment</td>
<td>4</td>
</tr>
<tr>
<td>NURS 502 School Nursing Management Practices</td>
<td>3</td>
</tr>
<tr>
<td>NURS 504 Primary Health Care of the School-Aged Child</td>
<td>3</td>
</tr>
<tr>
<td>NURS 504L Primary Health Care of the School-Aged Child Practicum</td>
<td>3</td>
</tr>
<tr>
<td>NURS 506 Current Concepts in Community Health Nursing</td>
<td>3</td>
</tr>
<tr>
<td>HS 521 Health Education for School Nurses</td>
<td>3</td>
</tr>
<tr>
<td>*PH 601 Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>C DIS 540 Hearing Conservation and Audiology for School Nurses</td>
<td>3</td>
</tr>
<tr>
<td>SPED 500 Exceptional Individuals</td>
<td>3</td>
</tr>
<tr>
<td>NURS 600 Client Assessment (31 units)</td>
<td>31</td>
</tr>
</tbody>
</table>

Upper Division Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 500 Client Assessment</td>
<td>4</td>
</tr>
<tr>
<td>NURS 502 School Nursing Management Practices</td>
<td>3</td>
</tr>
<tr>
<td>NURS 504 Primary Health Care of the School-Aged Child</td>
<td>3</td>
</tr>
<tr>
<td>NURS 504L Primary Health Care of the School-Aged Child Practicum</td>
<td>3</td>
</tr>
</tbody>
</table>

Special Topics in Nursing (1-3)

Prerequisites:

1. Baccalaureate degree in nursing or related field (including community health nursing).
2. Current California Registered Nurse License.
3. Required admission and planning interview with program adviser.
GRADUATE COURSES

602. Issues in Nursing and Health Care (3)
Analysis of current issues and trends in the profession of nursing and the health delivery system.

604. Theory Development and Nursing Theories (3)
Development of theory; critique of current nursing theories and theories used by nursing such as interaction, systems and developmental theories; process of developing a theoretical framework.

606. Research Methods in Nursing (3)
Prerequisite: Mathematics 250.
Research process in nursing including identification of research problems, research design, data analysis and reporting. Adaptations of methodology to nursing care systems and ethical issues involving human subjects.

608. Nursing Care System as an Organization (3)
Prerequisite: Consent of graduate adviser.
Principles of organizational structure and function in nursing care systems. Uses of human resources, motivation, power, and values within these organizations.

610. Social and Cultural Dynamics of Health Care (3)
Impact of culture on attitudes, behavioral norms and health/illness activities. Implication of cultural attitudes for planning of health programs and nursing care modalities for ethnic groups.

620. Current Nursing Clinical Practice (3)
Prerequisite: Nursing 500.
Recent nursing developments in acute and ambulatory care.

622. Nursing Systems Administration (3)
Prerequisites: Nursing 604 and 608.
Administrative theories and concepts within organizations of nursing. Nature of nursing care system administration, role of nurse administrator and administrative process in nursing care agencies.

624. Nursing Care Systems and Personnel Management (3)
Prerequisites: Credit or concurrent registration in Nursing 604, 606, and Management 611.
Issues related to personnel resources, staff development, staff utilization and collective bargaining in health care agencies and nursing care systems.

630. Community Health Nursing Theory (3-6)
Prerequisites: Nursing 604, 606, Public Health 601; concurrent registration in Nursing 631.
Theoretical frameworks used in community health nursing such as group dynamics, family theory, group teaching techniques, facilitating group behavior, change, evaluation, problem-solving process and mobilization of community resources.

631. Community Health Nursing Practicum (3-6)
Prerequisite: Concurrent registration in Nursing 630.
Experience working with individuals and families of a selected community group applying theoretical knowledge within framework of nursing process. May be repeated with different client populations. Maximum credit six units applicable to a master's degree.

642. Cross-Cultural Nursing Theory (3)
Prerequisites: Nursing 604, 608, 610, Public Health 601. Concurrent registration in Nursing 644.
Application of ethnoscience to nursing process with ethnic people. Development of cultural assessment tool; systems and family theory in delivery of nursing care. Delivery of nursing care to the family unit.

644. Cross-Cultural Nursing Practicum (3)
Prerequisite: Concurrent registration in Nursing 642.
Guided experience with individuals/families in selected ethnic groups in community; application of cultural assessment tool; application of theoretical knowledge within the nursing process.

650. Critical Care Nurse Specialist (3)
Prerequisites: Nursing 604 and 608. Credit or concurrent registration in Nursing 602 and 606.
Roles of critical care nurse specialist.

651. Psychosocial Aspects of Critical Care Nursing (3)
Prerequisites: Nursing 604 and 606. Credit or concurrent registration in Nursing 602, 606 and 650.
Psychosocial phenomena of concern when caring for critically ill adults. Identification, utilization, and evaluation of theoretical frameworks in clinical nursing practice.

652. Critical Care Nursing (3)
Prerequisite: Nursing 606 and 651.

653. Critical Care Nursing Practicum (3)
Nine hours of laboratory.
Prerequisite: Credit or concurrent registration in Nursing 652.
Guided clinical experiences specific to practitioner role of critical care nurse specialist.

654. Computer Applications for Human Services and Health Care Professionals (3)
Prerequisite: Concurrent registration in Nursing 650.
Emerging trends in health care computer systems including applications to biological monitoring, quality assurance programs, research, budgeting and staffing patterns. Ethics of computer use and influence of technology on client care. User skills.

656. Seminar in Selected Topics in Nursing (1-3)
Prerequisite: Concurrent registration in Nursing 624.
Intensive study in specific areas of nursing. May be repeated with new content. See Class Schedule for specific content. Maximum credit three units applicable to a master's degree.

724. Nursing Systems Administration Practicum (3)
Nine hours of laboratory.
Prerequisites: Nursing 622; Accounting 600, and concurrent registration in Nursing 624.
Provides observation and guided administrative experience specific to the role and function of the first level nurse manager in a selected health care system. Needs and individual objectives of the first level nurse manager in a selected health care system. Needs and objectives of the student are integrated into the experience. May be repeated for elective credit in a different health care system. Maximum credit six units applicable to a master's degree.

726. Advanced Nursing Systems Administration Practicum (3)
Nine hours of laboratory.
Prerequisites: Nursing 724 and concurrent registration in Nursing 740.
Provides observation and guided administrative experience specific to the role and function of the executive level manager in a selected health care system. Individual needs and objectives of the executive level manager in a selected health care system. Individual needs and objectives of the student are integrated into the experience. May be repeated for elective credit in a different health care system. Maximum credit six units applicable to a master's degree.

730. Advanced Community Health Nursing (3)
Prerequisites: Nursing 630 and 631.
Concurrent registration in Nursing 730.
Advanced community health nursing. Includes clinical health assessment and analysis of community characteristics, including social, cultural and psychological factors, and their interrelationships. Strategies of planning and introducing change.

740. Advanced Research Methods in Nursing (3)
Prerequisites: Nursing 604, 605, and six units in area of concentration.
Application of advanced research process in selected areas of nursing. Application of advanced research design, measurement and data analysis technique to health care problems.

742. Advanced Cross-Cultural Nursing Theory (3)
Prerequisites: Nursing 642, 644.
Concurrent registration in Nursing 744.
Consumer education and consumer involvement in health care for ethnic groups; legislation and policy; theories of health affecting health delivery; change process and nursing practice; conceptual models for health delivery to ethnic groups. Delivery of nursing care to community groups.
744. Advanced Cross-Cultural Nursing Practicum (3)
Nine hours of clinical experience.
Prerequisite: Concurrent registration in Nursing 742.
Design and implementation of nursing care to particular ethnic groups in the community level. Design of assessment tool and educational modalities of health care for ethnic groups; initiation of change in nursing care delivery to increase accessibility to care for ethnic groups.

752. Advanced Critical Care Nursing (3)
Prerequisite: Nursing 652 and 653.
Nursing care of adults experience acute alterations in neurological, endocrine, immunological, and gastrointestinal function. Clinical decision making, variables altering client response to care.

753. Advanced Critical Care Nursing Practicum (3)
Nine hours of laboratory.
Prerequisite: Credit or concurrent registration in Nursing 752.
Obtainment and guided experiences specific to educator and consultant roles of critical care nurse specialist.

797. Research (1-3) Cr/NC/SP
Prerequisite: Advancement to candidacy.
Independent research in a specialized subject. Maximum six units applicable to a master's degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of instructor.
Independent study. Maximum credit six units applicable to a master's degree.

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

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

Oceanography and Marine Studies

Life Sciences 105, (619) 594-5142

Faculty Committee for Marine Studies
John B. Conway, M.P.H., Ph.D., Professor of Public Health
Richard F. Ford, Ph.D., Professor of Biology
James H. Mathewson, Ph.D., Professor of Chemistry
Iraq Noorany, Ph.D., Professor of Civil Engineering
Charles F. Phleger, Ph.D., Professor of Natural Science
James F. Steenbergen, Ph.D., Professor of Biology, Chair of Committee
Douglas A. Stow, Ph.D., Associate Professor of Geography

General Information
San Diego State University provides preparation for ocean-oriented careers by offering marine-related coursework, research opportunities and oceanographic experience within regular degree programs in the Departments of Biology, Chemistry, Economics, Civil and Mechanical Engineering, Geography, Geological Sciences, Natural Science, Physics, and Public Health. Master's degrees with research focus on marine problems may be earned in these departments. Degrees in general oceanography or marine studies are not offered by the University. However, a Master of Arts or Master of Science degree may be earned as a special major (see the appropriate section in this bulletin).

The Center for Marine Studies coordinates work in the area of marine studies and provides special supporting services to the faculty, staff, and students which includes student advising, assistance in research and publication, operation of the University's marine laboratory at Mission Bay, and a boat operations program. The University also operates the Pacific Estuarine Research Laboratory for the study of estuarine and wetland ecology. (See the General Information section of this bulletin.)

Specific courses in oceanography (listed below) are offered with the cooperation of faculty from the participating departments. Advanced coursework and research in geological and physical oceanography are conducted in the Geological Sciences Department. The Chemistry Department offers work in chemical oceanography. Advanced courses and research in biological oceanography, marine biology, marine botany, and marine zoology are in the Department of Biology. The major areas of research under the joint doctoral program in ecology include coastal marine ecology, estuarine ecology and aquaculture. Similar marine-related coursework and research are offered in the Departments of Economics, the Graduate School of Public Health, Geography and in the College of Engineering. Students who require advising in these areas should inquire at the Center for Marine Studies.

UPPER DIVISION COURSES

Oceanography Courses

541. Oceanography (3) I, II
Prerequisites: Chemistry 200; Mathematics 121 and 122 or 150; Physics 180A or 195, 195L.
Multidisciplinary examination of the physical, chemical, biological and geological aspects of the marine environment and the relationship of man with the sea. Intended for science majors only.

561. Deep Sea Oceanography (3) I, II
Prerequisites: Biology 515 and Chemistry 361A.
Concepts of deep sea oceanography including abyssal biology, physics and chemistry, instruments and methods of deep sea research, biogeochemistry of oceanic ridges, and high-pressure biochemistry.

Biology Courses (Adviser: Ford)

513. Marine Microbiology (2)
514. Phycology (4)
515. Marine Invertebrate Zoology (4)
517. Biological Oceanography (4)
518. Fisheries Biology (3)
519. Aquaculture (3)
Oceanography and Marine Studies

520. Ichthyology (4)
604. Seminar in Aquatic Ecology (2)
638. Seminar in Aquatic Microbiology (2)
652. Seminar in Marine Zoology (2-3)
725. Aquatic Ecology (3)

Chemistry Course (Adviser: Mathewson)
501. Chemical Oceanography (3)
555. Economic Analysis of Environmental Quality (3)
696. Experimental Topics (3)

Economics Courses (Adviser: Hageman)
632. Computation of Hydraulics and Hydrology (3)
641. Advanced Foundation Engineering (3)

Civil Engineering Courses (Adviser: Noorany)

Geography Courses (Adviser: Stow)
501. Coastal and Submarine Phsyography (3)
506. Physical Climatology (3)
508. Seminar in Systematic Geography (3)
670. Seminar in Environment and Resource Conservation Theory (3)
671. Seminar in Problems of Environment and Resource Conservation (3)
687. Seminar in Remote Sensing of the Environment (3)
696. Special Topics Seminar (3)*

Geological Sciences Courses (Adviser: Kern)
540. Marine Geology (3)
545. Descriptive Physical Oceanography (3)
546. Coastal and Estuarine Physical Oceanography (3)
612. Carbonate Depositional Systems (3)
615. Geology of Clays (3)
625. Paleocology (3)
640. Geoteconics (3)
680. Sedimentary Geochemistry (3)

Public Health Courses (Adviser: Conway)
634. Environmental Protection (3)
637. Seminar in Biological Mechanisms of Environmental Toxicants (3)
639. Water Quality Investigation (3)

* Acceptable when of relevant content.

Philosophy

Adams Humanities 4142, (619) 594-5263

Faculty
Michael J. Carella, Ph.D., Professor of Philosophy
Andrew L. Feenberg, Ph.D., Professor of Philosophy
Maurice Stanley Friedman, Ph.D., Professor of Philosophy
Mary J. Gregor, Ph.D., Professor of Philosophy
Jack McClurg, Ph.D., Professor of Philosophy
Leon Rosenblin, Ph.D., Professor of Philosophy
William J. Snyder, Ph.D., Professor of Philosophy, Chair of Department
Edward W. Warren, Ph.D., Professor of Philosophy
Stanley M. Weissman, Ph.D., Professor of Philosophy
Thomas S. Weston, Ph.D., Professor of Philosophy (Graduate Adviser)
Deborah G. Chaffin, Ph.D., Associate Professor of Philosophy
Eugene A. Troxell, Ph.D., Associate Professor of 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 study and to meet the needs of students who plan to teach in colleges or hold other positions of leadership.

Admission to Graduate Study
All students must satisfy the general requirements for admission to the University with a classified graduate standing as described in Part Two of this bulletin. Students may be admitted to the graduate program in philosophy in one of two ways:

1. Admission with classified graduate standing requires:
   a. An undergraduate major in philosophy or a minimum of 24 units of upper division work in philosophy
   b. A minimum grade point average of 3.0 in upper division work in philosophy.
2. Admission with conditional classified graduate standing requires:
   a. Twelve units of upper division work in philosophy
   b. A minimum grade point average of 3.0 in upper division work in philosophy.

Students admitted with a grade point average below 2.0 acquire classified graduate standing. Students with an average of 3.0 or better are required for all units attempted after admission. Students with an average of 3.0 or below must complete a minimum of 24 such units. Units earned to complete this undergraduate work are not fulfill unit requirements for the master's degree. A minimum grade point requirement of 3.0 is required for all units attempted after admission. Units earned to satisfy requirements for a major do not fulfill unit requirements for the master's degree. Other units may fulfill such requirements if earned in courses acceptable on master's degree programs in philosophy.

Advancement to Candidacy
All students must meet the general requirements for advancement to candidacy as stated in Part Two 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 Two of this bulletin, the student must complete a program of at least 30 units of upper division and graduate courses selected with the approval of the graduate adviser.

Students must complete a minimum of 24 units from courses in philosophy listed below as acceptable on master's degree programs. The 24 units shall include (1) either 796 or 799A and...
(2) a minimum of 12 units in 600-numbered courses which must include Philosophy 600 and 610 or 620.

Students in the program may elect one of two plans, A or B, to complete the requirements for the degree. Plan A requires the writing of a thesis under Philosophy 799A as part of the outlined course program. If Plan B is elected, the student must pass a comprehensive examination, consisting of two written and one oral, and complete three units in Philosophy 796.

The master’s examination shall be conducted by a committee of at least three members selected by the graduate adviser after consultation with the student. Each of the written parts of the examination will be based on a bibliography drawn up by the committee administering the examination after consultation with the student. The oral part of the examination will be in a specific problem area or on a major philosopher. At least three weeks prior to the end of the semester preceding the semester of the examination, the student will consult with his or her committee to determine the bibliographies for the written exams and the subject matter for the oral exam. This consultation must be completed no later than three days after the official close of the semester. A student will not be permitted to enroll in Philosophy 796 if this consultation has not been completed. The master’s examination may be repeated only once.

Courses Acceptable on Master’s Degree Programs in Philosophy

UPPER DIVISION COURSES

506. Twentieth Century Continental Philosophy (3)
Prerequisite: Six upper division units in philosophy.
Major figures and movements in European philosophy from Husserl to the present.

507. Twentieth Century Anglo-American Philosophy (3)
Prerequisite: Six upper division units in philosophy.
Major figures and movements in Anglo-American philosophy since World War I.

508. Existentialism (3)
Prerequisite: Six units in philosophy.
The philosophical aspects of existentialism. Major emphasis is on the diversity of thought within a common approach as this is shown in individual thinkers.

510. Philosophy of Law (3)
Prerequisite: Three units in philosophy and three units in political science.
The nature of law and the logic of legal reasoning. An exploration of certain key legal concepts such as causation, responsibility, personality and property.

512. Political Philosophy (3)
Prerequisite: Philosophy 101, 102 or 103.
Selected aspects of the political structures within which we live, such as law, power, sovereignty, justice, liberty, welfare.

521. Deductive Logic (3)
Prerequisite: Philosophy 120.
Principles of inference for symbolic deductive systems; connectives, quantifiers, relations and sets. Interpretations of deductive systems in mathematics, science and ordinary language. Not open to students with credit in Mathematics 523.

522. Inductive Logic (3)
Prerequisite: Philosophy 120.

523. Theory of Knowledge (3)
Prerequisite: Six units in philosophy.
The major theories of human knowledge: mysticism, rationalism, empiricism, pragmatism.

525. Metaphysics (3)
Prerequisite: Six units in philosophy.
Prominent theories of reality, e.g., realism and nominalism, materialism and idealism, teleology and determinism.

527. Values and Social Science (3)
Prerequisite: Six units in philosophy.
Analysis and discussion of the nature of values and value judgment with particular reference to the social sciences. Among relevant issues: the naturalistic fallacy, facts and values; authoritarianism, emotivism, objective relativism; the individual and the community.

528. Theory of Ethics (3)
Prerequisite: Six units in philosophy.
Significant and typical value theories and systems and the concrete problems such theories seek to explain. Emphasis will be on moral values.

531. Philosophy of Language (3)
Prerequisite: Six units in philosophy.
The nature of history and historical inquiry. As metaphysics: A study of theories of historical development. As methodology: History as science, truth and fact in history, historical objectivity, the purpose of history.

535. Philosophy of Religion (3)
Prerequisite: Six units in philosophy.
Philosophical examination of issues raised by the religious impulse in man.

536. Philosophy of Mind (3)
Prerequisite: Three upper division units in philosophy.
Analysis of the concept of mind, intention, behavior, etc. Developments generated by works of such philosophers as Wittgenstein, Wisdorn, and Ryle.

537. Philosophy of Science (3)
Prerequisite: Six units in philosophy.
The basic concepts and methods underlying contemporary scientific thought. Contributions of the special sciences to a view of the universe as a whole.

541. History of Aesthetics (3)
Prerequisite: Philosophy 101, 102 or 103.
Major documents in the history of aesthetics.

542. Philosophy of Art (3)
Prerequisite: Six units in philosophy.
The nature of aesthetic experience. Principal contemporary theories of art in relation to actual artistic production and to the function of art in society.

575. A Major Philosopher (3)
Prerequisite: Six upper division units in philosophy.
The writings of one major philosopher. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

596. Selected Topics (3)
Prerequisite: Six upper division units in philosophy.
May be repeated with new content. A critical analysis of a major problem or movement in philosophy. May be repeated with new content. Limit of nine units of any combination of 596 and 596. 596 courses applicable to a bachelor’s degree. Maximum combined credit of six units of 596 and 696 applicable to a master’s degree.

GRADUATE COURSES

600. Seminar in the History of Philosophy (3)
Prerequisite: Twelve upper division units in philosophy.
A major philosopher, school, or problem. Their historical roots and subsequent historical significance. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master’s degree.
610. Seminar in Philosophy Problems: Values (3)  
  Prerequisite: Twelve upper division units in philosophy.  
  Problems in such fields as ethics, politics, aesthetics. See Class Schedule for specific  
  content. May be repeated with new content. Maximum credit six units applicable to a master's  
  degree.

620. Seminar in Philosophical Problems: Knowledge and Reality (3)  
  Prerequisite: Twelve upper division units in philosophy.  
  A problem or group of problems in metaphysics, epistemology and logic. See Class  
  Schedule for specific content. May be repeated with new content. Maximum credit six units  
  applicable to a master's degree.

630. Seminar in Current Philosophical Issues (3)  
  Prerequisite: Twelve upper division units in philosophy.  
  Problems in current philosophical publications. See Class Schedule for specific content.  
  May be repeated with new content. Maximum credit six units applicable to a master's degree.

696. Seminar in Selected Topics (3)  
  Prerequisite: Twelve upper division units in philosophy.  
  Intensive study in specific areas of philosophy. See Class Schedule for specific content.  
  Maximum credit three units applicable to a master's degree. (Formerly numbered Philosophy  
  796.)

796. Studies in Philosophy (1-3) Cr/NC  
  Prerequisite: An officially appointed examining committee and advancement to candidacy.  
  Preparation for the comprehensive examination for students taking the M.A. under Plan B.  
  Maximum credit three units applicable to a master's degree.

798. Special Study (1-3) Cr/NC/SP  
  Prerequisite: Twelve upper division units in philosophy and consent of staff, to be arranged  
  with department chair and instructor.  
  Individual study. Maximum credit six units applicable to a master's degree.

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

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

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Physical Education

Women’s Gym 302, (619) 594-5541

Faculty

Peter M. Aufsesser, Ph.D., Professor of Physical Education  
B. Robert Carlson, Ph.D., Professor of Physical Education, Chair of Department  
J. E. Lindsay Carter, Ph.D., Professor of Physical Education  
Harry A. King, Ph.D., Professor of Physical Education  
Thomas L. McKenzie, Ph.D., Professor of Physical Education  
Robert Moore, Ph.D., Professor of Physical Education  
William H. Phillips, Ed.D., Professor of Physical Education (Graduate Adviser)  
Brent S. Rushall, Ph.D., Professor of Physical Education  
Dennis J. Selder, Ph.D., Professor of Physical Education  
Roger Simmons, Ph.D., Professor of Physical Education  
Anthony A. Sucice, Ed.D., Professor of Physical Education  
Michael J. Buono, Ph.D., Associate Professor of Physical Education  
Peter R. Francis, Ph.D., Associate Professor of Physical Education  
Robert A. Meckikoff, Ph.D., Associate Professor of Physical Education  
F. Nell Faucette, Ed.D., Assistant Professor of Physical Education  
Peggy M. Lasko, Ph.D., Assistant Professor of Physical Education  
Jeanne Nichols, Ph.D., Assistant Professor of Physical Education  
Pamela Patterson, Ph.D., Assistant Professor of Physical Education  
Larry S. Verity, Ph.D., Assistant Professor of Physical Education

Assistantships

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

General Information

The Department of Physical Education, in the College of Professional Studies and Fine Arts,  
offers graduate study leading to the Master of Arts degree in Physical Education.  
This degree permits the selection, under advisement, of a program which may be oriented  
toward a generalist approach or with a specialization in one of the following areas: Adapted  
sports, Exercise Physiology, Kinesiology, Sport Psychology, and  
Coaching and Teaching Effectiveness.

Admission to Graduate Study

Students will be admitted to the graduate program in physical education only after careful  
consideration of their qualifications by the Physical Education graduate adviser. Complete  
application must satisfy the general requirements for admission to the University with  
and November 1 for the spring semester.  
All students must satisfy the general requirements for admission to the University with  
the program which may be oriented toward a generalist approach or with a specialization in one of the following areas: Adapted  
sports, Exercise Physiology, Kinesiology, Sport Psychology, and  
Coaching and Teaching Effectiveness.

Admission to Graduate Study

Students will be admitted to the graduate program in physical education only after careful  
consideration of their qualifications by the Physical Education graduate adviser. Complete  
application must satisfy the general requirements for admission to the University with  
the program which may be oriented toward a generalist approach or with a specialization in one of the following areas: Adapted  
sports, Exercise Physiology, Kinesiology, Sport Psychology, and  
Coaching and Teaching Effectiveness.

Admission to Graduate Study

Students will be admitted to the graduate program in physical education only after careful  
consideration of their qualifications by the Physical Education graduate adviser. Complete  
application must satisfy the general requirements for admission to the University with  
the program which may be oriented toward a generalist approach or with a specialization in one of the following areas: Adapted  
sports, Exercise Physiology, Kinesiology, Sport Psychology, and  
Coaching and Teaching Effectiveness.

Admission to Graduate Study

Students will be admitted to the graduate program in physical education only after careful  
consideration of their qualifications by the Physical Education graduate adviser. Complete  
application must satisfy the general requirements for admission to the University with  
the program which may be oriented toward a generalist approach or with a specialization in one of the following areas: Adapted  
sports, Exercise Physiology, Kinesiology, Sport Psychology, and  
Coaching and Teaching Effectiveness.
Specific Requirements for the Master of Arts Degree
(Major Code: 08351)

In addition to meeting the requirements for classified graduate standing the student must satisfy the basic requirements for the master's degree, described in Part Two of this bulletin. The 30-unit program includes a minimum of 21 units in physical education selected from courses listed in this bulletin as acceptable on master's degree programs, of which at least 18 units must be in 600- and 700-numbered courses. Physical Education 791, Seminar in Research Techniques, and Physical Education 799A, Thesis or Project are required. Students seeking a Master's degree in Physical Education are required to develop and sign a formal plan of study which must be approved by the graduate adviser before being forwarded to the Graduate Division. The approved plan of study should include coursework preparing the student to complete the required thesis. Therefore, the plan of study should be developed in consultation with a faculty member who teaches graduate coursework of interest to the student. The student is required to pass a final oral examination on the thesis.

Students who have experience as a coach or teacher will find the content and field experience of particular relevance. The department's graduate coordinator counsels students in the general degree program to choose courses that best fit their interests. The student must take at least five courses in their specialization as specified in the following sections. Unit requirements include those from courses listed in the bulletin and units may not be repeated. The student is required to pass a final oral examination on the thesis.

In addition to meeting the requirements for classified graduate standing the student must satisfy the basic requirements for the master's degree, described in Part Two of this bulletin. The 30-unit program includes a minimum of 21 units in physical education selected from courses listed in this bulletin as acceptable on master's degree programs, of which at least 18 units must be in 600- and 700-numbered courses. Physical Education 791, Seminar in Research Techniques, and Physical Education 799A, Thesis or Project are required. Students seeking a Master's degree in Physical Education are required to develop and sign a formal plan of study which must be approved by the graduate adviser before being forwarded to the Graduate Division. The approved plan of study should include coursework preparing the student to complete the required thesis. Therefore, the plan of study should be developed in consultation with a faculty member who teaches graduate coursework of interest to the student. The student is required to pass a final oral examination on the thesis.

Students who have experience as a coach or teacher will find the content and field experience of particular relevance. The department's graduate coordinator counsels students in the general degree program to choose courses that best fit their interests. The student must take at least five courses in their specialization as specified in the following sections. Unit requirements include those from courses listed in the bulletin and units may not be repeated. The student is required to pass a final oral examination on the thesis.

Specialization in Adapted Physical Education
This area is predicated on a broad-based knowledge approach to working with diverse disabled individuals in a variety of school, community, and clinical settings. The student may choose electives from the following courses.

Required courses (12 units):
- PE 640 Clinical Practices in Adapted Physical Education (3)
- PE 667 Seminar in Adapted Physical Education (3)
- PE 672 Perceptual Motor Learning (3)
- PE 684 Behavior Change in Sport and Physical Education (3)
- Electives (12 units): Twelve units to be chosen in consultation with a specialization adviser.

Specialization in Applied Exercise Physiology
The role of exercise in health, aging, and disease prevention and rehabilitation is studied by providing in-depth theoretical knowledge and practical experiences related to the field. Students are prepared for preventive and/or rehabilitative certification from the American College of Sports Medicine with a grade point average of 3.0 or better, and official transcript approval of the coordinator.

Required courses (15 units):
- PE 665 Seminar in Exercise Electrocardiography (3)
- PE 666 Adult Fitness: Exercise Prescription (3)
- PE 668 Adult Fitness: Exercise Leadership and Administration (3)
- PE 689 Cardiopulmonary Physiology, Pathology and Exercise (3)
- PE 796 Exercise Specialist Internship (3) Cr/NC
- Electives (9 units): Nine units to be chosen in consultation with a specialization adviser.

Specialization in Coaching and Teaching Effectiveness
Effectiveness and knowledge of coaching and/or teaching will be developed through techniques that affect the behavior of students and athletes in more productive and beneficial ways. Persons who have experience as a coach or teacher will find the content and field experience of particular relevance.

Required courses (9 units): A student must take at least three of the following six courses.
- PE 684 Behavior Change in Sport and Physical Education (3)
- PE 691 Seminar in Evaluating Teaching and Coaching Effectiveness (3)
- PE 696 Contemporary Coaching (3)
- PE 697 Coaching Models for Superior Performers (3)
- PE 699 Principles of Movement Instruction for Children (3)
- PE 691 Application and Movement Instruction for Children (3)
- Electives (15 units): Fifteen units to be chosen in consultation with a specialization adviser.

Specialization in Kinesiology
This area serves students who are interested in teaching, coaching, corporate health programs, and medically related fields and who wish to improve their abilities to analyze human performance through the application of kinesiological, biomechanical, and motor control principles.

Required courses (15 units): A student must take at least five of the following courses:
- PE 630 Advanced Biomechanics: Human Motion Analysis (3)
- PE 631 Advanced Biomechanics: Kinetics of Human Movement (3)
- PE 660 Advanced Kinesiology (3)
- PE 664 Seminar in Anthropometry and Motor Performance (3)
- PE 670 Seminar in Motor Learning and Motor Performance (3)
- PE 673 Advanced Principles of Motor Control (3)
- Electives (9 units): Nine units to be chosen in consultation with a specialization adviser.

Specialization in Sport Psychology
The study of the psychology of sport and physical activity includes both theoretical and applied sport psychology. Students select courses that reflect their interests and background. A primary focus of this area is its emphasis on laboratory and practical experience.

Required courses (9 units):
- PE 671 Seminar in Advanced Sport Psychology (3)
- PE 688 Applied Psychology of Effective Coaching (3)
- PE 689 Applied Psychology for Superior Performance (3)
- Electives (15 units): Fifteen units to be chosen in consultation with a specialization adviser.

Exercise Leadership Certificate
This program is designed to prepare individuals interested in working in preventive and rehabilitative exercise programs for the certifications of 1) exercise technologist, 2) fitness specialist which are awarded by the American College of Sports Medicine (ACSM). Prerequisites for the program are an undergraduate degree in any major and previous work activity in physical education programs. Applications should be made to the director of the certificate program.

Required courses (15 units):
- PE 590 Exercise Science 560, 561, 562, 563, 564, 565, 566, 568, 569
- PE 560 561, 567, 568, 569, 570, 571
- PE 660 661, 662, 663, 664, 665, 666
- PE 667 668, 669, 670, 671, 672, 673
- PE 674 675, 676, 677, 678, 679
- PE 680 681, 682, 683, 684, 685
- PE 686 687, 688, 689, 690, 691
- PE 692 693, 694, 695, 696, 697
- PE 698 699, 700, 701, 702, 703
- PE 671 770, 771, 772, 773, 774
- PE 771 772, 773, 774, 775
- Electives (9 units): Nine units to be chosen in consultation with a specialization adviser.

Adapted Physical Education Credential
(Credential Code: 00880)

Admission Categories
Level I: Physical Education major with an interest in adapted physical education.
Level II: Physical Education major with a grade point average of 2.5 or better, and official application to the Coordinator of Adapted Physical Education.
Level III: Certified. Completion of all courses required for physical education major in the Adapted Physical Education program, and official application to the Coordinator of Adapted Physical Education.

Certification: Completion of all courses required for physical education major, in the Adapted Physical Education program, and official application to the Coordinator of Adapted Physical Education.

Admission Categories
Level I: Physical Education major with an interest in adapted physical education.
Level II: Physical Education major with a grade point average of 2.5 or better, and official application to the Coordinator of Adapted Physical Education.
Level III: Certified. Completion of all courses required for physical education major in the Adapted Physical Education program, and official application to the Coordinator of Adapted Physical Education.
Pre-Service Program

Candidates for this program in adapted physical education must complete the requirements for the single subject teaching credential in physical education, apply for the program, be accepted, and complete the following specialist coursework.

1. Adapted Program: Minimum 15 units.
   - Physical Education 396 (1 unit), 567, 568, 667, 672, and Special Education 501.
2. Practical Experience and Student Teaching: The candidate must complete four units of Physical Education 368 and a full-time student teaching experience in adapted physical education.

In-Service Program

Candidates for this program in adapted physical education must complete the requirements for the single subject teaching credential in physical education, apply for the program, be accepted, and complete the following specialist coursework.

1. Adapted Program: Minimum 15 units.
   - Physical Education 396 (1 unit), 567, 568, 667, 684.
2. Practical Experience and Student Teaching: The candidate must complete four units of Physical Education 368 and a full-time student teaching experience in adapted physical education or equivalent experience.

* Approved by Coordinator, Adapted Physical Education.

Courses Acceptable on Master's Degree Programs in Physical Education

UPPER DIVISION COURSES

550. Choreography: Basic Elements (2) I
   - Four hours of activity.
   - Prerequisite: Completion of preparation for the major in physical education with emphasis in dance.
   - Using concepts of space, time, and energy to investigate and explore basic elements of choreography. Studies and compositions emphasizing solo and small group works. (This course to be offered for the last time during the 1989-90 academic year.)

560. Applied Anatomy and Kinesiology (3) I, II, S
   - Prerequisites: Biology 150, 336.
   - Arthrology, syndesmology and myology, with emphasis on movement analysis. Muscle groups and their functional relationships. Application of simple mechanical principles to movement analysis.

561. Physiology of Exercise (3) I, II, S
   - Prerequisites: Biology 150, 336.
   - Effects of physical activities on the physiological functions of the body.

562. Cardiopulmonary Laboratory (2) I, II
   - One lecture and three hours of laboratory.
   - Prerequisites: Physical Education 362 and 561.
   - Cardiopulmonary evaluation of human subjects for rehabilitative and preventive cardiology including electrocardiography, blood chemistry, ergometry, central and peripheral vascular assessment, body composition, and lifestyle change.

563. Biomechanics of Human Movement (3) I, II
   - Prerequisites: Biology 150 and Physics 107.
   - Mechanical principles as applied to movement; analysis and application to selected motor skills.

564. Mechanisms of Sports Injuries (3) I, II
   - Prerequisites: Physical Education 265, 560, and 561.
   - Pathomechanics and pathophysiology of soft tissue and bone injury as it relates to the identification and management of sports related injuries.

565. Clinical Evaluation of Sports Injuries (3) I, II
   - Two lectures and three hours of laboratory.
   - Prerequisite: Physical Education 564.
   - Theoretical and practical experiences in the clinical evaluation of sports injuries with emphasis on techniques and procedures.

567. Corrective and Orthopedic Physical Education (3) I, II, S
   - Prerequisites: Physical Education 560 and 561.
   - Etiology, characteristics, and programs for children with corrective and/or physically handicapping conditions will be discussed. This will include evaluating and implementing prescribed activities for individuals with these types of conditions.

568. Special Physical Education (2) I, II, S
   - Prerequisites: Psychology 101 and Physical Education 371.
   - These courses will be offered for the last time during the 1989-90 academic year. Prerequisites: Psychology 101 and Physical Education 371 or 561. Specific programs and disturbed, learning disabled, blind and hearing impaired individuals. Specific programs and disturbed, learning disabled, blind and hearing impaired individuals. Specific programs and disturbed, learning disabled, blind and hearing impaired individuals.

569. Exercise, Sport and Aging (3)
   - Prerequisite: Physical Education 398 or 561.
   - Relationships between exercise, sport and human aging including physiological, psychological, sociological, health and program considerations. Aging is viewed developmentally with emphasis on the middle and later years.

570. Psychological Bases of Physical Education (3) I, II, S
   - Prerequisite: Psychology 101.
   - Psychological parameters related to physical performance and the acquisition of motor skills.

571. Sport Psychology (3) I, II
   - Prerequisite: Physical Education 570.
   - Psychological factors underlying behavior in sport and physical activity. Emphasis on personality and motivational factors.

574. Therapeutic Modalities for Sports Injuries (3)
   - Prerequisites: Physical Education 564, 566, 568, 667, 672, 687, 688.
   - Design and application of therapeutic exercise programs for athletic injuries.

596. Selected Topics in Physical Education (1-3) I, II
   - Selected topics in physical education. May be repeated with instructor consent.
   - See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's or master's degree. Maximum combined credit of six units of 496 and 596 applicable to a 30-unit master's degree.

GRADUATE COURSES

630. Advanced Biomechanics: Human Motion Analysis (3)
   - Prerequisites: Physical Education 560 and 563.
   - Kinesiometric analysis of human movement using photo-electric systems including high speed cinematography.

631. Advanced Biomechanics: Kinetics of Human Movement (3)
   - Prerequisites: Physical Education 560 and 563.

632. Physiological Chemistry of Exercise (3)
   - Prerequisites: Physical Education 661 and Chemistry 160.
   - Biochemical and metabolic responses of the human body to acute and chronic exercise.
   - Neuroendocrine control of fuel regulation during exercise.
640. Clinical Practices in Adapted Physical Education (3)
Two lectures and two hours of activity. Prerequisite: Physical Education 567 and at least one unit in Physical Education 368 in a clinical setting. Theory and practical skills in adapted and corrective exercises for individuals with physical disabilities. Assessment and exercise prescription.

644. Scientific Basis of Therapeutic Exercise (3)
Prerequisite: Physical Education 575. Mechanical and neurophysiological principles related to application of therapeutic exercise techniques.

645. Injury Prevention for Sports and Physical Education (3)
Prerequisite: Physical Education 564. Theories of injury prevention in physical activities through risk measurement, decision making, and implications of injury prevention programs in area of litigation.

660. Advanced Kinesiology (3)

661. Seminar in Advanced Physiology of Exercise (3)

662. Advanced Exercise Physiology Laboratory (3)
Nine hours of laboratory. Prerequisites: Physical Education 362 and 561. A laboratory course designed to develop competency in respiratory metabolism pulmonary function, gas analysis, blood chemistry and ergometry. Experience in the application of exercise procedures with human subjects and analysis and interpretation of results.

663. Seminar in Exercise Electrocardiography (3)
Principles of resting and exercise electrocardiography with emphasis on ergometric methods and application to exercise physiology.

664. Seminar in Anthropometry and Motor Performance (3)
Prerequisites: Physical Education 371 and 560. Relationships between body structure and motor performance as compared through the techniques of anthropometry, somatotyping and body composition.

665. Advanced Sports Medicine (3)
Prerequisite: Physical Education 564 or a physical therapy major. Clinical sports medicine. Relationship of biomechanics, nutrition, environment and conditioning to medical problems of athletes.

666. Adult Fitness: Exercise Prescription (3)
Prerequisites: Physical Education 562. Biology 590. Physical conditioning programs for the prevention, rehabilitation, and control of diseases associated with aging adults. Topics include disease etiology, health/disease evaluation, and exercise prescription for apparently healthy and diseased adults.

667. Seminar in Adapted Physical Education (3)
Prerequisites: Physical Education 567 and 568. Trends, programs and crucial problem areas in Adapted Physical Education as they relate to the organization, planning and implementation of these programs.

668. Adult Fitness: Exercise Leadership and Administration (3)
One lecture and six hours of laboratory. Prerequisite: Physical Education 666. Administration of and role of exercise programs in preventive medicine, corporate fitness, and Phase I, II, and III of Cardiac Rehabilitation, and other disease rehabilitation. Development of skills in exercise leadership in traditional and experimental exercise programs for the apparently healthy and diseased adult.

669. Cardiopulmonary Physiology, Pathology and Exercise (3)
Prerequisite: Physical Education 561 or upper division course in human physiology. Selected cardiovascular and pulmonary disease problems, their etiology, symptoms, physical limitations, and physiology as affected by exercise in therapy and rehabilitation.

670. Seminar in Motor Learning and Motor Performance (3)
Prerequisite: Physical Education 570. A review of research in physical education and related fields plus experimental laboratory experiences in motor learning.

671. Seminar in Advanced Sport Psychology (3)
Prerequisite: Physical Education 571. Research and theory of psychological behavior in sport and physical activity. Theoretical models, research issues, and applications.

672. Philosophical Principles in Motor Learning (3)
Prerequisite: Physical Education 570. Basic psychological parameters underlying perceptual motor impairment. Emphasis on utilizing these concepts to evaluate and remediate perceptual motor problems in the young child.

673. Advanced Principles of Motor Control (3)
Prerequisite: Physical Education 570. Investigation of the control of human movement using electromyography, biomechanics, and neurophysiology.

674. Philosophy of Sport and Physical Education (3)
Prerequisite: Physical Education 570 and related fields plus experimental laboratory methods and application to exercise physiology.

676. Seminar in Current Trends and Issues in Physical Education (3)
A critical appraisal of contemporary trends and issues. Investigation and analysis of professional literature.

684. Behavior Change in Sport and Physical Education (3)
Prerequisite: Physical Education 570. Major philosophies and their application in sport and physical education. Behavioral techniques to manage and control human movement in diverse physical activity settings. (Formerly numbered Physical Education 684.)

685. Seminar in Evaluating Teaching and Coaching Effectiveness (3)
Prerequisite: Physical Education 347. Coaching and teaching in physical activity settings. Research and systematic observation of coaching behavior. (Formerly numbered Physical Education 685.)

686. Contemporary Coaching (3)
Prerequisite: Admission to specialization in teaching and coaching effectiveness. Teaching and coaching behavior. (Formerly numbered Physical Education 686.)

687. Coaching Models for Superior Performers (3)
Prerequisite: Physical Education 666. American approaches to coaching.

688. Applied Psychology of Effective Coaching (3)
Prerequisite: Admission to specialization in teaching and coaching effectiveness. Psychological procedures controlling physical performance in training and competitions. Psychological procedures which improve sporting performances.

689. Applied Psychology for Superior Performance (3)
Prerequisite: Physical Education 668. Psychological factors for preparing superior athletes to compete, with particular emphasis on the competitive situation.

690. Principles of Movement Instruction for Children (3)
Current issues and models in movement education.
691. Application of Movement Instruction for Children (3)
Two lectures and three hours of laboratory.
Prerequisite: Physical Education 690.
Application of the movement education approach to teaching children's physical education.

696. Advanced Topics in Physical Education (3)
Intensive study in specific areas of physical education. May be repeated with new content.
See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. (Formerly numbered Physical Education 690.)

701. Seminar in Research Techniques (3)
Prerequisites: Major in physical education and Physical Education 385.
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.)

796. Exercise Specialist Internship (1-3) Cr/NC
Three hours of laboratory per unit.
Prerequisites: Physical Education 661, 662, 663, 666, 669 and consent of instructor.
Supervised application of exercise laboratory testing, test interpretation, exercise prescription and exercise leadership in adult fitness, corporate fitness, preventative medicine and/or hospital disease rehabilitation setting. Maximum credit six units applicable to a master's degree.

798. Special Study (1-3) Cr/NC
Prerequisite: Consent of department chair.
Individual study. Maximum credit six units applicable to a master's degree.

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

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

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. In addition, the undergraduate preparation in physics must have substantially satisfied the undergraduate requirements for the bachelor's degree in physics. (Refer to the General Catalog for a description of these majors.) If the student's undergraduate preparation is deficient, he/she will be required to take courses for the removal of the deficiency. These courses, taken by the student as an unclassified graduate, are in addition to the minimum of 30 units for the master's degree. The results of the advanced test in physics are used as part of the evaluation of deficiencies.

Attention is called to the status of an unclassified student as described in Part Two of this bulletin under Unclassified Student Enrollment.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement, as stated in Part Two of this bulletin.

Specific Requirements for the Master of Arts Degree in Physics

(Major Code: 19021)

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 Two of this bulletin. The student's graduate program must include Physics 602A, 604A-604B, 605, and 610A-610B. The student is required to pass a final oral examination on the thesis. This degree program is recommended for those students who plan to continue the study of physics beyond the master's level.

Specific Requirements for the Master of Science Degree in Physics

(Major Code: 19021)

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 Two of this bulletin. Normally, Plan A, Thesis will be required, but those students who have demonstrated research experience may elect, with the approval of the graduate adviser, Plan B with a written comprehensive examination. This degree program is recommended for those students who plan to continue the study of physics beyond the master's level.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. In addition, the undergraduate preparation in biology, chemistry, mathematics, and physics must have substantially satisfied the undergraduate requirements for a baccalaureate degree in the life sciences or the physical sciences so that satisfactory progress can be made toward the master's degree. If the student's undergraduate preparation is deficient, he will be required to take courses for the removal of the deficiency. These courses, taken by the student as an unclassified graduate, are in addition to the minimum of 30 units for the master's degree.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Two of this bulletin.

Specific Requirements for the Master of Science Degree in Radiological Health Physics

(Major Code: 12251)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must meet the following requirements:

1. Have completed an approved program of 30 units which includes the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 561, Radiation Biology</td>
<td>2</td>
</tr>
<tr>
<td>Biology 561L, Radiation Biology Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>Physics 560, Radiological Health Physics</td>
<td>2</td>
</tr>
<tr>
<td>Physics 561, Radiological Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>Physics 660, Advanced Radiological Health Physics</td>
<td>2</td>
</tr>
<tr>
<td>Physics 661, Advanced Radiological Instrumentation</td>
<td>1</td>
</tr>
<tr>
<td>Physics 662, Colloquium in Radiological Sciences</td>
<td>1</td>
</tr>
</tbody>
</table>

Total units: 16

The remaining fourteen units must be selected from 500-, 600- or 700-numbered courses (including Physics 696 when appropriate) with the approval of the Graduate Adviser.

2. The thesis option (Plan A) requires the approval of the Graduate Adviser. Students in Plan A must include Physics 797 and Physics 799A in the 30-unit program, and are required to pass a final oral examination on the thesis. Students in Plan B (non-thesis option) are required to pass a comprehensive written examination.

Courses Acceptable on Master's Degree Programs in Physics

UPPER DIVISION COURSES

510. Quantum Mechanics (3)
Prerequisites: Physics 350A, 354B; credit or concurrent registration in Mathematics 342C.
The mathematical and physical foundations of the quantum theory in terms of mechanics, Schrödinger's wave mechanics. Applications to the properties of atoms, quantum chemistry, and nuclei.

513. Electronic Instrumentation (3)
One lecture and six hours of laboratory.
Prerequisite: Physics 313 with minimum grade of C.
Transducer principles and applications; theory and design of active filters, modern signal detection and enhancement techniques, instrumentation design.

516A-516B. Theory of Scientific Instrumentation (3-3)
Prerequisites: Physics 313, Mathematics 342A. Physics 516A is prerequisite to 516B.
Linear analysis using Fourier techniques, introduction to the stochastic treatment of signals and noise, using concepts from probability and statistics. Optimization of detection systems with respect to signal-to-noise ratio. Applications to spectroscopy.
520. Microprocessor Instrumentation (3)
Two lectures and three hours of laboratory.
Prerequisite: Credit or concurrent registration in Physics 513.
The electronics of microprocessor-based computer and control systems. Assembly language programming. Interfacing of analog inputs and outputs. The microcomputer as a multipurpose signal processing instrument.

524. Physical Principles of Remote Sensing (3) I
Prerequisites: Physics 197, 197L, and 311.
Physical principles of electromagnetic techniques in remote sensing. Topics include electromagnetic scattering, optical and radar image acquisition problems.

532. Solid State Physics (3) II
Prerequisites: Physics 350A, 354B; credit or concurrent registration in Mathematics 342C.
Elastic, thermal, electric, magnetic and optical properties of solids. Introduction to the energy band theory of solids, with applications to semiconductors and metals.

533. Experimental Techniques in Condensed Matter Physics (3)
One lecture and six hours of laboratory.
Prerequisite: Credit or concurrent registration in Physics 532.
Experiments in various fields of condensed matter such as x-ray diffraction, Hall effect, superconductivity, and electron paramagnetic resonance.

534. Topics in Condensed Matter Physics (1)
Prerequisite: Credit or concurrent registration in Physics 532.
Student and faculty research project presentations. Maximum credit 3 units.

542. Acoustics (3)
Prerequisites: Physics 350A and Mathematics 342B.
Wave motion, production, reception, transmission and analysis of sound. Special applications such as environmental noise, underwater and seismic waves.

554. Topics in Optics Research (1) Cr/NC I, II
Prerequisites: Physics 552. May be repeated with the consent of instructor. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

600. Seminar (1-3)
Prerequisite: Consent of instructor.
An intensive study in advanced physics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

602A-602B. Mathematics of Physics (3-3)
Prerequisites: Mathematics 342C. Physics 602A is prerequisite to 602B.
Topics from matrix theory, vector and tensor analysis, orthogonal function theory, calculus of variations and probability theory with particular emphasis on applications to physical theory of solids and condensed matter systems and information science.

604A-604B. Electromagnetic Theory (3-3)
Prerequisites: Physics 403B, 403A.
Topics from advanced quantum mechanics, kinematics, orthogonal function theory, vector and tensor analysis, matrix theory, and field theory. Boundary value problems; time varying electric and magnetic fields; propagation of electromagnetic waves; antennas; wave guides.

606. Statistical Mechanics (3)
Prerequisites: Physics 409A and 510.
Classical and quantum statistics, kinetic theory, low-pressure phenomena, Boltzmann transport equation, irreversible processes.

608. Classical Mechanics (3)
Prerequisites: Physics 409A.
Vector and tensor methods, motion of rigid bodies, vibration, coupled circuits, Lagrange's equations, principles of least action, and Hamilton's equations.

610A-610B. Quantum Mechanics (3-3)
Prerequisites: Physics 510.
Wave mechanics and the physical and mathematical basis of quantum mechanics. Wave mechanics and the physical and mathematical basis of quantum mechanics. Wave mechanics and the physical and mathematical basis of quantum mechanics. Wave mechanics and the physical and mathematical basis of quantum mechanics.

632. Theory of the Solid State (3)
Prerequisites: Physics 510 and 532.
The band theory of solids, with applications to the electrical and optical properties of dielectrics, semiconductors, and metals.

652. Advanced Optics (3)
Prerequisite: Physics 552.
Selected topics in advanced optics such as rigorous diffraction theory, optical spectra, interferometry, laser and fiber optics, and applications of Fourier analysis to systems and information processing.

654. Gravitation (3)
Prerequisite: Physics 570.
Differential geometry, metric geodesies. Equivalence Principle, collapsed objects, black holes, gravastas, geodeses in curved spacetime evolution of the universe.

660. Advanced Radiological Health Physics (3)
Prerequisite: Physics 560.
Continuation of Physics 560. Radiation protection and dosimetry. For use in the radiation protection field. (Formerly numbered Physics 660A.)
661. Advanced Radiological Instrumentation (2)
Six hours of laboratory.
Prerequisite: Physics 561.
Continuation of Physics 561. Radiation detection and measurement using scintillation and thermoluminescence dosimetry, semiconductor detectors, and neutron dosimetry. Practices of current use in the radiation protection field. (Formerly numbered Physics 661B.)

662. Colloquium in Radiological Sciences (1)
Joint critical study by students and faculty of the fields of knowledge pertaining to radiological sciences. Periodic contributions are made by visiting scientists. Research in progress is discussed. May be repeated with new content. Maximum credit three units applicable to a master’s degree.

670. Medical Radiation Physics (3)
Two lectures and three hours of laboratory.
Prerequisite: Physics 660.
Radiological physics in medical environments including diagnostic radiology, nuclear medicine, and radiation oncology. Clinical equipment design and quality control procedures. Diagnostic and therapeutic procedures and dosimetry. (Formerly numbered Physics 670A-670B.)

680. Nuclear Reactor Health Physics (3)
Nuclear reactor systems, core physics, operating theory, and basic power plant systems. Reactor components affecting health physics practice, monitoring and regulations. (Formerly numbered Physics 680A-680B.)

696. Special Topics in Radiological Sciences (1-3)
Prerequisite: Consent of Instructor.
Intensive study in specific areas of radiological sciences. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

796. Internship in Radiological Sciences (3) Cr/NC
Prerequisite: Consent of instructor.
Field instruction and practice in radiological science.

797. Research (1-3) Cr/NC/SP
Prerequisite: Consent of graduate adviser.
Research in one of the fields of physics. Maximum credit six units applicable to a master’s degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff, to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master’s degree.

799A. Thesis (3) Cr/NC/SP
Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a thesis in physics for the master’s degree.

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

Political Science

Nassatir Hall 127, (619) 584-6244

Faculty

Charles F. Andrain, Ph.D., Professor of Political Science
James J. Conniff, PhD., Professor of Political Science
Ivo K. Feierabend, Ph.D., Professor of Political Science
Edward V. Heck, Ph.D., Professor of Political Science
C. Richard Hofstetter, Ph.D., Professor of Political Science
David H. Johns, Ph.D., Professor of Political Science
Woodrow Jones, Ph.D., Professor of Political Science
Tae Jin Kahng, Ph.D., Professor of Political Science
D. Richard Little, Ph.D., Professor of Political Science
Brian E. Loveman, Ph.D., Professor of Political Science
E. Walter Miles, Ph.D., Professor of Political Science
L. Vincent Paddock, Ph.D., Professor of Political Science, Chair of Department
William A. Schultze, Ph.D., Professor of Political Science (Graduate Adviser)
Louise Terrell, Ph.D., Professor of Political Science
Dwight G. Anderson, Ph.D., Associate Professor of Political Science
Charles H. Catter, Ph.D., Associate Professor of Political Science
Lyndelle Fairlie, Ph.D., Associate Professor of Political Science
John A. Hobbs, Ph.D., Associate Professor of Political Science
K. Robert Keiser, Ph.D., Associate Professor of Political Science
Harlan J. Lexin, Ph.D., Associate Professor of Political Science
William T. Soule, Ph.D., Associate Professor of Political Science
Lucinda R. Callender, Ph.D., Assistant Professor of Political Science

General Information

The Department of Political Science, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Political Science. Within the M.A. program in political science, the Department offers a specialization in public policy. Areas covered in the public policy specialization include American public policy, US foreign and national security policy, comparative public policy, and international relations. For graduate study in connection with the Master of Arts degree and comparative public policy, as approved by the Research Center and the Social Science Research Center, refer to this bulletin under Social Science. Research facilities provided by the Inter-University Consortium for Political Research.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with the Master of Arts degree in Political Science. Within the M.A. program in political science, the Department offers a specialization in public policy. For graduate study in connection with the Master of Arts degree and comparative public policy, as approved by the Inter-University Consortium for Political Research.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as stated in Part Two of this bulletin. In addition, students must have received credit for a three-unit course in statistics.

Specific Requirements for the Master of Arts Degree

(Major Code: 22071)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must
complete a graduate program of at least 30 units of upper division and graduate courses approved by the graduate adviser.

Specific requirements for students selecting the specialization in public policy are:

1. Political Science 560. Comparative Public Policy (3)
2. Political Science 601. Seminar in the Scope and Method of Political Science (3)
3. Political Science 603. Theory and Method of Public Policy Analysis (3)
4. Political Science 635. Seminar in Politics of Public Policy (3)
5. Two graduate seminars chosen from among the following:
   - Political Science 605. Seminar in Political Theory (3)
   - Political Science 620. Seminar in American National Government (3)
   - Political Science 625. Seminar in Political Behavior (3)
   - Political Science 630. Seminar in Politics (3)
   - Political Science 640. Seminar in Public Law (3)
   - Political Science 655. Seminar in General Comparative Political Systems (3)
   - Political Science 675. Seminar in International Relations (3)
6. A three unit course in political science research methods, preferably Political Science 515A, Research Methods in Political Science (3).
7. Political Science 796. Internship in Public Policy (5)
8. Political Science 799A. Thesis (3) Cr/NC/SP. Thesis must be in the public policy area. Students must complete a minimum of 24 units in political science from courses listed below as acceptable on master's degree programs. At least 21 units must be in 600- and 700-numbered courses including Political Science 601 (Seminar in the Scope and Method of Political Science) and five other graduate seminars in political science.
9. To fulfill the requirements for the Master of Arts degree in Political Science, students must select Plan A which requires the writing of a thesis under Political Science 799A and the taking of a final oral examination on the general field of the thesis.

Courses Acceptable on Master's Degree Programs
in Political Science

**UPPER DIVISION COURSES**

515A-515B. Research Methods in Political Science (3-3)
Prerequisite: Political Science 201. Political Science 515A is prerequisite to 515B.
The research process, from research design through data processing, analysis and interpretation. Problems of application to election statistics, census data, roll call records, sample survey data and biographical information.

522. Urban Politics (3)
Prerequisite: Political Science 101 or 102.
The processes by which social conflicts in American urban areas are represented and regulated. Urban political culture; ecology; group development and activity; power structures; and reform movements. The character of the urban political "problem" and government. When taken with Political Science 305 or 320, will also meet all requirements in American Institutions.

523. Community Political Analysis (3)
Prerequisite: Political Science 101 or 102.
Community power structures. Analysis of policy alternatives; strategies of community development and approach to social planning and organization. Examples are primarily from the American experience, but some comparative materials may be discussed.

530. Political Parties (3)
Prerequisite: Political Science 102 or 320.
The political party as a part of the process of government; party organization and activities; nominating and campaign methods; theories and functions of the party system; party responsibility. The functioning of political parties in the American political system. May include a substantial amount of material about foreign political systems.

531. Interest Groups and Political Movements (3)
Prerequisite: Political Science 101 or 102.
Pressure group activity, lobbies, mass movements; factors which explain origins and motivations of group behavior; votes, money, information, protest as political resources, theories of pluralism, power elite and mass society; class and ethnic politics. May include a substantial amount of material about foreign political systems.

536. The American Presidency (3)
Prerequisites: Political Science 101 and 102.
Analysis of principal institutions, functions and problems of the presidency and federal executive branch. Attention given to presidential leadership, staffing, executive-legislative relations and policy formation.

537. The Politics of Bureaucracy (3)
Prerequisites: Political Science 101 and 102.
An analysis of the bureaucracy as an actor in the political system. May include a substantial amount of material about foreign political systems.

555. Comparative Political Systems (3)
Prerequisite: Political Science 103.
An examination of selected political and governmental systems for purposes of comparative study and analysis to determine similarities, differences and general patterns and universals among political systems.

560. Comparative Public Policy (3)
Prerequisite: Political Science 103 or 335.
Ways that political and social factors shape policy choices, implementation strategies, and policy outcomes in selected countries, emphasis on industrialized nations. Policy areas chosen may include foreign policy, national policy, social policy and comparative policy areas.

562. Government and Politics of Japan (3)
Prerequisite: Political Science 103 or 362.
Japanese political system. Recent political history and cultural factors which shape Japanese politics. Japanese foreign political, especially the Japan-United States relationship.

566. Political Change in Latin America (3)
Prerequisite: Political Science 101 or 103.
General pattern of politics and political development in Latin America with an emphasis on those features which condition domestic and foreign policy making.

567. Political Systems of Latin America (3)
Prerequisite: Political Science 555.
Domestic and international politics of selected Latin American states.

568. The Mexican Political System (3)
Prerequisite: Political Science 101 or 103.
Principal factors in Mexican governmental decision making. Ideology, political groups, tactics of leaders and governmental structure.

577. Principles of International Law (3)
The function of law in the international community. The historical development of the ideas and rules of international law and their place in the modern diplomatic and legal structure.

**GRADUATE COURSES**

601. Seminar in the Scope and Method of Political Science (3)
The discipline of political science and systematic training in its methodology. Required of all applicants for advanced degrees in political science.

603. Theory and Method of Public Policy Analysis (3)
Prerequisites: Political Science 601 and admission to the specialization in public policy. Theoretical approaches used to explain and evaluate public policy performance. Focus on quantitative and qualitative methods of appraising the validity of theories.

605. Seminar in Political Theory (3)
Maximum credit six units applicable to a master's degree.

620. Seminar in American National Government (3)
Maximum credit six units applicable to a master's degree.
625. Seminar in Political Behavior (3)
Prerequisite: Political Science 601.
Political science literature focusing on major areas of political behavior including study of political attitudes, voting, and political communication.

630. Seminar in Politics (3)
Prerequisite: Six upper division units in political science, three units of which must come from Political Science courses 320 through 338, 522 through 537.
Process by which individuals and groups make demands upon political decision makers; emphasis on the styles, structures, channels and consequences of interest articulation. Maximum credit six units applicable to a master's degree.

635. Seminar in Politics of Public Policy (3)
Prerequisite: Political Science 601.
Examination of public policies, e.g., energy, environment, protection, taxation, income maintenance, population, health care, education, housing. Use of research findings to analyze policy process, to estimate probable consequences of alternative decisions, and to appraise governmental programs.

646. Seminar in Public Law (3)
Maximum credit six units applicable to a master's degree.

655. Seminar in General Comparative Political Systems (3)
Prerequisites: Political Science 555, and three additional upper division units in political science.
The field of comparative politics, including historical developments, major theoretical approaches, substantive concerns, uses and limitations of the comparative method, methodological innovations in study of foreign political systems.

658. Seminar in Communist Political Systems (3)
Prerequisite: Six upper division units in political science.
The differences and similarities among Communist nations in Europe and Asia, with particular reference to instruments of power and ideology. A comparison of Communist ruling techniques and processes.

661. Seminar in the Political Systems of the Developing Nations (3)
Prerequisite: Six upper division units in political science.
Theoretical analysis of political development, modernization and industrialization in the emerging nations. Search for valid generalizations about the non-Western political process. Political trends and developments in the developing nations.

667. Seminar in Latin American Political Systems (3)
Prerequisite: Political Science 555 or 566.
Political developments in selected Latin American nations. May be repeated with new content. Maximum credit six units applicable to a master's degree.

675. Seminar in International Relations (3)
Maximum credit six units applicable to a master's degree.

795. Problem Analysis (3)

796. Internship in Public Policy (6)
Prerequisites: Political Science 601, 603, and eighteen units on official program for M.A. degree in political science with a specialization in public policy. A 320 hour internship approved by instructor in public or private agency. Grade based on instructor's evaluation of supervisor's report, student consultation with instructor reviewing theories of public policy.

797. Research in Political Science (3) Cr/NC/SP
Prerequisite: Consent of the department chair.
Research in political theory, political parties, comparative government, international relations, public law or American government.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master's degree.

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

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

Life Sciences 110, (619) 594-5346

Faculty

Marilyn A. Borges, Ph.D., Professor of Psychology
Jeff B. Bryan, Ph.D., Professor of Psychology
Rebecca S. Bryan, Ph.D., Professor of Psychology
Charles F. Dicken, Ph.D., Professor of Psychology
Larry Fanson, Ph.D., Professor of Psychology
Louis R. Franzini, Ph.D., Professor of Psychology
Philip J. Hall Jr., Ph.D., Professor of Psychology
Richard G. Graf, Ph.D., Professor of Psychology
William K. Graham, Ph.D., Professor of Psychology
John M. Grossberg, Ph.D., Professor of Psychology (Graduate Adviser)
William A. Hillix, Ph.D., Professor of Psychology, Chair of Department
Frederick W. Hombek, Ph.D., Professor of Psychology
Norman Kass, Ph.D., Professor of Psychology
Bruce T. Leckart, Ph.D., Professor of Psychology
Joseph R. Levine, Ph.D., Professor of Psychology
Alan J. Litrownik, Ph.D., Professor of Psychology
Rosalind A. Lorwin, Ph.D., Professor of Psychology
John E. Martin, Ph.D., Professor of Psychology
Roy D. McDonald, Ph.D., Professor of Psychology
Sandra O. Mollenauer, Ph.D., Professor of Psychology
Robert Penn, Ph.D., Professor of Psychology
Rod Plotnik, Ph.D., Professor of Psychology
Robert Radiow, Ph.D., Professor of Psychology
Stephen K. Reed, Ph.D., Professor of Psychology
Edward P. Riley, Ph.D., Professor of Psychology
Miriam J. Rodin, Ph.D., Professor of Psychology
Gerald Rosenbaum, Ph.D., Professor of Psychology, Director of Clinical Training
Dennis P. Saccuzzo, Ph.D., Professor of Psychology, Joint Doctoral Coordinator
Jerome M. Sattler, Ph.D., Professor of Psychology
Richard H. Schulte, Ph.D., Professor of Psychology, Director, Psychology Clinic
John P. Shapesh, Ph.D., Professor of Psychology
John J. Spinetta, Ph.D., Professor of Psychology
Walter R. Stevens, Ph.D., Professor of Psychology
Robert M. Yaremko, Ph.D., Professor of Psychology
James W. Brown, Ph.D., Associate Professor of Psychology, Associate Dean of the College of Sciences

Assistantships

Graduate teaching assistantships and graduate nonteaching assistantships in psychology may be obtained from the Chair, Graduate Assistantships Committee, Department of Psychology.

General Information

A Master of Science degree with concentrations in clinical psychology and industrial and organizational psychology is offered, as well as the Master of Arts degree in general psychology. While only Ph.D. students are eligible for the Master of Science degree with a concentration in clinical psychology, others with clinical interests may elect appropriate electives in the Master of Arts general program. In addition, the Department of Psychology, jointly with the Department of Psychiatry, University of California, San Diego, School of Medicine, offers a program of graduate study leading to the Doctor of Philosophy degree in Clinical Psychology with specialization in Behavioral Medicine, Neuropsychology, or Experimental Psychopathology. A scientist-practitioner training model, identified by the American Psychological Association, serves as a guide for the experiences provided for doctoral students. It is expected that graduates of this program will be prepared to serve as scientists, innovators, and leaders in the field of clinical psychology.

The doctoral program requires that students spend a minimum of five calendar years in study and research. In the first four years, doctoral students must complete their prescribed coursework satisfactorily as well as engaging in research and a series of clinical practica during the summer months. In the last year of the program all students must complete a 12-month clinical internship.

The department has a strong scientific research orientation, and emphasizes the master's degree as preparation for doctoral work. Students in all programs must take an advanced statistics/experimental design course sequence and produce an empirical research thesis.

The department awards approximately 30 master's degrees annually. More than 90% of the graduates who apply go on to enroll in doctoral work.

The clinical psychology faculty staff a Psychology Clinic for graduate clinical training and service to the metropolitan San Diego community. The Center for Behavioral Medicine, with federal grant support, sponsors research projects, provides training and consultation and an opportunity for interdisciplinary dialogue. Practical experience in industrial and organizational psychology is available at nearby military research and personnel-processing units as well as at local industries. Some small-animal research is conducted on campus where animals are housed in a modern vivarium staffed by a veterinarian. There are also research facilities for the study of more exotic species at the San Diego Zoo and Sea World.

Research programs of faculty include special topics in interpersonal communication, stress in families of terminally ill children, cognitive development in infants, beneficial intervention strategies for children with developmental disabilities, differential health care, and biochemical substrates of anxiety and stress. Graduate students take an active role in research, which often results in publications or presentation at professional meetings.

Research space, equipment, and supplies are available in the department for student experiments. The College of Sciences maintains two completely equipped electronics shops and a wood and metal shop, all staffed with full-time technicians. In addition to the University's large modern computer facilities and excellent support services, there are a large number and variety of microprocessor and minicomputer systems in the Department of Psychology and throughout the College of Sciences.

Section I. Master's Degree Programs

Admission to Graduate Study

In seeking admission to the graduate program in psychology, the student should write directly to the Graduate Studies Adviser, Department of Psychology, requesting application materials. Applicants to the joint UCSD-SDSU doctoral program should write to UCSD-SDSU Joint Doctoral Program, P.A.R.T., 6363 Alvarado Court, Suite 103, San Diego, CA 92192-0551. Detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms.

STUDENTS WILL BE ADMITTED TO GRADUATE PROGRAMS IN PSYCHOLOGY ONLY IN THE FALL SEMESTER AND APPLICATIONS MUST BE RECEIVED BY THE DEPARTMENT OF PSYCHOLOGY NOT LATER THAN FEBRUARY 1 FOR MASTERS PROGRAMS AND JANUARY 15 FOR THE PH.D. PROGRAM.

Concurrent with application to the department, the student must file an application for concurrent admission to San Diego State University with the Office of Graduate Admissions. Acceptance by the University does not guarantee acceptance to the psychology program.
psychology, students with an interest in clinical psychology may select elective courses in this area (e.g., Psychology 551, 651, 652, 757), and complete a clinical thesis. All new Master of Arts degree students are required to take one unit of 600 (Research Orientation) during their first semester and another unit during their second semester.

### Specific Requirements for the Master of Science Degree

(Major Code: 20011)

Within the 36-unit general requirement set forth above, the Master of Science degree may be obtained with the following concentrations:

1. **Clinical Psychology (included within the Ph.D. program; not available separately):** A minimum of 36 units in psychology, including Psychology 600 (Research Orientation, 2 units), Psychology 601 (Colloquium, 2 units), 650, 651 or 652, 654, 655 or 656, 670, 671, 796 (Clinical Practicum, 6 units), and 799A (Thesis). Registration for six units of Psychology 796 (Clinical Practicum) is contingent upon prior cooperative arrangement from the student and the Department of Psychology Practicum Committee, and is exempt from the University's requirement that courses graded Cr/NC be limited to 30 percent of units for the master's degree.

2. **Industrial and Organizational Psychology:** A minimum of 36 units, 30 of which must be in psychology, to include Psychology 570, 571 (or 670, 671), 600 (Research Orientation, 2 units), 601 (Colloquium, 2 units), 621, 622, 675, 721, 722, 797 (Research, 2 units), and 799A (Thesis). Six units of graduate electives may be selected from other departments with prior approval of the Industrial/Organizational Coordinator.

### Section II. Joint Doctoral Program

**Admission to Doctoral Study**

To be considered for admission to the joint UCSD-SDSU doctoral program in clinical psychology, students must meet the general requirements for admission to both universities with a classified graduate standing as outlined in the respective current catalogs. These include:

(a) an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or equivalent academic preparation, as determined by the Deans of the Graduate Division;
(b) a 3.0 grade point average of at least 3.0 in the last 60 semester units of the undergraduate program;
(c) a score above the 50th percentile rank on the GRE Subject (Advanced) Test in Psychology. The student should take this test as early as possible if necessary, and at least two laboratory courses or their equivalent in psychology. At San Diego State University these specific course requirements are met by Psychology 101, 211, 260, 270, 350, 410, 470 and one course from 412, 413, 415, 475, 417, 418 or 419;
(d) a score above the 50th percentile rank on the GRE Subject (Advanced) Test in Psychology. The student should take this test as early as possible if necessary, and at least two laboratory courses or their equivalent in psychology. At San Diego State University these specific course requirements are met by Psychology 101, 211, 260, 270, 350, 410, 470 and one course from 412, 413, 415, 475, 417, 418 or 419;
(e) an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or equivalent academic preparation, as determined by the Deans of the Graduate Division;
(f) a 3.0 grade point average of at least 3.0 in the last 60 semester units of the undergraduate program;
(g) a score above the 50th percentile rank on the GRE Subject (Advanced) Test in Psychology. The student should take this test as early as possible if necessary, and at least two laboratory courses or their equivalent in psychology. At San Diego State University these specific course requirements are met by Psychology 101, 211, 260, 270, 350, 410, 470 and one course from 412, 413, 415, 475, 417, 418 or 419;
(h) a score above the 50th percentile rank on the GRE Subject (Advanced) Test in Psychology. The student should take this test as early as possible if necessary, and at least two laboratory courses or their equivalent in psychology. At San Diego State University these specific course requirements are met by Psychology 101, 211, 260, 270, 350, 410, 470 and one course from 412, 413, 415, 475, 417, 418 or 419;
(i) a score above the 50th percentile rank on the GRE Subject (Advanced) Test in Psychology. The student should take this test as early as possible if necessary, and at least two laboratory courses or their equivalent in psychology. At San Diego State University these specific course requirements are met by Psychology 101, 211, 260, 270, 350, 410, 470 and one course from 412, 413, 415, 475, 417, 418 or 419;
(j) a score above the 50th percentile rank on the GRE Subject (Advanced) Test in Psychology. The student should take this test as early as possible if necessary, and at least two laboratory courses or their equivalent in psychology. At San Diego State University these specific course requirements are met by Psychology 101, 211, 260, 270, 350, 410, 470 and one course from 412, 413, 415, 475, 417, 418 or 419;
(k) a score above the 50th percentile rank on the GRE Subject (Advanced) Test in Psychology. The student should take this test as early as possible if necessary, and at least two laboratory courses or their equivalent in psychology. At San Diego State University these specific course requirements are met by Psychology 101, 211, 260, 270, 350, 410, 470 and one course from 412, 413, 415, 475, 417, 418 or 419;
(l) a score above the 50th percentile rank on the GRE Subject (Advanced) Test in Psychology. The student should take this test as early as possible if necessary, and at least two laboratory courses or their equivalent in psychology. At San Diego State University these specific course requirements are met by Psychology 101, 211, 260, 270, 350, 410, 470 and one course from 412, 413, 415, 475, 417, 418 or 419;
(m) a score above the 50th percentile rank on the GRE Subject (Advanced) Test in Psychology. The student should take this test as early as possible if necessary, and at least two laboratory courses or their equivalent in psychology. At San Diego State University these specific course requirements are met by Psychology 101, 211, 260, 270, 350, 410, 470 and one course from 412, 413, 415, 475, 417, 418 or 419;
(n) a score above the 50th percentile rank on the GRE Subject (Advanced) Test in Psychology. The student should take this test as early as possible if necessary, and at least two laboratory courses or their equivalent in psychology. At San Diego State University these specific course requirements are met by Psychology 101, 211, 260, 270, 350, 410, 470 and one course from 412, 413, 415, 475, 417, 418 or 419;
(o) a score above the 50th percentile rank on the GRE Subject (Advanced) Test in Psychology. The student should take this test as early as possible if necessary, and at least two laboratory courses or their equivalent in psychology. At San Diego State University these specific course requirements are met by Psychology 101, 211, 260, 270, 350, 410, 470 and one course from 412, 413, 415, 475, 417, 418 or 419;

3. **A total scale score of 950 or above on the GRE General Test (verbal and quantitative portions only).** The total score must be in the 85th percentile or above on the GRE Subject Test in Psychology. Scores not reported by December of the year prior to admission will be considered incomplete.

4. **In addition, students must have an approved thesis proposal prior to advancement to candidacy.**

5. **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.**

### General Requirements for all Master’s Degree Programs

In addition to meeting the basic requirements for the master’s degree as described in Part Two of this bulletin, the student must complete a graduate program of at least 36 units (36 units for the Master of Science degree) approved by the departmental graduate coordinator. Only classified graduate students are permitted to enroll in any 600-numbered (or higher) courses in psychology.

Psychology 570, 571 (or 670, 671), 600 (Research Orientation), 601 (Colloquium), 796 (Clinical Practicum), and 799A (Thesis), and an oral examination on the thesis, are required in all master’s degree programs in the Department of Psychology. A maximum of two units credit in Psychology 601 can apply toward completion of the program.

### Specific Requirements for the Master of Arts Degree

(Major Code: 20011)

The Master of Arts degree requires the completion of a minimum of 30 units in psychology to include Psychology 501 or 587 (unless taken as an undergraduate), 570, 571 (or 670, 671), 2 units of 600 (Research Orientation), 2 units of 601 (Colloquium), 605, 745 or 760 or 761 or 764, 1 unit of 797 (Research), and 799A (Thesis). In special cases and by petition to the Graduate Committee, students may take up to six units of the required 30 units in 500 and above level courses in other departments. Although the Master of Arts degree provides training in general
appreciation of professional ethics and conduct; knowledge of the theory and techniques of psychological assessment; knowledge of therapeutic interventions, acquisition of therapeutic skills, and a minimum of 300 hours of supervised clinical experience; and competence in psychological assessment; knowledge of therapeutic interventions, acquisition of therapeutic research methods. Specific courses providing this background at SDSU include Psychology 650, 651, 654, 655, 656, 670, 671, 745, 760, and 896.

After completing the basic two-year core, work in subsequent years will diverge for students in the different specialty areas. Students will identify an area of specialization in consultation with their Joint Guidance Committee. They will be required to take the introductory seminar (Psychology 800) during the second semester of their second year. In the third year students will take both a research and a clinical practicum in their area. The research practica will include work in an established lab while the clinical practica will include a minimum of 10 hours of supervised clinical practice per week (minimum of 300 hours for the year). Students and their Joint Guidance Committee will determine which courses and seminars are to be completed. For the fourth year students select a lab where they would like to conduct their dissertation research. They will have an opportunity to begin and finish their research during the year. The fifth year is reserved for the completion of a clinical internship that is identified by the student in consultation with his/her Joint Guidance Committee. Finally, at some point in the first four years of study, each student will be assigned to teach an undergraduate course in Psychology as part of the general requirements of the program.

Courses Acceptable on Master's and Doctoral Degree Programs in Psychology

UPPER DIVISION COURSES

501. History of Psychology (3)
Limited to psychology majors with senior standing or graduate students.
The historical background of modern psychology. (Formerly numbered Psychology 580.)

551. Clinical Psychology: Theory and Practice (4) I, II
Two lectures and six hours of laboratory.
Prerequisite: Psychology 350.
Clinical assessment, theory and practice of behavior change, and professional ethics.

570. Advanced Statistics (3) I
Two lectures and two hours of activity.
Prerequisite: Psychology 270.
Empirical data, basic principles and theoretical positions of major theorists in learning and cognitive psychology.

596. Selected Topics in Psychology (3)
Prerequisite: Psychology 101 and consent of instructor.
Intensive study in specific areas of psychology. See Class Schedule for specific content.
Limit of nine units in any combination of 596, 496, and 564 for a bachelor's degree. Maximum combined credit of six units of 596 applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a 30-unit master's degree.

GRADUATE COURSES

Graduate courses in psychology are not open to postbaccalaureate unclassified students. Priority for enrollment in graduate courses in psychology is given to psychology students who have the courses as requirements in their respective programs.

600. Research Orientation (1) Cr/NC
Prerequisite: Admission to the master's program.
Faculty presentations, followed by individual meetings with students, and initiation of supervised independent research. All new Master of Arts students are required to enroll for one unit during their first semester and one unit during their second semester; no more than two units are applicable toward the degree.

601. Colloquium (1) Cr/NC
Prerequisite: Admission to an advanced degree program in psychology.
Recent research advances in selected areas of psychology, presented by department faculty and established outside investigators. Master's level students are required to enroll for two semesters; no more than two units are applicable toward the degree.

605. Seminar in Theoretical Psychology (3)
Prerequisite: Consent of graduate adviser.
Basic nature of theories, their relationships to data, and the characteristics of various types of constructs used in psychological theories. Course may be repeated provided it is offered by a different instructor and the subject matter is substantially different. To enroll in the seminar for the second time, the student must submit a petition to be approved by the professor of the course and the graduate adviser. Maximum credit six units applicable to a master's degree.

621. Seminar in Personnel Psychology (3)
Prerequisites: Psychology 321 and consent of graduate adviser.
Problems and procedures in selection, classification, and performance appraisal, focusing on testing in industry, the interview, and other selection and assessment devices. Criterion development and measurement methods.

622. Seminar in Organizational Psychology (3)
Prerequisites: Psychology 321 and consent of graduate adviser.
Applications of psychological principles and methods of investigation to problems of industrial relations and motivation of employees; factors influencing morale and employee productivity; criteria of job proficiency; psychological aspects of worker-management relationships and leadership.

650. Seminar and Laboratory in Counseling and Psychotherapy (4)
Two lectures and six hours of laboratory.
Prerequisite: Consent of graduate adviser.
Seminars in the application of psychotherapeutic and counseling techniques. Students may prepare for selected cognitive, dynamic, interpersonal, and behavioral approaches. This course is open only to students accepted in the clinical psychology concentration.

651. Seminar in Behavior Disorders of Childhood and Adolescence (3)
Prerequisites: Psychology 350 and consent of graduate adviser.
Contemporary approaches to emotional and behavioral problems of childhood and youth. Considers developmental, cognitive and social variables as well as theory and treatment.

652. Seminar in Behavior Disorders of Adults (3)
Prerequisites: Psychology 350 and consent of graduate adviser.
Contemporary approaches to emotional and behavioral problems of adulthood. Considers developmental, cognitive and social variables as well as theory and treatment.

654. Seminar in Psychological Assessment I (4)
Two lectures and six hours of laboratory.
Prerequisites: Psychology 350, 470, and consent of graduate adviser.
Theory and practice in assessment of intelligence and special abilities.

655. Seminar in Psychological Assessment II (4)
Two lectures and six hours of laboratory.
Prerequisites: Psychology 654 and consent of graduate adviser.
Theory and practice in assessment of special abilities, personality and behavior disorders.
656. Seminar in Behavior Therapy and Laboratory (4)
Two lectures and six hours of laboratory.
Prerequisite: Consent of graduate adviser. Recommended: Psychology 397.
Supervised practice in the application of behavior therapy (individual treatment) and behavior
modification (group method).
This course is open only to students accepted in the clinical psychology concentration.

670. Experimental Design (3)
Two lectures and two hours of activity.
Prerequisites: Psychology 410, a passing score on the departmental statistics aptitude test
and consent of graduate adviser.
Principles and methods of planning and carrying out systematic investigations to answer
questions concerning human behavior with stress on the dependability 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.

671. Correlational and Multivariate Analysis in Psychology (3)
Two lectures and two hours of activity.
Prerequisites: Psychology 670 and consent of graduate adviser.
Application of multiple regression and multiple correlation techniques to behavioral data.
Multivariate analyses in psychology using computer-based statistical packages. Analysis and
interpretation of representative data from psychological science and practice. (Formerly
numbered Psychology 571.)

675. Seminar in Psychological Measurement (3)
Prerequisites: Psychology 470 and consent of graduate adviser. Recommended: Psychology
670 and 671.
General principles, theory and methods underlying measurement in studies of group and
individual differences in controlled experiments.

700. Seminar (3)
Prerequisite: Consent of graduate adviser.
An intensive study in advanced psychology. May be repeated with new content. See Class
Schedule for specific content. Maximum credit six units applicable to a master's degree.

721. Advanced Seminar in Personnel Psychology (3)
Prerequisites: Psychology 621 and consent of Master's Programs Coordinator.
Selected areas within personnel psychology including selection, classification, performance
appraisal, test development, criterion development, measurement and scaling
methods. Course may be repeated with new content with permission of instructor and Master's
Programs Coordinator. Maximum credit six units applicable to a master's degree.

722. Advanced Seminar in Organizational Psychology (3)
Prerequisites: Psychology 622 and consent of Master's Programs Coordinator.
Selected areas within organizational psychology including leadership, motivation, organizational
development, and organizational effectiveness. Course may be repeated with new
content with permission of instructor and Master's Program Coordinator. Maximum credit
six units applicable to a master's degree.

745. Seminar in Social Psychology (3)
Prerequisite: Consent of graduate adviser. Recommended: Psychology 340 or 412.
Issues of contemporary importance in the field. See Class Schedule for specific content.
Course may be repeated provided it is offered by a different instructor and the subject
matter is substantially different. To enroll in the seminar for the second time, the student
must submit a petition to be approved by the professor of the course and the graduate adviser.
Maximum credit six units applicable to a master's degree.

757. Seminar in Selected Topics in Clinical Psychology (3)
Prerequisite: Consent of graduate adviser.
Advanced study of clinical topics as cognitive behavior therapy, forensic psychology,
ethics, and stress. Topics will vary on a semester basis.
Course may be repeated provided it is offered by a different instructor and the subject
matter is substantially different. To enroll in the seminar for the second time, the student
must submit a petition to be approved by the professor of the course and the graduate adviser.
Maximum credit six units applicable to a master's degree.

765. Seminar in Ethology and Comparative Psychology (3)
Prerequisite for the second time, the student must
submit a petition to be approved by the professor of the course and the graduate adviser.
Maximum credit six units applicable to a master's degree.
Doctoral Special Study (1-8) Cr/NC/SP
Prerequisite: Admission to the doctoral program. Individual study in the field of specialization. Maximum credit eight units applicable to the doctoral degree.

Doctoral Dissertation (3-6) Cr/NC/SP
Prerequisites: An officially constituted dissertation committee and advancement to candidacy. Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

Public Administration and Urban Studies

Faculty
Ronald L. Boostrom, D. Crim., Professor of Public Administration and Urban Studies
James A. Clapp, Ph.D., Professor of Public Administration and Urban Studies
James A. Gazell, Ph.D., Professor of Public Administration and Urban Studies (M.P.A. Graduate Advisor)
Stuart H. Gilbreath, Ph.D., Professor of Public Administration and Urban Studies
G. Thomas Gitchoff, D. Crim., Professor of Public Administration and Urban Studies
Dipak K. Gupta, Ph.D., Professor of Public Administration and Urban Studies
Joel H. Henderson, Ph.D., Professor of Public Administration and Urban Studies
Louis M. Rea, Ph.D., Professor of Public Administration and Urban Studies, Director of School
Glen W. Sparrow, Ph.D., Professor of Public Administration and Urban Studies
L. Paul Sutton, Ph.D., Professor of Public Administration and Urban Studies
Nico Calavita, Ph.D., Associate Professor of Public Administration and Urban Studies (M.C.P. Graduate Adviser)
Roger W. Caves, Ph.D., Associate Professor of Public Administration and Urban Studies
Darrell L. Pugh, Ph.D., Associate Professor of Public Administration and Urban Studies, Associate Dean for Budget and Planning, College of Professional Studies and Fine Arts
Robert L. Stock, Ph.D., Associate Professor of Public Administration and Urban Studies
Robert J. Woste, Ph.D., Associate Professor of Public Administration and Urban Studies
Carol J. Edlund, M.A., Assistant Professor of Public Administration and Urban Studies
Dallion S. Lee, D.P.A., Assistant Professor of Public Administration and Urban Studies
Marco G. Walshok, Ph.D., Assistant Professor of Public Administration and Urban Studies

General Information
Public Administration and Urban Studies, in the College of Professional Studies and Fine Arts, offers graduate study leading to the Master of Public 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’ MPA degree is accredited by the National Association of Schools of Public Affairs and Administration (NASPAA) and listed on its annual Roster of accredited programs found to be in conformity with standards established for professional master’s degrees in public affairs and administration.

Master of Public Administration Degree
This degree permits the selection, under advisement, of a program of course and seminar work which may be oriented toward a generalist approach or with a research focus on organizational behavior and development, public policy, public administration, or urban administration. Also offered are concentrations in Criminal Justice Administration, Public Telecommunications Administration and City Planning, each consisting of 15 units within the required program for the Master of Public Administration. Since management responsibilities are shared by administrators in a number of professional areas in the public service, the student is encouraged to supplement the study of government and administration with graduate courses in economics, sociology, psychology, business administration, and other related areas.
Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. The student must also satisfy the following requirements: (1) a 3.0 grade point average in the undergraduate major and a 2.75 overall average; (2) an acceptable score on the GRE General Test; (3) two letters of reference from individuals who have known the student's academic work and/or employment performance; and (4) satisfactory completion of Public Administration 450 or equivalent course, and at the discretion of the graduate adviser students should have suitable background in social science statistics.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, as described in Part Two of this bulletin and be recommended by the faculty. In order to be recommended for advancement, a student must have achieved a grade point average of 3.5 in Public Administration 600 and three additional courses from among Public Administration 604, 605 or 606, 630, 642, 650, 660, with no grade below B-.

Specific Requirements for the Master of Public Administration Degree

(Major Code: 21021)

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 Two of this bulletin. Students must also complete as a part of their programs: (1) at least 27 units of 600- and 700-numbered courses including Public Administration 604, 605, 606 or 606, 630, 642, 650, 660 and 660; (2) a minimum of nine additional units of 500 level or graduate courses in public administration or related fields selected under advisement. An internship of 12 units (one semester) beyond the 36 units of coursework is required of students who have not had equivalent 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. Public Administration 799A, Thesis, must be included in the program unless Plan B with a comprehensive written examination in lieu of the thesis is selected by the student with the approval of a graduate adviser; and (3) Students who specialize in Public Personnel and Labor Relations must take Public Administration 500 and three additional courses from among Public Administration 604, 605 or 606, 630, 642, 650, 660, with no grade below B-.
2. Nine units of 600- and 700-numbered courses in planning elective courses, readings and research.

3. City Planning 796, Internship in Urban Planning (3) Cr/NC

4. Public Administration 604, Methods of Analysis in Public and Urban Affairs (3)

5. Other electives to complete program selected with the approval of adviser.

6. Students in Plan B are required to pass comprehensive written examinations in five areas of study. Students who have approval of the graduate adviser to pursue Plan A must include on their programs City Planning 799A, Thesis. At least 30 units must be completed in residence at San Diego State University, and at least 24 units of program courses shall be enrolled in and completed after advancement to candidacy. Not more than a total of nine units in courses 797 and 798 will be accepted for credit toward the degree.

Courses Acceptable on Master's Degree Programs in Public Administration and Urban Studies

UPPER DIVISION COURSES IN CRIMINAL JUSTICE ADMINISTRATION

502. Juvenile Deviance and the Administration Process (3)
Prerequisite: Criminal Justice Administration 321.
Problems of implementing and evaluating policies and programs for prevention of juvenile delinquency and treatment of juvenile offenders; an assessment of the proposed standards and goals for juvenile justice administration.

510. Contemporary Issues in Law Enforcement Administration (3)
Prerequisite: Criminal Justice Administration 310.
Assessment of problems confronting administrators of law enforcement agencies and of recent efforts to enhance the capability of agencies to control criminal activity while guarding individual liberties.

520. Prosecutorial Function in Administration of Justice (3)
Prerequisite: Criminal Justice Administration 301.
Analysis of prosecutor's function at local, state and federal levels and in selected foreign nations, including appraisal of proposed national standards and goals for prosecutors.

531. Probation and Parole (3)
Prerequisite: Criminal Justice Administration 330.
Basic concepts, history, legislation, and practices used in work with juveniles and adults who have been placed on probation or parole; criteria of selection, methods of supervision, and elements of case reporting.

540. Applied Planning, Research and Program Evaluation in Criminal Justice Administration (3) I, II
Prerequisite: Criminal Justice Administration 301.
Application of planning, research and program development and evaluation principles to the field of criminal justice.

543. Community Resources in Criminal Justice Administration (3)
Prerequisite: Criminal Justice Administration 301.
Exploration of present and probable roles of public and private agencies and volunteers in criminal justice administration.

UPPER DIVISION COURSES IN PUBLIC ADMINISTRATION

510. Intergovernmental Relations in the United States (3) I
Prerequisite: Public Administration 310 or 312 or 315.
Constitution, political and administrative characteristics of American federalism, including regionalism, interstate compacts, and grants-in-aid.

512. The Metropolitan Area (3)
Prerequisite: Public Administration 310 or 312.
Problems of government and administration arising from population patterns and physical and social structures of metropolitan areas.

520. Decision Making in the Urban Community (3)
Prerequisite: Public Administration 310.
Processes of decision making in the management of urban communities.

525. The U.S. City Planning Process (3) I
Prerequisite: Public Administration 320 or graduate standing.
Description and critique of traditional city planning process; styles and roles of city planner; city planning values and ethics.

530. Negotiation and Bargaining in the Public Service (3)
Prerequisite: Public Administration 301.
Specific issues such as strategies, the effects of threat, the physical setting, use of a third-party observer and theories of advocacy. Emphasis on analyzing simulations of the bargaining process and developing effective negotiation skills.

531. Governmental Employer-Employee Relations (3)
Prerequisite: Public Administration 330.
Historical development, legal basis and organizational implications of governmental employer-employee relations; emphasis on California local government.

540. Public Administrative Systems Analysis (3)
Prerequisites: Public Administration 301 and a statistics course.
Systems and organization analysis; work standards and units; procedures analysis; administrative planning.

550. Budgetary and Financial Administration in the Public Sector (3) II
Prerequisites: Public Administration 301 and 450.
Management trends in public sector financial administration; budgetary procedures and techniques; control and monitoring systems. Cash management, capital projects management, debt administration, disbursement, funds management, and auditing.

570. Administrative Law (3)
Prerequisite: Public Administration 301.
Law of public office and public officers, powers of administrative authorities, scope and limits of administrative powers, remedies against administrative action.

580. Comparative Public Administration (3)
Prerequisite: Public Administration 301.
Administrative organization and process of selected foreign and American governments. Analysis of the cultural basis of administrative systems.

GRADUATE COURSES IN PUBLIC ADMINISTRATION

600. Scope of Public Administration (3)
Prerequisite: Six upper division units in public administration. The development of public administration as an academic discipline; a systematic evaluation of the rise and operations of large-scale public bureaucracies.

604. Methods of Analysis in Public and Urban Affairs (3)
Prerequisite: Credit or concurrent registration in Public Administration 600.
Research design for problems and cases in public affairs; summarizing/organizing data; methods of projection; sampling theory and application; using census and other secondary data sources.

605. Seminar in Research Methods in Public Administration (3)
Prerequisites: Public Administration 600 and 604.
Examination of basic research approaches, i.e., legal, historical, and small-group, etc.

606. Seminar in Quantitative Approaches to Public Administration (3)
Prerequisites: Public Administration 600 and 604.
Advanced techniques for analyzing problems in public and urban affairs; emphasis on computer applications.

620. Seminar in Management of Urban Governments (3)
Selected problems in the management of urban governments. Maximum credit six units applicable to a master's degree.
632. Seminar in Organization Development in the Public Sector (3)
Prerequisite: Public Administration 600.
Organization development theory and practice. Emphasis on organizational diagnosis, intervention theory, team building and process consultation skills as they apply to public sector organizations.

640. Seminar in Public Administration (3)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

642. Seminar in Administrative Theory (3)
Prerequisite: Public Administration 600.
Organization and management; the executive role, decision making; bureaucracy; authority and power; communication and control and organizational system; tactics and strategies in effective management.

643. Seminar in Administrative Behavior (3)
Prerequisite: Public Administration 340.
Intrapersonal, interpersonal and group development knowledge which enhances the administrator's effectiveness. Simulations and structured experiential designs examine behaviors encountered in public bureaucracies.

650. Seminar in Public Financial Management (3)
Prerequisite: Public Administration 450.

660. Administration and Public Policy Development (3)
Prerequisite: Public Administration 600.
Social, political and administrative problems involved in governmental program development and change.

670. Seminar in Administrative Law (3)
Prerequisite: Public Administration 570.
Legal aspects of problems of administration at the federal, state and local levels.

751. Readings in Public Administration (3) Cr/NC
Prerequisites: Public Administration 600 and advancement to candidacy.
Selected readings in the literature of public administration.

792. Problem Analysis (3)

798. Internship in Public Administration (3-12) Cr/NC
Prerequisite: Consent of instructor. 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. Maximum credit twelve units. The 12 units of 796 will be exempt from the University's requirement that courses graded Cr/NC be limited to 30 percent of units for the master's degree.

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

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

GRADUATE COURSES IN CITY PLANNING

610. Seminar in Urban Planning (3)
Introductory seminar to the Master of City Planning Program, focusing on the planner's perspective of urban problems and goal formation.

620. Seminar in Urban Planning Methodologies (3)
Prerequisite recommended: City Planning 610. Procedures and analytical techniques for advanced urban planning analysis.

625. Quantitative Techniques in Urban Planning (6)
Three lectures and nine hours of laboratory. Prerequisites: City Planning 610 and Public Administration 604. Contemporary techniques and methodologies of planning analysis: a practicum emphasizing survey research, environmental impact techniques, case studies in demographic and economic analysis.

630. Seminar in Urban Planning Implementation (3)
Prerequisite recommended: City Planning 620. Analysis of the content and function of zoning, subdivision regulation, codes, capital budgeting, urban renewal, model cities, and other implementation methods and programs.

635. Seminar in Housing and Housing Policy (3)
Study, definition and analysis of housing needs and problems. Public policies and programs addressed to housing issues. Alternative solutions and the role of the private and public sectors.

640. Seminar in Urban Planning Theory (3)
Prerequisite recommended: City Planning 630. Alternative theories of planning and organization of the planning function. Emphasis on conceptual foundations, relationship to governmental structure, decision making, and ideological and ethical orientations.

650. Seminar in Urban Theory (3)
Study of the various empirically and normatively based theories of the city and urbanization process, with emphasis on communication and transactional and institutional approaches.

665. Seminar in Urban and Regional Planning Analysis (3)
Theories and techniques of urban and regional planning analysis.

670. History of Urban Planning (3)
History of urban development and of the field of urban planning.
680. Seminar in Readings in Urban Planning (3)
Selected topics in urban planning. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

700. Urban Design and Land Use Planning Studio (3)
One lecture and six hours of laboratory. Prerequisite recommended: City Planning 620. Laboratory course concerned with graphic expression, principles of land use planning, land development, and urban design. Project integrating principles.

710. Seminar in Theories of Urban Design (3)
Perspectives and methodologies of contemporary urban design and its contribution toward improving the quality of the physical, social and economic environment.

720. Seminar in Land Use and Environmental Law (3)
Cases and studies in zoning, coastal planning, growth management and environmental assessment.

730. Seminar in Urban Transportation Planning (3)
Issues, techniques and practices in urban transportation planning with general emphasis on interrelations between transportation and land use planning.

796. Internship in Urban Planning (3-6) Cr/NC
Students will be assigned to various government agencies and will work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences. Maximum credit six units.

797. Research in Urban Planning (3) Cr/NC/SP
Prerequisite recommended: Consent of Director of City Planning Program. Research in one of the areas of urban planning. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisite recommended: Consent of staff. To be arranged with Director of City Planning and instructor. Individual study. Maximum credit six units applicable to a master's degree.

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

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

GRADUATE COURSES IN CRIMINAL JUSTICE ADMINISTRATION

601. Seminar in the Administration of Criminal Justice (3)
Prerequisite: Criminal Justice Administration 301. Administrative problems of criminal justice systems.

602. Seminar in the Criminal Justice System as a Social Institution (3)
Prerequisite: Criminal Justice Administration 301. Examination of criminal justice system as both cause and consequence of social change; nature of institutional change with application to criminal justice system components.

604. Seminar in Criminal Justice and Urban Administration (3)
Prerequisite: Criminal Justice Administration 540. Critical analysis of influences on crime control and the criminal justice process of actions by urban administrators, legislators and the private sector in areas such as housing, education, public health and transportation, and urban development policies.

696. Selected Topics in Criminal Justice Administration (3)
Prerequisite: Criminal Justice Administration 601 or 602. Analysis of contemporary issues of major import to the administration of criminal justice. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

791. Seminar in Readings in Criminal Justice Administration (3)
Prerequisite: Six graduate units in criminal justice administration. Selected readings in the literature of criminal justice administration.

797. Research in Criminal Justice Administration (3) Cr/NC/SP
Prerequisite: Consent of Coordinator of Criminal Justice Administration. Research in one of the areas of criminal justice administration. Maximum credit six units applicable to a master's degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff, to be arranged with Coordinator and instructor. Individual study. Maximum credit six units applicable to a master's degree.
Public Health

Faculty
Peter A. Dual, Ph.D., M.P.H., Professor of Public Health, Dean of the College of Health and Human Services
F. Douglas Scutchfield, M.D., Professor of Public Health, Director of the Graduate School of Public Health
Kevin M. Patrick, M.D., M.S., Director of Health Services and Director of the General Preventive Medicine Residency Program, Adjunct Faculty in Public Health

Epidemiology and Biostatistics
Craig A. Molgaard, Ph.D., M.P.H., Associate Professor of Public Health
Afram S. Benenson, M.D., Lecturer in Public Health, Division Head
Louise K. Hofherr, M.P.H., Ph.D., Lecturer in Public Health

Health Promotion
Melbourne F. Hovell, Ph.D., M.P.H., Professor of Public Health
David A. Sleer, Ph.D., Professor of Health Science and Adjunct Professor of Public Health
Felipe G. Castro, M.S.W., Ph.D., Associate Professor of Public Health
John P. Elder, Ph.D., M.P.H., Associate Professor of Public Health, Acting Division Head
Karen L. Senn, Ed.D., M.P.H., Associate Professor of Health Science and Adjunct Associate Professor of Public Health
Joni A. Mayer, Ph.D., Assistant Professor of Public Health

Health Services Administration
William E. Stier, M.B.A., Ph.D., Professor of Finance and Adjunct Professor of Public Health
Stephen J. Williams, S.M., Sc.D., Professor of Public Health, Division Head
Alma L. Koch, Ph.D., M.P.H., Associate Professor of Public Health
K. Michael Peddecord, Dr.P.H., Associate Professor of Public Health
Robert L. Seidman, Ph.D., Assistant Professor of Public Health and Economics
Donald J. Slymen, Ph.D., Assistant Professor of Public Health
Sheryl T. Dacso, M.P.H., J.D., Dr.P.H., Lecturer in Public Health
Daniel M. McLean, M.S.A., Lecturer in Public Health

Maternal and Child Health
Allan C. Oglesby, M.D., M.P.H., Professor of Public Health, Division Head
Winne Willis, R.N., Sc.D., Associate Professor of Public Health
Carl Coffelt, M.D., M.P.H., Adjunct Faculty in Public Health
Ofelia V. Dirige, R.D., Dr.P.H., Adjunct Faculty in Public Health
Betty Z. Bassoff, D.S.W., Lecturer in Public Health
Helen M. Wallace, M.D., M.P.H., Lecturer in Public Health

Occupational and Environmental Health
John B. Conway, M.P.H., Ph.D., Professor of Public Health, Associate Director of the Graduate School of Public Health (Graduate Adviser)
Behzad S. Samimi, M.S.P.H., Ph.D., C.I.H., Professor of Public Health, Division Head
Ann de Peyser, Ph.D., Associate Professor of Public Health and Biology
Richard M. Gensberg, Ph.D., Assistant Professor of Public Health

Master of Public Health Degree

General Information
The Graduate School of Public Health in the College of Health and Human Services offers graduate study leading to the Master of Public Health degree. The curriculum enables students to prepare for professional careers with responsibilities for health services in public and private agencies and organizations.

Students may specialize in one of six concentrations. The following general description of faculty and student research currently being conducted in each of the six concentrations helps to illustrate the role of each specialty area within the broad, interdisciplinary field of public health:

- **Environmental Health and Toxicology**: isolation and identification of chemical and microbiological disease agents in air, water, and soil; toxicity and mechanism studies of pesticides, food contaminants, diesel exhaust and other environmental chemicals, with emphasis on pulmonary and reproductive system toxicants.
- **Epidemiology and Biostatistics**: identification of biological, social and behavioral risk factors for human diseases, determination of the distribution and etiology of disease in human populations, particularly infectious and chronic diseases; development and application of statistical methods and models in the fields of health, medicine and biology.
- **Health Promotion**: identification of risk factors, health education and behavior modification approaches to reducing the incidence of chronic diseases, injury, and other major health problems; particular emphasis on minority, disadvantaged, and aged populations.
- **Health Services Administration**: management, planning, regulation, utilization, quality assurance and evaluation of health services; current emphasis on hospital administration, long-term and ambulatory care, mental health and dental services, and clinical laboratories.
- **Maternal and Child Health**: health services delivery to mothers and children, with emphasis on family planning, perinatal care, identification of needs and program planning and evaluation in maternal and child health services.
- **Occupational Health and Industrial Hygiene**: recognition, evaluation and control of chemical, physical, and biological hazards in the workplace; current emphasis on studies of airborne contaminants and respiratory protection.

A significant number of expert practitioners in specialized fields of public health are involved in the academic and practical components of the program, to provide breadth and depth of opportunity for the student. Many of the health facilities within San Diego are available for field study and practicum requirements. In addition, modern computer facilities and laboratories are available on the San Diego State University campus.

The School's close proximity to the Mexican border has promoted the development of strong professional ties between the Graduate School at Public Health faculty and students and their counterparts in Baja California. A number of jointly sponsored binational research and service projects are aimed at improving public health conditions and health services on both sides of the U.S.-Mexico border.

Admission to Graduate Study
Applicants seeking admission to the program leading to the Master of Public Health degree should contact the Graduate School of Public Health requesting appropriate application materials. Detailed information concerning application procedures will be sent to the applicant along with appropriate application forms.

In addition to satisfying the requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, the student seeking admission to the Graduate School of Public Health must: (1) submit a narrative statement as described in the Graduate School of Public Health must; (2) submit a narrative statement as described in Part Two of this bulletin; (3) submit three letters of recommendation; (3) present additional evidence of promise of success in academic and professional activities; and (4) documents competence or prior academic preparation in the biological sciences, social sciences, and quantitative methods. A personal interview is desired when feasible.

Advancement to Candidacy
All students must: (1) meet the general requirements for advancement to candidacy as described in Part Two of this bulletin; (2) satisfactorily pass a faculty evaluation of the progress described in Part Two of this bulletin; (3) complete the core courses, Public that they are making in their graduate course of study; (3) complete the core courses, Public
Health 601, 602, 603, 604, 605 (students in Health Services Administration will substitute Public Health 641 and 644 for Public Health 605 and students in Health Promotion will substitute Public Health 661 and 662 for Public Health 603) with a grade point average of at least 3.0 and no grade less than a B- in each core course completed; and (4) have completed at least 12 semester units of approved public health coursework.

In addition, the student must be recommended for advancement to candidacy by the faculty of the Graduate School of Public Health.

Specific Requirements for the Master of Public Health Degree
(Major Code: 12141)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete an officially approved course of study of not less than 48 units (55 units for students in Health Services Administration concentration) including: (1) twelve units of core courses, Public Health 601, 602, 603**, 604, and 605; (2) a minimum of 21 units of graduate courses in the area of concentration; (3) a maximum of twelve units of supervised field placement (if the student has not had equivalent field experience); and (4) electives selected with the approval of the graduate adviser. In addition, Public Health 799A. Thesis, must be included in the program except in the Maternal and Child Health, Health Services Administration, and Health Promotion concentrations where the student may select the Plan B option, with a comprehensive written examination in lieu of the thesis when approved by the graduate adviser. Up to six units of graduate credit may be accepted in transfer, with the approval of the graduate adviser.

* Students in Health Services Administration will take Public Health 641 and Public Health 644 in lieu of Public Health 605.
** Students in Health Promotion will take Public Health 661 and 662 in lieu of Public Health 603.

Concentration in Environmental Health
Courses required for the concentration:
PH 632 Air Quality (3)
PH 634 Environmental Protection (3)
PH 639 Water Quality Investigation (3)
or for students wanting to focus on toxicology:
PH 637 Biological Mechanisms of Environmental Toxicants (3)
PH 638A Principles of Toxicology (3)
PH 638B Methods in Toxicity Testing (3)
PH 739 Quality Assurance in Toxicity Testing (3)

Prescribed electives (a minimum of six additional units selected with the approval of the adviser from):
PH 631 Consumer Health and Safety (3)
PH 635 Occupational Medicine (3)
PH 636 Hazardous Waste Management (3)
PH 637 Biological Mechanisms of Environmental Toxicants (3)
PH 638A Principles of Toxicology (3)
PH 700 Seminar in Public Health (1-3)
PH 721 Environmental Epidemiology (3)
PH 731 Environmental and Occupational Health Policy (3)
PH 732 Principles of Industrial Hygiene (4)
PH 734 Noise in the Work Place (3)
PH 737 Advanced Industrial Hygiene (4)
PH 738 Topics in Toxicology (3)
PH 798 Special Study (1-3) Cr/NC/SP

Electives (6 units): These electives may include any public health course or selected graduate level courses in other departments with the approval of the faculty adviser.

Concentration in Epidemiology
Courses required for the concentration:
PH 621 Epidemiology of Infectious Diseases (3)
PH 622 Epidemiology of Chronic Diseases (3)
PH 623 Epidemiological Methods (3)
PH 627 Advanced Statistical Methods in Public Health (3)

Prescribed electives in Epidemiology (two courses selected from):
PH 625 Control of Infectious Diseases (3)
PH 649 Public Health Data Organization and Management (3)
PH 721 Environmental Epidemiology (3)

Electives (3 units selected with the approval of the concentration faculty): These electives may include any public health course or selections from the following:

Biology 552, 553, 554, 555, 556, 557, 559, 644
Family Studies and Consumer Sciences 600, 603, 606, 607, 609, 700
Mathematics 550, 551A, 554A, 562, 673, 674, 677
Sociology 770

Specialization in Epidemiology-Biostatistics
Courses required for the specialization:
PH 622 Advanced Statistical Methods in Public Health (3)
PH 650 Field Practice (3-6) Cr/NC
MATH 551A, 551B Mathematical Statistics (3-3)
MATH 554A Computer Oriented Statistical Analysis (3)
MATH 673 Sample Surveys (3)
MATH 677 Design of Experiments (3)

Prescribed electives (3 courses selected with approval of adviser):
PH 623 Epidemiological Methods (3)
PH 647 Quantitative Methods (3)
PH 553 Stochastic Processes (3)
MATH 672 Nonparametric Statistics (3)
Approved public health or graduate biology course (3)

Concentration in Health Promotion
Courses required for the concentration:
PH 607 Research Methods and Proposal Writing (3)
PH 661 Theoretical Foundations of Health Promotion (3)
PH 662 Motivating Health Behavior (3)
PH 663 Health Promotion Communications Theory and Design (3)
PH 666 Health Promotion Program Planning and Assessment (3)

Prescribed electives (choose two or more different courses from):
PH 664 Health, Society and Human Behavior (3)
PH 665 Health Promotion in Clinical Settings (3)
PH 667 Prevention and Control of Chronic Diseases (3)
PH 668 Seminar in Health Promotion Research (3)
PH 669 Health Risk Appraisal (3)
PH 671 Health Promotion in Work Settings (3)
PH 700 Seminar in Public Health (1-3)
PH 761 Programming Health Promotion (3)
PH 762 Behavioral Medicine (3)
PH 763 Injury Control (3)
PH 785 Stress and Disease (3)
PH 797 Research (3) Cr/NC/SP

Electives (6 units to be chosen with the approval of the faculty from any Public Health course or Health Science 573, 574).
Concentration in Health Services Administration

Courses prerequisite to this concentration are Accountancy 600 and Economics 603 or their equivalents as determined by the graduate adviser. If these courses or the equivalents have not been completed prior to admission, they should be included in the first semester course requirements.

ACCTG 600 Financial Accounting (3) or equivalent
ECON 603 Economic Analysis (3) or equivalent

Courses required for the concentration:
PH 641 Health Care Delivery Systems (3)
PH 642A Professional Development of the Health Services Administrator (2)
PH 642B Professional Development of the Health Services Administrator (1)
PH 643 Strategic and Program Planning in Health Services (3)
PH 644 Health Services Management (3)
PH 645 Health Services Economics (3)
PH 647 Quantitative Methods (3)
PH 742A Health Services Financial Management (3)
PH 742B Health Services Financial Management (3)

Setting electives (at least one):
PH 743 Organization and Management of Health Services (3)
A. Hospitals
B. Long-term Care
C. Ambulatory Care

Skill electives (9 units selected with approval of the faculty).

Concentration in Maternal and Child Health

Courses required for the concentration:
PH 651A Problems and Programs in Maternal and Child Health (3)
PH 651B Seminar in Problems and Programs in Maternal and Child Health (3)
PH 652 Maternal Health (3)
PH 653 Family Planning (3)
PH 655 Child Health (3)
PH 747 Program Evaluation in Health Services (3)

Electives (6 units): At least three units must be selected from the following MCH courses.

PH 654 Maternal and Child Health Legislation (3)
PH 656 Seminar in International Maternal and Child Health (3)
PH 700 Seminar in Public Health (1-3)
PH 751 Perinatal Health Care Services (3)
PH 752 Health Care of Children of School Age (3)
PH 754 Handicapped Children and Youth (3)
PH 757 Seminar in Nutrition in Maternal and Child Health (3)

Concentration in Occupational Health

Courses required for the concentration:
PH 635 Occupational Medicine (3)
PH 638A Principles of Toxicology (3)
PH 732 Principles of Industrial Hygiene (4)
PH 736 Occupational Health Program Management (3)

Electives (17 units for occupational health, 16 units for industrial hygiene focus): At least three courses must be selected from the following list. The remaining elective units may be selected with the approval of the academic adviser from any public health course or graduate level courses offered by other departments.

PH 632 Air Quality (3)
PH 634 Environmental Protection (3)
PH 637 Biological Mechanisms of Environmental Toxicants (3)
PH 639 Water Quality Investigation (3)
PH 700 Seminar in Public Health (1-3)
PH 721 Environmental Epidemiology (3)
PH 731 Environmental and Occupational Health Policy (3)
PH 734 Noise in the Workplace (3)
PH 735 Industrial Ventilation (3)
PH 736 Occupational Health Program Management (3)
PH 737 Advanced Industrial Hygiene (4)

Specialization in Occupational Health Promotion

Courses required for the specialization:
PH 607 Research Methods and Proposal Writing (3)
PH 635 Occupational Medicine (3)
PH 650 Field Practice (3) Cr/NC
PH 662 Motivating Health Behavior (3)
PH 671 Health Promotion in Work Settings (3)
PH 732 Principles of Industrial Hygiene (4)
PH 736 Occupational Health Program Management (3)

Prescribed electives (6 units selected from Group A and 6 units selected from Group B for a total of 12 units):

Group A:
PH 661 Theoretical Foundations of Health Promotion (3)
PH 663 Health Promotion Communications Theory and Design (3)
PH 665 Health Promotion in Clinical Settings (3)
PH 666 Health Promotion Program Planning and Assessment (3)
PH 669 Health Risk Appraisal (3)
PH 762 Behavioral Medicine (3)
PH 763 Injury Control (3)

Group B:
PH 637 Biological Mechanisms of Environmental Toxicants (3)
PH 638A Principles of Toxicology (3)
PH 721 Environmental Epidemiology (3)
PH 734 Noise in the Workplace (3)

Students must enroll in Public Health 799A (Thesis, 3 units), and complete a quantitative analysis concerning Occupational Health Promotion. The student's thesis committee must include one faculty member from the Division of Health Promotion and one from the Division of Occupational and Environmental Health.

Master of Social Work and Master of Public Health Degrees

The Graduate School of Public Health and the School of Social Work offer a three year concurrent graduate program leading to a Master of Public Health and a Master of Social Work. The major objective of the concurrent program is to offer preparation in the fields of public health and social work for the purpose of providing the knowledge and skills necessary to health and social work. The student will select one of two practice contexts: Social Work for a Community and Social Work with a Concentration in Public Health. For a listing of degree requirements refer to the section of this bulletin on Social Work.
Preventive Medicine Residency Certificate

The purpose of the preventive medicine residency certificate is to train physicians to assure that they have adequate knowledge, attitudes, and skills germane to general preventive medicine and occupational medicine. The physician will be eligible to sit for the Board certification examination administered by the American Board of Preventive Medicine.

In addition to satisfying the requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, the student seeking admission to the preventive medicine residency must (1) fulfill the admission requirements given above, and (2) have completed a Doctor of Medicine degree from an accredited institution.

The student will be expected to complete a three year course of study which involves the completion of a clinical year provided by the University of California, San Diego School of Medicine, the completion of an academic year leading to the Master of Public Health degree provided by the Graduate School of Public Health at San Diego State University, and appropriate practicum experiences under the supervision of faculty of one of the two cooperating institutions.

The student is expected to complete the number of units required for the Master of Public Health degree as well as those additional units which may be prescribed in order to complete the practicum year, i.e., Public Health 750.

The student is expected to have maintained a 3.0 average overall in the coursework at the Graduate School of Public Health or at the University of California, San Diego School of Medicine.

Program Adviser:
General Preventive Medicine
Kevin M. Patrick, M.D., Director
Graduate School of Public Health

Courses Acceptable on Master’s Degree Programs in Public Health

GRADUATE COURSES

601. Epidemiology (3)
Prerequisite: Consent of instructor.
Distribution and determinants of diseases; role of epidemiology in public health. Descriptive, analytic and experimental epidemiology.

602. Biostatistics (3)
Prerequisite: Mathematics 250.
Statistical reasoning applied to public health; probability, hypothesis testing, regression and correlation, analysis of variance, measurement theory and modeling.

603. Behavioral and Social Science in Public Health (2)
Prerequisites: Anthropology 526; Psychology 316, 340; Sociology 436.
Role of psychological, social and environmental variables in health and illness. Multifactorial psychosocial model of disease susceptibility.

604. Environmental Determinants of Human Health (2)
Prerequisites: Biology 100, Chemistry 100.
Environmental determinants and their influence on human health. Biological, physical and chemical factors which affect the health of a community.

605. Planning, Policy Analysis and Administration of Health Programs (2)
Prerequisite: Sociology 101.
United States health care system with focus on resources planning, policy and management. Includes health consumer issues, health organizational problems and elements of public health administration.

606. Seminar in Pathophysiology (3)
Prerequisite: Consent of instructor.
Deviations from normal structure and function in human disease. Morbid anatomic and pathophysiologic basis for diagnosis and treatment of human disease.

607. Research Methods and Proposal Writing (3)
Two lectures and three hours of laboratory.
Prerequisites: Public Health 601, 661, and consent of instructor. Recommended: Public Health 602.
Direct observation measurement, group and intensive experimental designs. Laboratory exercises and proposal writing applicable to public health.

621. Epidemiology of Infectious Diseases (3)
Prerequisite: Public Health 601.
Utilizing selected infectious diseases and environmental settings, provides scientific background on which epidemiological investigations and control measures are based.

622. Epidemiology of Chronic Diseases (3)
Prerequisite: Public Health 601.
Epidemiology of selected chronic diseases.

623. Epidemiological Methods (3)
Prerequisites: Public Health 602, 621 or 622.
Topics include: analysis of descriptive data, design of studies, evaluation of data, development of biological models. Examples of both acute and chronic diseases.

625. Control of Infectious Diseases (3)
Prerequisite: Public Health 621.
Theoretical and practical experience in techniques available for control of infectious diseases.

627. Advanced Statistical Methods in Public Health (3)
Prerequisite: Public Health 602.
Techniques for application of statistical theory to actual data. Topics include probability theory, estimation of parameters, and tests of hypothesis for both the discrete and continuous case.

631. Consumer Health and Safety (3)
Health problems associated with consumer goods, toys, apparel, aerosols and food additives.

632. Air Quality (3)
Prerequisites: Biology 100, Chemistry 251, Physics 180A.

634. Environmental Protection (3)
Prerequisites: Biology 100, Chemistry 251, Physics 180A.
Techniques for control of water supplies, liquid and solid waste disposal, lighting, heat, food and housing, pesticides and community noise.

635. Occupational Medicine (3)
Prerequisites: Public Health 601, 661, and consent of instructor. Recommended: Public Health 601.

637. Biological Mechanisms of Environmental Toxins (3)
Prerequisites: Biology 261, Chemistry 160, and 230.
Biologic effects and underlying mechanisms of action of harmful environmental agents on biologic mechanisms cells and tissues. Emphasis on toxic chemicals and applications of basic mechanisms research to public health situations.

638A. Principles of Toxicology (3)
Prerequisites: Biology 261, Chemistry 160, and 230.
Dose-response and other principles for evaluating the effects of toxic chemicals on mammalian organ systems.

638B. Methods in Toxicity Testing (3)
One lecture and six hours of laboratory.
Prerequisite: Credit or concurrent registration in Public Health 638A.
Laboratory methods used in evaluating chemicals for potential human toxicity.
639. Water Quality Investigation (3)
   Two lectures and three hours of laboratory.
   Prerequisite: Public Health 604 or 634.
   Human health problems associated with water usage and with various aquatic environments.

641. Health Care Delivery Systems (3)
   National health care system; topics include health personnel, facilities, organization and funding of health care.

642A. Professional Development of the Health Services Administrator (2)
   Career opportunities and job functions for health services administrator or planner. Introduces future health services administrator to the field of practice from the perspective of various functional roles that could be entered into upon graduation. Limited to health services administration students.

642B. Professional Development of the Health Services Administrator (1)
   Legal, moral, and ethical issues in health services administration and issues related to personal and professional growth. Professionals, the characteristics of professionals, and functions of professional organizations. Interaction between administrator and other professionals. Limited to health services administration students.

643. Strategic and Program Planning in Health Services (3)
   Prerequisites: Public Health 622 and 641.
   Strategic analysis, policy formulation, and program implementation for health services institutions and programs. Use of internal and extraneous data sources, market research, forecasting techniques, and implementation methods in health planning. (Formerly numbered Public Health 643A-643B.)

644. Health Services Management (3)
   Prerequisite: Public Health 641.
   Decision making, change implementation, and control processes in health care organizations. Emphasizes behavioral, organizational, and situational factors affecting the management role in hospitals, and management strategies for analyzing problems and implementing changes to improve institutional performance.

645. Health Services Economics (3)
   Prerequisite: Economics 603.
   Topics related to economics of health care, including supply and demand factors, financing of care, efficiency and cost of delivery, and allied areas.

646. Legal and Ethical Aspects of Health Care (3)
   Prerequisite: Public Health 641.
   Structure of American legal and judicial systems in relation to health, medical care, and related public policy. Ethical and legal considerations of resource allocation, termination of treatment, and experimentation.

647. Quantitative Methods (3)
   Prerequisites: Public Health 602 and 641.
   Health services applications of quantitative methods to management decision making. Includes subjects applicable to management of hospitals, clinics, and other health care organizations.

649. Public Health Data Organization and Management (3)
   Two lectures and three hours of laboratory.
   Prerequisites: Public Health 601 and 602.
   Sources of morbidity, mortality, demographic and health services utilization data. Systematic approaches to analysis, collection, processing and storage of data of health significance. Statistical packages for application of health services and epidemiologic techniques.

650. Field Practice (3-6) Cr/NC
   Field instruction in public health settings. Application of public health principles and skills to practical problems. Maximum credit six units of Public Health 650 applicable to a master's degree.
   A. Epidemiology
   B. Maternal and Child Health
   C. Occupational Health
   D. Environmental Health
   E. Health Services Administration
   F. Health Promotion

651A. Problems and Programs in Maternal and Child Health (3)
   Major problems in health and social care of mothers and children; programs and services designed to meet major needs.

651B. Seminar in Problems and Programs in Maternal and Child Health (3)
   Prerequisite: Public Health 651A.
   Health and social needs of mothers, children, and youth. Planning, implementation, analysis, and evaluation of programs and services for mothers, children, and youth.

652. Maternal Health (3)
   Prerequisite: Concurrent registration in Public Health 651A.
   Major health problems and needs in health care of women in the childbearing age; conceptions, prenatal, postpartum, interconceptional care and services; maternal mortality; antecedents of infant and perinatal mortality; nutrition; nurse midwifery.

653. Family Planning (3)
   Prerequisite: Public Health 651A.
   Physiology of menstruation, pregnancy and lactation; methods of contraception, effectiveness, safety, acceptance and cost; abortion; sterilization; family planning services and programs.

654. Maternal and Child Health Legislation (3)
   Present and proposed status and trends of legislation for the health care of mothers and children. Organization of health care for mothers and children at national, state and local levels.

655. Child Health (3)
   Prerequisite: Graduate standing.
   Child health needs, problems and programs.

656. Seminar in International Maternal and Child Health (3)
   Prerequisite: Public Health 651A.
   Major health needs and problems of mothers, infants, children, and youth around the world, with emphasis on developing countries. New trends in World Health Organization such as primary health care, training of personnel in health services for mothers, infants, children and youth.

661. Theoretical Foundations of Health Promotion (3)
   Prerequisite: Health Science 250.
   History and philosophy of health education. Psychological, sociological, economic, and political theories relevant to the mission and processes of health education with special reference to schools and colleges. (Formerly numbered Health Science 621.)

662. Motivating Health Behavior (3)
   Prerequisite: Health Science 401.
   Application of behavioral change techniques and health education methodology in health promotion activities within the school-community setting. (Formerly numbered Health Science 606.)

663. Health Promotion Communications Theory and Design (3)
   Prerequisite: Health Science 402.
   Theory, design and implementation of health education communications in school and community contexts. Extensive use of student design, analysis, and projects.

664. Health, Society and Human Behavior (3)
   Prerequisites: Psychology 101, Sociology 101.
   Historical and contemporary examination of health problems of individuals and communities. Health needs, resources; impact of society on health and health on society.

665. Health Promotion in Clinical Settings (3)
   Two lectures and three hours of laboratory.
   Prerequisites: Public Health 661 and 662.
   Planning, organization, implementation, conduct and evaluation of programs of health education and patient health counseling within medical care settings.

666. Health Promotion Program Planning and Assessment (3)
   Prerequisites: Public Health 661, 662.
   Program planning and assessment, theories, systems and procedures relevant to health promotion and education.
667. Prevention and Control of Chronic Diseases (3)  
Prerequisite: Public Health 601 and 602.  
Health promotion strategies for modification of individual behaviors and social practices to lower risk of chronic disease.

668. Seminar in Health Promotion Research (3)  
Prerequisite: Graduate standing in public health.  
Philosophical and methodological issues in current research and professional publications in public health and health promotion.

669. Health Risk Appraisal (3)  
Prerequisites: Public Health 601, 602, 661, 662.  
Techniques available for identifying personal health risk. Use of these methods for inducing change. Evaluation of effectiveness of methodologies.

671. Health Promotion in Work Settings (3)  
Prerequisite: Public Health 666.  
Health promotion programs pertinent to business and industrial settings. Environmental, occupational, and lifestyle issues.

696. Contemporary Topics in Public Health (1-3)  
Intensive study in specific areas of public health and health services administration. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

700. Seminar in Public Health (1-3)  
Investigation of current problems in one of the fields of public health. Maximum credit nine units of Public Health 700 applicable to a master's degree. These units may be in a single concentration area or any of the public health concentration areas.

706. Seminar in Critical Care Pathophysiology (3)  
Prerequisite: Consent of instructor.  
Pathophysiologic anatomy as a basis for prevention, detection, and intervention in human disease in critical care settings.

721. Environmental Epidemiology (3)  
Uses of epidemiological methods in study of environmental hazards affecting community health and health of workers. Case studies.

731. Environmental and Occupational Health Policy (3)  
Prerequisite: Credit or concurrent registration in Public Health 604.  
Current issues in environmental and occupational health, including risk assessment, policy development, and program management.

732. Principles of Industrial Hygiene (4)  
Three lectures and three hours of laboratory.  
Prerequisites: Chemistry 251, 341, and Physics 190A.  
Fundamental principles of recognition, evaluation, and control of hazardous chemical, physical, and biological agents in the work place.

734. Noise in the Work Place (3)  
Prerequisites: Biology 100 and Physics 180A.  
Physics of sound, physiology and effects of noise on hearing; noise assessment and control in the work place.

735. Industrial Ventilation (3)  
Two lectures and three hours of laboratory.  
Prerequisite: Public Health 732.  
Techniques of general, dilution, and local exhaust ventilation. Ventilation system design. Techniques and strategies of ventilation survey and testing. OSHA ventilation regulations.

736. Occupational Health Program Management (3)  
Prerequisite: Public Health 732.  
Governmental regulations and needs of private industry in determining delivery of occupational health services. Designing, implementing, and managing occupational health programs.

737. Advanced Industrial Hygiene (4)  
Two lectures and six hours of laboratory.  
Prerequisite: Public Health 732.  
Techniques and strategies for investigation and control of potential health hazards in occupational environment.

738. Topics in Toxicology (3)  
Prerequisite: Public Health 638A.  
Topics in toxicology to include food toxicants, pesticides, soil and groundwater pollutants, industrial toxicology and quality assurance, toxicokinetics, genetic toxicology and toxicology in risk assessment.

739. Quality Assurance in Toxicity Testing (3)  
Two lectures and three hours of laboratory.  
Prerequisite: Public Health 638B.  
Protocol and research objectives; proper data collection, analysis and recording, quality control in animal studies; contractual and legal responsibility; statistical considerations, laboratory management and personnel safety.

741. Health Policy and Politics (3)  
Prerequisite: Public Health 641.  
Mechanisms for establishing health policy; political processes; examination of current California and national health policy and policy options for the future.

742A. Health Services Financial Management (3)  
Prerequisite: Accountancy 600.  
Financing and accounting principles applied to health services facilities and organizations, financial goals, statement analysis, cost control, budgeting, working capital management, capital financing and structure.

742B. Health Services Financial Management (3)  
Prerequisite: Public Health 742A.  
Continuation of Public Health 742A. Hospital chart of accounts, Medicare and state reporting, rate setting methods, diagnosis related groups, cost based reimbursement, physician reimbursement and negotiations.

743. Organization and Management of Health Services (3)  
Prerequisite: Public Health 644.  
Organization and management of different settings in which health care services are provided. May be repeated with new content. Maximum credit nine units of Public Health 743 applicable to a master's degree.

745. Seminar in Health Economics (3)  
Prerequisite: Public Health 645.  
Operation and interaction of markets for medical care and health insurance. Development of analytical skills appropriate for examining current policy issues in health.

746. Quality of Care Assessment and Assurance (3)  
Prerequisite: Public Health 641.  

747. Program Evaluation in Health Services (3)  
Prerequisites: Public Health 602, 641 and 647.  
Evaluation of programs with topics covering population health care needs assessment, establishment of program goals, evaluation design, data collection, as applicable to ongoing establishment of program goals, evaluation design, data collection, and feedback mechanisms to relate evaluation to program activities.
750. Advanced Field Practice (3-6) Cr/NC
Prerequisite: Public Health 650.
Advanced field instruction in public health setting. Intensification and continuation of application of public health principles and skills to public health problems. Maximum credit six units of Public Health 750 applicable to a master's degree.
A. Epidemiology
B. Maternal and Child Health
C. Occupational Health
D. Environmental Health
E. Health Services Administration
F. Health Promotion

751. Perinatal Health Care Services (3)
Prerequisite: Public Health 651A.
Perinatal mortality and morbidity; recent efforts at prevention, planning and providing services; results; regionalization of care; follow-up programs and results.

752. Health Care of Children of School Age (3)
Prerequisite: Public Health 651A.
Major health problems of children of school age; preschool and school health programs; school-age children with special health care needs. Use of school nurse practitioners.

754. Handicapped Children and Youth (3)
Prerequisite: Public Health 651A.
Principles and management of handicapped infants, children and adolescents (case finding, diagnosis, treatment, rehabilitation; special education; vocational assistance; residential care; prevention); legislative base; funding; common types of developmental disabilities.

756. Seminar in Genetics: Public Health Application (3)
Prerequisite: Public Health 651A.
Current genetics information and its clinical application in public health programs with emphasis in maternal and child health; management of genetic disorders and analysis of family and community impacts.

757. Seminar in Nutrition in Maternal and Child Health (3)
Prerequisite: Consent of instructor.
Nutritional needs and problems of women, infants, and children. Analysis of nutrition programs to meet these needs at the international, national and local levels, including site visits.

761. Programming Health Promotion (3)
Prerequisites: Public Health 661 and 663.
Current programs, practices, and problems in health promotion activities of hospitals, clinics, public health departments, and government. Issues necessitating health promotion programs. Formulation of effective promotion planning in various settings.

762. Behavioral Medicine (3)
Prerequisites: Public Health 661 and 662.
Behavioral management approaches to health care problems. Diseases and conditions that arise from physical, psychological and environmental causes; behavioral interventions that attenuate disease process and improve compliance.

763. Injury Control (3)
Prerequisites: Public Health 601, 602, 661, and 662.
Factors in injury causation. Approaches to injury prevention and control including design and application of health promotion strategies to reduce injury.

765. Stress and Disease (3)
Prerequisites: Public Health 601, 602, 661, 662.
Psychosocial stressors and their causative macrovariables in society and environment. Application of behavioral techniques to cope with stressors of life.

797. Research (1-3) Cr/NC/SP
Prerequisite: Consent of instructor.
Research in one of the fields of public health. Maximum credit six units applicable to a master's degree. Maximum combined credit six units of Public Health 797 and 798 applicable to a master's degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff, to be arranged with the director and instructor.
Individual study. Maximum credit six units applicable to a master's degree. Maximum combined credit six units of Public Health 797 and 798 applicable to a master's degree.

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

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

Professional Studies and Fine Arts 431
(619) 594-5110

Faculty
Jessie T. Dixon, Ph.D., Professor of Recreation
Mary R. Duncan, Ph.D., Professor of Recreation
Daniel L. Dustin, Ph.D., Professor of Recreation (Graduate Adviser)
Joyce M. Gattas, Ph.D., Professor of Recreation, Dean, College of Professional Studies and Fine Arts
Bruno Hans Geba, Ph.D., Professor of Recreation
Gene G. Lamke, M.A., Professor of Recreation, Chair of Department
Donald W. Peterson, Ph.D., Associate Professor of Recreation
Janna S. Rankin, J.D., Associate Professor of Recreation
Richard K. Namba, M.S., Assistant Professor of Recreation

General Information
The Department offers advanced coursework in recreation which may be used toward fulfilling the requirements for master's degrees in other departments with the approval of the student's graduate adviser.

UPPER DIVISION COURSES

548. Aquatic Administration (3)
Management of swimming pools, beaches, lakes and marinas; safety factors; legal requirements; health standards; facilities and programming.

549. Camp Administration (3)
Prerequisite: Recreation 110.
Operation of resident, day and travel camps. Staff management, health and safety, finances, food services, maintenance, planning and publicity.

560. Legal and Fiscal Aspects of Parks and Recreation Management (3)
Prerequisite: Recreation 464.
Legal obligations and basic principles of fiscal management pertinent to delivery of leisure services. Budgeting, record keeping, liability, open space acquisition and preservation, constitutional guarantees, administrative regulations, contracts, criminal law and legal research.

565. Recreation Systems Administration and Research (3) I, II
Prerequisite: Recreation 464.
Organizational behavior, planning, policy development, and future trends of recreation systems. Methods of investigation, data analysis, and reporting in relation to research needs in recreation.

575. Designing Recreation Areas and Facilities (3) I, II
Prerequisite: Recreation 101.
Design principles and concepts applied to planning and development of park and recreation areas and facilities.

580. Leisure and the Aging Process (3) II
Concepts of the relationship between leisure and gerontology are examined. Influence of leisure and recreation on work and life satisfaction of older adults.

GRADUATE COURSES

604. Seminar in Problems in Recreation (3) Alternate Years
A survey of current problems facing the recreation profession, a review of literature, discussion of trends and observation of school situations together with the analysis and evaluation of actual problems. Written reports are required.

760. Recreation Administration and Supervision (3) Alternate Years
Prerequisites: Recreation 484 and 565.
Methods, techniques and evaluation systems used by chief administrators, department heads and supervisors in both public and private agencies.

Religious Studies

Adams Humanities 4231, (619) 594-5185

Faculty
Christine R. Downing, Ph.D., Professor of Religious Studies
Mary Carlisle Friedman, Ph.D., Professor of Religious Studies, Philosophy and Comparative Literature
Irving Alan Sparks, Ph.D., Professor of Religious Studies, Chair of Department
Marcia K. Hermansen, Ph.D., Associate Professor of Religious Studies
Willard L. Johnson, Ph.D., Associate Professor of Religious Studies
Issa J. Khalil, Ph.D., Associate Professor of Religious Studies
Linda D. Holler, Ph.D., Assistant Professor of Religious Studies

General Information
The Department offers advanced coursework in religious studies which may be used toward fulfilling advanced degree requirements in the Special Major and other departments with the approval of the student's graduate adviser.

UPPER DIVISION COURSES

506. Spiritual Traditions of India (3)
Prerequisite: Three units of religious studies.
India's religions and philosophical modes of thought, reading and analysis of primary texts in translation.

508. Spiritual Traditions of East Asia (3)
Prerequisite: Three units of religious studies.
East Asian religious and philosophical modes of thought, especially those of China and Japan; reading and analysis of primary texts in translation.

518. The Oracular Tradition (3)
Prerequisite: Three units of religious studies.
Oracular traditions of East and West, with special attention to the I Ching and the Tarot.

522. Religion in America (3)
Prerequisite: Three units of religious studies.
Selected topics in religion in America, such as Deism, Transcendentalism, pragmatism, church-state relations, Jewish identity, etc. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

580. A Major Figure (3) I, II
Prerequisite: Three units of religious studies.
Life, works and significance of one major figure in a religious tradition. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

581. A Metaphysical Doctrine (3) I, II
Prerequisite: Three units of religious studies.
Teachings of one major doctrine to the teachings of one of the major religious traditions. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

596. Advanced Topics in Religious Studies (1-3)
Prerequisite: Consent of instructor.
Advanced selected topics in religious studies. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 596, 496, 596 Class Schedule for specific content. Maximum credit six units.

596. Advanced Topics in Religious Studies (1-3)
Prerequisite: Consent of instructor.
Advanced selected topics in religious studies. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 596, 496, 596 Class Schedule for specific content. Maximum credit six units of 596 applicable to a 30-unit master's degree. Maximum combined credit of six units of 596 and 496 applicable to a 30-unit master's degree.
GRADUATE COURSES

696. Seminar in Selected Topics (3)
Prerequisite: Twelve upper division units in religious studies. Directed research in a major problem or movement in religious studies. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master’s degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisites: Twelve upper division units in religious studies and consent of staff, to be arranged with department chair and instructor. Individual study: Maximum credit six units applicable to a master’s degree.

RUSSIAN

Library East 468B, (619) 594-6313

Faculty
Leland A. Fetzer, Ph.D., Professor of Russian (Graduate Adviser)
Ludek A. Kozlik, Ph.D., Professor of Russian
Julian H. Wulbern, Ph.D., Professor of German, Chair of Department

General Information
The Department of German and Russian Languages and Literatures, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Russian.

The Master of Arts degree provides advanced training for students who plan to terminate their graduate studies at the master’s level, and for those who plan to proceed to a doctoral degree in Russian or in Slavic linguistics.

A diversified graduate program is offered in both Russian literature and Slavic linguistics. Teaching and research interests of the faculty cover a wide spectrum, providing students with opportunities to concentrate in their area of preference. The library collection is geared to supporting graduate research.

Admission to Graduate Study
All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two 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 Two of this bulletin, students may be required to pass a qualifying examination in Russian given by the Department of German and Russian Languages and Literatures.

Specific Requirements for the Master of Arts Degree
(Major Code: 11061)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units which includes a major consisting of at least 24 units in Russian, including at least 18 units in 600- and 700-numbered courses, including Russian 799A, Thesis. If Plan B is followed, the student must pass a comprehensive written examination in lieu of Russian 799A.

Courses Acceptable on Master’s Degree Programs in Russian

UPPER DIVISION COURSES

501. Translation (3)
Prerequisite: Russian 302. Comparison of Russian and English through translation of a variety of texts from Russian to English and from English to Russian.

555. Russian Short Story, Drama and Poetry of the Nineteenth Century (3)
Prerequisites: Russian 200B and 212. Development of the Russian short story, drama and poetry of the nineteenth century.

561. Russian Novel of the Nineteenth Century (3)
Prerequisites: Russian 200B and 212. Development of the Russian novel of the nineteenth century.

563. Russian Literature of the Twentieth Century (3)
Prerequisites: Russian 200B and 212. Poetry, prose and drama of the twentieth century.
GRADUATE COURSES

580. Russian Syntax and Stylistics (3)
Prerequisites: Russian 301 and 302.
The structure of contemporary Russian.

581. Russian Phonetics and Morphology (3)
Prerequisites: Russian 200B and 212.
The sounds and forms of contemporary Russian.

596. Topics in Russian Studies (3) I, II
Prerequisite: Russian 302 (for linguistic topics) or Russian 306F (for literary topics).
Topics in Russian language, literature, or linguistics. May be repeated with new content.
See Class Schedule for specific content. Limit of nine units of any combination of 596, 696, courses applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

600. Research and Criticism (3)
Prerequisite: Twelve upper division units in Russian.
Purposes and methods of research in Slavic linguistics and in the literatures; theories and practice of literary criticism.

610. History of the Russian Language (3)
Prerequisite: Twelve upper division units in Russian.
The historical development of the Russian language.

650A-650B. Old Church Slavic (3-3)
Prerequisite: Twelve upper division units in Russian.
Structure of Old Church Slavic with readings and analysis of medieval Slavic texts.

680. Seminar in Slavic Linguistics (3)
Prerequisite: Twelve upper division units in Russian.
Selected topics in historical and comparative Slavic linguistics.

696. Topics in Russian Studies (3)
Prerequisite: Russian 600.
Intensive study in specific areas of Russian. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum credit of six units of 596 and 696 applicable to a 30-unit master's degree. (Formerly numbered Russian 76D.)

741. Seminar in Nineteenth Century Russian Literature (3)
Prerequisite: Twelve upper division units in Russian.
Directed research in the works of a representative author, genre or movement. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. (Formerly numbered Russian 76D.)

751. Seminar in Twentieth Century Russian Literature (3)
Prerequisite: Twelve upper division units in Russian.
Directed research in the works of a representative author, genre, or movement of the twentieth century. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. (Formerly numbered Russian 76D.)

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

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

Social Work

Hepner Hall 119, (619) 594-6865

Faculty
Harry Butler, Ph.D., Professor of Social Work
Inger P. Davis, Ph.D., Professor of Social Work
Alfred Dean, Ph.D., Professor of Social Work
Ronald W. Griffin, Ph.D., Professor of Social Work
Anita S. Herbst, Ph.D., Professor of Social Work
Dean of Student Affairs
Joseph B. Kelley, D.S.W., Professor of Social Work
William F. Lee, D.S.W., Professor of Social Work
Mary G. Schmidt, Ph.D., Professor of Social Work
E. Perroll Stanford, Ph.D., Professor of Social Work
Juan Ramon Valle, Ph.D., Professor of Social Work
Maria E. Zuziga, Ph.D., Professor of Social Work
Arthur L. Ellis, D.S.W., Associate Professor of Social Work
Joseph S. Gallegos, Ph.D., Associate Professor of Social Work
Rosalind Guercy, Ph.D., Associate Professor of Social Work
Maria J. Roberts DeGennaro, Ph.D., Associate Professor of Social Work
Marilyn A. Ruemshart, Ph.D., Associate Professor of Social Work
Alan E. Simon, Ph.D., Associate Professor of Social Work
James A. Ajemian, Ph.D., Assistant Professor of Social Work
Shirley A. Lockery, Ph.D., Assistant Professor of Social Work
Paul H. Raymond, M.S.W., Assistant Professor of Social Work
David P. Stoesz, D.S.W., Assistant Professor of Social Work
Vincent Sucato, Ph.D., Assistant Professor of Social Work

Master of Social Work Degree

General Information

The School of Social Work offers a two-year accredited graduate program leading to a Master of Social Work degree. The goal of the Master of Social Work program is the education of advanced social work practitioners with specialized knowledge in two concentrations:

1. (1) Populations-at-Risk: Aging; Children, Youth and Families; Health; and Mental Health, and necessary application forms, instructions for filing the necessary application forms, instructions for filing the
2. Social Work Methods: Clinical Social Work and Social Work Administration. The graduate program also emphasizes research and practice aimed at advancement of social work practice with individuals, groups, families, communities and organizations.

Admission to Graduate Study

To request application materials for the graduate program in Social Work, applicants should write to the Chair of Admissions, School of Social Work, San Diego State University. All necessary application forms, instructions for filing the program will be sent.

In order to be considered for the graduate program in Social Work, applicants must:

1. Meet the general requirements for admission to graduate study at the University (see Part Two of this bulletin).
2. Have a 2.75 or better grade point average in the last 60 semester or 90 quarter units in science or special education, social or behavioral science, or liberal arts, or have a combined score of 950 or above on the aptitude section of the Graduate Record Examination General Test. (The School may admit an applicant with a score less than 950 GRE score in a conditional status, providing other factors are highly positive.) Applicants
already holding another master's or higher degree from an accredited graduate school are exempt from the GRE.

4. Submit a personal statement and references as described in the application instructions. The references and personal statement will be used to help evaluate character and personal fitness for the profession.

Advancement to Candidacy
All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. In addition, the student must: (1) have earned at least 24 units of postbaccalaureate study with a minimum grade point average of 3.0 (B) and received credit (C) in field practicum; (2) be recommended by the faculty of the School of Social Work; (3) be approved for advancement by the Graduate Division.

Specific Requirements for the Master of Social Work Degree
(Major Code: 21041)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree in Part Two of this bulletin, the student must complete an officially approved 56-unit course of study including: (1) three units in social policy and services; (2) six units in human behavior and the social environment; (3) sixteen units of social work practice; (4) nine units of research; (5) sixteen units of practicum; and (6) six units of elective credit. Those enrolled in the full-time program must complete all course work on a year-round basis. Students enrolled in the part-time program must complete all course work in the minimum time specified in the Program of Study for MSW. The above table of course requirements represents the full-time program of study for MSW candidates (see part-time program guide in application materials for official part-time program). Students are required to follow the sequence of courses exactly as presented in the table. Variations are permitted only with special circumstances and the approval of the graduate adviser.

Program of Study
The above table of course requirements represents the full-time program of study for MSW candidates (see part-time program guide in application materials for official part-time program). Students are required to follow the sequence of courses exactly as presented in the table. Variations are permitted only with special circumstances and the approval of the graduate adviser.

Students will select two areas of concentrated study for their official program. In the first year, one of the following Population-at-Risk Concentrations is selected:

A. Social Work in Aging
The concentration addresses issues related to aging, including the needs and the elderly, functional and dysfunctional elements in service systems, and personal/societal significance of life-cycle changes. Policy and program implications of theories on social, psychological, and biological aging research are also considered. Students will explore the development of innovative strategies to improve the quality of life of older adults.

B. Social Work in Mental Health
The concentration addresses issues related to mental health, including the needs of individuals and families affected by mental illness, and the role of social workers in addressing these needs. Students will explore the development of innovative strategies to improve the quality of life of individuals and families affected by mental illness.

C. Social Work in Child Welfare
The concentration addresses issues related to child welfare, including the needs of children and families affected by child maltreatment, and the role of social workers in addressing these needs. Students will explore the development of innovative strategies to improve the quality of life of children and families affected by child maltreatment.

D. Social Work with Children, Youth and Families
The concentration addresses issues related to social work practice in the field of child welfare, including the role of social workers in addressing the needs of children and families affected by child maltreatment. Students will explore the development of innovative strategies to improve the quality of life of children and families affected by child maltreatment.
In the second year one of the following Social Work Method Concentrations is selected:

A. Clinical Social Work
Focus is on interpersonal conflicts and social functioning with emphasis on appropriate
intervention methods used primarily with individuals, families and groups. Emphasis is
placed on a problem-solving framework that utilizes assessment/diagnosis, intervention/ treatment and evaluative skills.

B. Social Work Administration
Focus is on intervention in inter- and intraorganizational functioning of social welfare agencies. Particular emphasis is placed on intervention in problems of organizational administration and development of voluntary and public social agencies. The skills emphasized include service delivery design, budgeting, team building and organizational decision making.

Master of Social Work and Master of Public Health Degrees

General Information
The School of Social Work and the Graduate School of Public Health offer a three year concurrent graduate program leading to a Master of Social Work and a Master of Public Health. The major objective of the concurrent program is to offer preparation in the fields of public health and social work for the purpose of providing the knowledge and skills necessary to emphasize concentration in Health, and the Maternal and Child Health concentration of Public Health; or Social Work with a concentration in Health and the Health Services Administration concentration of Public Health.

Admission to Graduate Study
To request application materials for the concurrent graduate program in Social Work and Public Health, applicants should write to the Director of the MSW/MPH Advisory Committee, Graduate School of Public Health, San Diego State University. All necessary application forms, instructions for filing them, and information about the program will be sent. In order to be considered for the concurrent MSW/MPH program, applicants must:
1. Meet the general requirements for admission to graduate study at the University (see Part Two of this bulletin).
2. Have a minimum 2.75 grade point average in the last 60 semester or 90 quarter units in undergraduate work completed. Undergraduate preparation in at least one of the following areas is preferred: social work, social or behavioral sciences, or health science.
3. Have a combined score of 950 or above on the Graduate Record Examination (GRE) General Test. Applicants already holding another master's degree or higher degree from an acceptable accredited graduate school are exempt from the GRE.
4. Submit a narrative statement as described in Instructions for Applicants.
5. Submit three letters of recommendation.
A committee composed of faculty from Social Work and Public Health will make all admission recommendations to the Dean of the Graduate Division and Research.

Specific Requirements for the MSW/MPH Concurrent Program
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Two of this bulletin, the student must complete an officially approved course of study of not less than 88 units as outlined below.

Option A: Social Work/Public Health—Maternal and Child Health

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<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>SW 600C</td>
<td>Seminar in Social Welfare Policy and Services: Health</td>
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<tr>
<td>SW 620C</td>
<td>Seminar in Human Behavior and Social Environment</td>
<td>3</td>
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<tr>
<td>SW 631C</td>
<td>Social Work Practice with Individuals, Families, and Groups, I: Health</td>
<td>3</td>
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<tr>
<td>SW 832C</td>
<td>Social Work Practice with Organizations and Communities, I: Health</td>
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Option B: Social Work/Public Health—Health Services Administration

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<td>SW 650C</td>
<td>Field Practicum: Health</td>
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<tr>
<td>SW 720C</td>
<td>Seminar in Human Behavior and Social Environment</td>
<td>3</td>
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<td>SW 733C</td>
<td>Social Work Practice with Individuals, Families and Groups, II: Health</td>
<td>2</td>
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<td>SW 734C</td>
<td>Social Work Practice with Organizations and Communities, II: Health</td>
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<td>SW 740C</td>
<td>Advanced Seminar in Social Work Administration</td>
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<td>SW 745C</td>
<td>Advanced Seminar in Selected Topics in Social Work Administration</td>
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<td>SW 791B</td>
<td>Applied Social Work Practice Research Seminar</td>
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<td>PH 602</td>
<td>Epidemiology</td>
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<tr>
<td>PH 603</td>
<td>Environmental Determinants of Human Health</td>
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<tr>
<td>PH 651A</td>
<td>Problems and Programs in Maternal and Child Health</td>
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<td>PH 651B</td>
<td>Seminar in Problems and Programs in Maternal and Child Health</td>
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<td>PH 652</td>
<td>Maternal Health</td>
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<td>PH 653</td>
<td>Family Planning</td>
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<td>PH 655</td>
<td>Child Health</td>
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<td>PH 747</td>
<td>Program Evaluation in Health Services</td>
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<td>PH 797</td>
<td>Research</td>
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<td>SW 745C</td>
<td>Advanced Seminar in Selected Topics in Social Work Administration</td>
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<tr>
<td>SW 750B</td>
<td>Advanced Field Practicum: Social Work Administration</td>
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<tr>
<td>SW 791B</td>
<td>Applied Social Work Practice Research Seminar</td>
<td>3</td>
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Elective, acceptable to faculty advisory committee (3)

*Social Work 650 and 750 (field practica) must have the approval of the faculty advisory committee. Responsibility for faculty field supervision will be assigned in Social Work.

Transfer units will not be accepted toward the concurrent MSW/MPH degree program. If a student after entering the concurrent MSW/MPH program returns to a single degree program, all the requirements for the single degree program must then be met.
Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. All core courses in Social Work and Public Health must be completed prior to advancement. In addition, the student must: (1) have earned at least 24 units of graduate study within the concurrent program with a minimum grade point average of 3.0 and no grade less than a B- in each core course; (2) have been recommended for advancement by the combined faculty advisory committee; received credit (Cr) in field practicum; (3) have a thesis proposal approved by the combined faculty advisory committee.

Upon advancement to candidacy, the student will enroll in Social Work 797 (Research), 799A (Thesis), Public Health 797 (Research), and 799A (Thesis). A thesis (Plan A) incorporating theory, method, and analytic techniques from both disciplines is the culminating experience for the concurrent program leading to the MSW and MPH degrees.

Courses Acceptable on Master's Degree Program in Social Work

UPPER DIVISION COURSES

540. Seminar in Social Effects of the Legal Process (3) Prerequisite: Upper division, undergraduate social work major, or classified graduate standing in the School of Social Work; or classified graduate standing or unclassified standing with consent of the director. Structure and functions of law as it bears upon such groups as defendants in criminal prosecutions, recipients of welfare programs, conservates in mental health hearings, children in juvenile court dependency proceedings. The legal conflicts social workers may encounter between their ethics and their duties to clients and agency.

596. Experimental Topics (1-4) Selected topics in social work. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

600. Seminar in Social Welfare Policy and Services (3) Social welfare as a social institution; philosophical, historical and comparative analysis of the welfare functions, issues and problems, plus conceptual analysis of social welfare programs in general and related to areas of concentration. Sectioned by:
A. Aging
B. Mental Health
C. Health
D. Children, Youth and Families

620. Seminar in Human Behavior and Social Environment (3) Theoretical perspectives on the human condition based on biological, psychological, interpersonal and social assumptions, with emphasis on examining unusual behavior from several perspectives for social work practice. Sectioned by:
A. Aging
B. Mental Health
C. Health
D. Children, Youth and Families

631. Social Work Practice with Individuals, Families and Groups, I (3) Preparation for direct intervention with individuals, families and groups in context of specific concentrations.
A. Aging
B. Mental Health
C. Health
D. Children, Youth and Families

632. Social Work Practice with Organizations and Communities, I (3) Theoretical knowledge of elementary organizational and interorganizational decision-making in human service programs which serve specific populations-at-risk.
A. Aging
B. Mental Health
C. Health
D. Children, Youth and Families

650. Field Practicum (4-B) Cr/NC Prerequisite: Concurrent registration in Social Work 733 and 734 in same concentration. Field instruction in public or voluntary social work setting. Eight units required. Maximum credit eight units. Experiences emphasize application of social work objectives, principles and skills in service to individuals, families, groups and communities related to:
A. Aging
B. Mental Health
C. Health
D. Children, Youth and Families

690. Seminar in Social Work Research Methods (3) Definition and purpose of research in social work. Techniques and methods used in collecting, organizing and interpreting social welfare and related data; steps involved in planning a research project and selecting a research design, related to:
A. Aging
B. Mental Health
C. Health
D. Children, Youth and Families

696. Seminar on Selected Topics (3) Intensive study in specific areas of social work. May be repeated with new content. See Class Schedule for specific content. Maximum credit of nine units of 696 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree. (Formerly numbered Social Work 710.)

700. Seminar in Social Welfare Policy and Services (3) Problems and issues in emerging social welfare programs, including analysis of the structure of social services and of social work as a profession.

720. Seminar in Human Behavior and Social Environment (3) Theories of natural and induced change in human behavior which have utility for social work practice.

733. Social Work Practice with Individuals, Families and Groups, II (2) Prerequisite: Social Work 631A or 631B or 631C or 631D. Assessment and intervention modalities. Evaluative aspect of interventions with individuals, families and groups within context of specific concentrations.
A. Aging
B. Mental Health
C. Health
D. Children, Youth and Families

734. Social Work Practice with Organizations and Communities, II (2) Prerequisite: Social Work 632A or 632B or 632C or 632D. Elementary methods and techniques for organizational decision making and planning in human service organizations which serve specific populations-at-risk.
A. Aging
B. Mental Health
C. Health
D. Children, Youth and Families

739. Advanced Seminar in Social Work Practice with Families and Groups (3) Prerequisite: Social Work 733A or 733B or 733C or 733D. Family and group dynamics and social work practice approaches related to family and group change.

740. Advanced Seminar in Social Work Administration (3) Prerequisite: Social Work 734A or 743B or 743C or 743D. Problems and roles of administrators in social agencies; administrative and organizational theories; executive functions of planning, budgeting, directing, reporting and staffing; multilevel relationships and communications.

741. Facilitative and Educational Roles in Human Service Organizations (3) Facilitative and educational roles of practitioner in human service organizations emphasizing supervision, consultation, staff development and evaluative processes. Theories in adult learning and educational assessment to enhance performance of staff including paraprofessionals, volunteers and consumers will be explored.

744. Advanced Seminar in Selected Topics in Clinical Social Work Practice (3) Prerequisite: Social Work 739. Study of a selected aspect of clinical social work. Topics include treatment methodology. See Class Schedule for specific content.
748. Advanced Seminar in Selected Topics in Social Work Administration (3)
Prerequisite: Social Work 740.
Study of a selected aspect of social work management in human services. Topics may cover such foci as program development, program evaluation, grant writing, resource development, financial management or management of nontraditional programs/projects. See Class Schedule for specific content.

750. Advanced Field Practicum (4-8) Cr/NC
Prerequisites: Social Work 650 and concurrent registration in Social Work 739 or 740.
Advanced field instruction in public or voluntary social work setting. Eight units required.

758. Seminar in Social Work and Selected Fields of Practice (3)
Traditional and emerging fields of practice and related social work responsibilities and roles. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

761. Seminar on Racial-Ethnic Groups (3)
Social survival techniques of ethnic minority groups, their similarities and differences and implications to development of social service delivery systems and practice.

766. Seminar on Aging (3)
Survey and analysis of selected areas in aging which depict the contemporary trends in the social aspects of aging. Special attention given to developing social policy and the relationship between social work practice modifications in the field of aging.

768. Seminar in Social Work and Selected Populations-at-Risk (3)
Social work practice with selected populations-at-risk such as one-parent families, children in institutions, ethnic minority immigrants, Native-Americans in the urban scene, and foreign-born brides of U.S. servicemen. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master's degree.

791. Applied Social Work Practice Research Seminar (3)
Prerequisite: Social Work 690.
Preparation for practitioner-researcher role through application of social work research concepts and procedures in practice situations (in class and field) of interventions with individuals, families and groups or in community practice and management. Maximum credit three units of Social Work 791 applicable to a master’s degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with Director and instructor.
Individual study. Maximum credit three units applicable to a master’s degree.

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

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

Faculty
Warner Bloomberg Jr., Ph.D., Professor of Sociology
Ann B. Cottrell, Ph.D., Professor of Sociology
Mohamed E. El-Assal, Ph.D., Professor of Sociology
Charles F. Hohm, Ph.D., Professor of Sociology, Chair of Department
Richard L. Hough, Ph.D., Professor of Sociology (Graduate Adviser)
Bohdan Kolody, Ph.D., Professor of Sociology
Nicos M. Mouratides, Ph.D., Professor of Sociology
Ruden G. Rumbaut, Ph.D., Professor of Sociology
William B. Sanders, Ph.D., Professor of Sociology
Joan Sandlin, Ph.D., Professor of Sociology
Rolf H. K. Schultz, Ph.D., Professor of Sociology
John R. Wriceks, Ph.D., Professor of Sociology
Robert W. Winslow, Ph.D., Professor of Sociology
James L. Wood, Ph.D., Professor of Sociology
Robert E. Buck, Ph.D., Associate Professor of Sociology
Shelly E. Chandler, Ph.D., Associate Professor of Sociology
Robert E. Emerick, Ph.D., Associate Professor of Sociology
Phillip T. Gay, Ph.D., Associate Professor of Sociology
Keni Ima, Ph.D., Associate Professor of Sociology
Will C. Kennedy, Ph.D., Associate Professor of Sociology
R. George Kirkpatrick, Ph.D., Associate Professor of Sociology
David L. Preston, Ph.D., Associate Professor of Sociology
Dennis C. Scheck, Ph.D., Associate Professor of Sociology
Joan T. Werner, Ph.D., Associate Professor of Sociology

Assistantships
Graduate assistantships and graduate teaching assistantships in sociology are available to a limited number of qualified students. Application blanks and further information may be obtained from the chair of the department.

General Information
The Department of Sociology, in the College of Arts and Letters, offers graduate work leading to the Master of Arts degree in Sociology. Research facilities provided by the Department of Sociology include a well-equipped Social Science Research Laboratory for use by the faculty and graduate students. Faculty in the Department of Sociology are involved in a wide range of research activities with a focus on applied sociological research. Regular opportunities exist for participation in these projects by graduate students within the department.

Admission to Graduate Study
All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. Students whose preparatory requirements have been completed or who have achieved comparable proficiency on the Graduate Record Examination (GRE) are usually admitted to classified graduate status. Applicants whose performance is not sufficient to meet this requirement may be admitted as conditionally classified graduate students with the expectation that they will meet admission standards within a specified time. The Graduate Record Examination or other equivalent test is administered to all applicants. Specific admission requirements are as follows:

1. Submission of a completed application to the Graduate Division.
2. Evidence of completion of a baccalaureate degree from a recognized college or university.
3. Three letters of recommendation from qualified individuals.
4. An undergraduate major in sociology or closely related fields.
5. Evidence of sufficiently strong academic performance.

Specific Requirements for the Master of Arts Degree
(Major Code: 22081)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree, as described in Part Two of this bulletin, students must complete an approved graduate program including a total of at least 30 units. While six units of electives may be taken in other departments, these courses must be acceptable for master's degree credit in the particular departments in which they are offered. Students must include in their graduate program at least 18 units of sociology courses from the list of 600- and 700-numbered courses. Sociology 799A (Thesis) and an oral examination on the thesis are required. The student will be expected to relate the narrower concerns of the thesis to a more comprehensive treatment of theoretical and methodological issues. Before the student proceeds with the thesis, approval must be obtained based upon a detailed thesis proposal, usually undertaken through Sociology 797.

There is no foreign language requirement but students who wish to pursue a doctorate at another university are advised to acquire a reading knowledge of one or two foreign languages.

The Master of Arts degree in Sociology may be obtained with a specialization in one of the following areas:

- **General Sociology.** Students master theory and methods with an emphasis on surveying the discipline in preparation for teaching or more advanced graduate study.
- **Applied Sociology.** Students master theory and methods with an emphasis on applying social theory and method to specific real-world research problems, in preparation for employment as applied researchers in non-academic settings.

Courses required for the General Sociology specialization: 30 units to include 12 units of core courses, Sociology 601, 602, 603, and 604; a minimum of 6 additional units in sociology courses from the list of 700-level seminar courses, Sociology 799A (Thesis), and a minimum of 9 additional units, chosen from 500-, 600-, and 700-numbered courses (6 units of which may be taken in other departments).

Courses required for the Applied Sociology specialization: 30 units to include Sociology 605; 9 units of core courses, Sociology 601, 602, and either 603 or 604, a minimum of 9 additional units, selected from Sociology 500-, 600-, and 700-numbered courses (a maximum of 6 units may be selected from another department, with approval of the graduate adviser); Sociology 760 (Seminar in Research Methods), Sociology 796 (Field Practicum), and 799A (Thesis).

Courses Acceptable on Master's Degree Programs in Sociology

**UPPER DIVISION COURSES**

- **505. Applied Sociological Research** (3) I, II
  - Prerequisite: Sociology 407 or 408.
  - Types and methods of applied sociological research, and an overview of their application in substantive areas. Practicum in sociological research skills.
- **517. Life Crises and Coping: Sociological Perspectives** (3) II
  - Prerequisite: Sociology 101.
  - Social variation in the occurrence of life crises, personal and social coping strategies, and psychosocial outcomes.
- **522. The Family in Comparative and Historical Perspective** (3) II
  - Prerequisite: Sociology 101. Recommended: Sociology 421.
  - Comparative study of selected family systems in the past and present. Family and parenthood: Marriage, child-rearing, familial and social roles of men and women in the second half of the life cycle. Ethnic, sex and class differences in family organization.
- **527. Aging and Society** (3)
  - Prerequisite: Sociology 101.
  - Status and roles of men and women in the second half of the life cycle. Ethnic, sex and class differences in aging. Cross-cultural comparisons of occupational, educational, familial, recreational, and political opportunities for the aging.
528. Death and Dying (3)
Prerequisite: Sociology 101.
Sociological concepts and theories of the process of dying. Comparative study of death and dying with emphasis on social, psychological, and social organization approaches. Consideration of contemporary social-ethical issues surrounding dying in our society.

531. Working and Society (3) II
Prerequisite: Sociology 101.
Work and occupations in the division of labor. Paid and unpaid labor; work at home and in the marketplace. The social drama of work: identity, role conflict, and change. Power, pay, and status ranking of occupations: the professionalization of work. (Formerly numbered Sociology 591.)

537. Political Sociology (3)
Prerequisite: Sociology 101.
Social organization of political processes. Power and authority, social class, primary groups, collective behavior, social change and other sociological factors considered in their relationships to political processes.

539. Sociology of Education (3) I, II
Prerequisite: Sociology 101.
Social organization of education in the United States and other societies. Structure and functions of educational institutions. Formal and informal education. Class, ethnic and other social factors affecting the educational process. Implications of educational decision making and testing.

543. Police, Courts, and Corrections: The Sociology of Crime and Punishment (3) I
Prerequisite: Sociology 101.
Historical sociology of the American criminal justice system. Development and functions of police, criminal courts, prisons, parole, and probation. Theories and ideologies of punishment and rehabilitation. Review of contemporary research. (Formerly numbered Sociology 516.)

555. Immigrants and Refugees in Contemporary American Society (3)
Prerequisite: Sociology 101.
Contemporary migration to the United States, especially from Latin America and Asia. Political and economic migration. Immigrant and refugee adaptation. Theoretical controversies, research applications, and policy implications.

556. Topics in Comparative Societies (3) II
Prerequisite: Sociology 101.
Social structures, social problems, and social change in selected areas of the world in comparative and historical perspectives. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units. (Formerly numbered Sociology 519.)

557. Urban Sociology (3) I, II
Prerequisite: Sociology 101.
The structure and function of the modern city; types of neighborhoods; forms of recreation; social forces in a metropolitan area; types of urban personalities and groups; rural-urban conflicts of culture. Practical field studies required.

596. Current Topics in Sociology (1-3) I, II
Prerequisite: Sociology 101.
Selected specialized, controversial, or currently relevant topics in sociology. Maximum opportunity provided for student initiative in determining course content and procedures. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 696 courses applicable to a bachelor's degree. Maximum credit of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree. (Formerly numbered Sociology 511.)

597. Investigation and Report (3) I, II
Prerequisite: Sociology 101.
Analysis of special topics in sociology. Maximum credit six units.
760. Seminar in Research Methods (3)
Prerequisites: Sociology 401 and 407.
Analysis of methods used in current sociological research, including evaluation of reported findings. Discussion of research designs appropriate to particular types of projects. Evaluation of research in progress by members of the seminar. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

770. Seminar in Population and Demography (3)
Prerequisites: Sociology 350 and 407.
Demographic theories, fertility, mortality, migration, construction and application of demographic indices, demographic prediction, world population trends, special topics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

796. Field Practicum (3) Cr/NC
Prerequisites: Sociology 601, 602, and either 603 or 604.
Supervised field placement in community agency. Application of sociological theories and methods to policy and research needs of agency. Maximum credit six units applicable to a master's degree.

797. Research (3) Cr/NC/SP
Prerequisite: Sociology 407.
Independent investigation of special topics. Maximum credit six units applicable to a master's degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff, to be arranged with department chair and instructor. Individual study. Maximum credit six units applicable to a master's degree.

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

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

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Spanish

Library East 469, (619) 594-6588

Faculty

Ernesto M. Barrera, Ph.D., Professor of Spanish
Thomas E. Case, Ph.D., Professor of Spanish, Chair of Department
C. Ben Christensen, Ph.D., Professor of Spanish
Gerald L. Head, Ph.D., Professor of Spanish (Graduate Adviser)
Theodore V. Higgs, Ph.D., Professor of Spanish
Arturo Jiménez-Vega, Ph.D., Professor of Spanish
George Lemos, Ph.D., Professor of Spanish
Gustav V. Segade, Ph.D., Professor of Spanish
Malcolm N. Silverman, Ph.D., Professor of Spanish
Susana D. Castillo, Ph.D., Associate Professor of Spanish
Michael S. Doyle, Ph.D., Associate Professor of Spanish
Mary E. O'Brien, Ph.D., Associate Professor of Spanish
Florinca W. Talarantse, Ph.D., Associate Professor of Spanish
Raymond D. Weeter, Ph.D., Associate Professor of Spanish
Ronald R. Young, Ph.D., Associate Professor of Spanish; Associate Dean of Undergraduate Studies
Margarita G. Hidalgo, Ph.D., Assistant Professor of Spanish

Assistantships

Graduate Teaching Assistantships in Spanish are available to a limited number of qualified graduate students. New Teaching Assistants are required to enroll in Spanish 770 during their first semester as Teaching Assistants. Application blanks and additional information may be secured from the Chair of the department.

General Information

The Department of Spanish and Portuguese Languages and Literatures, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Spanish. The staff in charge of the graduate program in Spanish is composed of professors whose native tongue is Spanish, or who have studied and traveled extensively in Spain or in Spanish America, enabling them to represent authentically the Spanish language and culture. Library facilities include rich resources in Spanish literature and linguistics, including books, periodicals and newspapers. A foreign language laboratory with modern equipment is available to both graduate and undergraduate students.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two 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. A language competency examination, both written and oral, will be required of all incoming graduate students. The examination will be held prior to each semester. If an incoming graduate student does unsatisfactory work on the examination, he/she will be required to make up the deficiency before he/she will be allowed to enroll in graduate courses.

Advancement to Candidacy

In addition to meeting the requirements for advancement to candidacy as described in Part Two 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

(Major Code: 11051)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete an approved graduate program of at least 30 units. Each program must include Spanish 601, 770, 790; nine units of Spanish American literature, at least six of which must be from 600- and 700-numbered courses; nine units of Spanish peninsular literature, at least six of which must be from 600- and 700-numbered courses; and 799A or three units of electives in Spanish. Students may elect either Plan A, requiring a thesis (Spanish 799A), or Plan B, requiring a comprehensive written and oral examination in lieu of the thesis in consultation with the graduate adviser.

Courses Acceptable on Master's Degree Programs

in Spanish

UPPER DIVISION COURSES IN SPANISH

510A-510B. Modern Spanish Drama (3-3)
Prerequisites: Spanish 305A-305B.
Semester I: Development of Spanish theater from 1800 to Spanish Civil War. Major literary movements and themes analyzed through study of works of representative dramatists of the period. Semester II: Spanish theater from the Civil War to the present. Theater of the absurd, theater of social justice, underground theater, and new directions in today's Spanish drama.

515A-515B. Mexican Literature (3-3)
Prerequisites: Spanish 306A-306B.
Aspects of Mexican culture. Semester I: A rapid survey of Mexican literature from the colonial period to the twentieth century. Semester II: The twentieth century, with emphasis on the contemporary Mexican novel and theater.

520. Caribbean Area Countries Literature (3)
Prerequisites: Spanish 306A-306B.
Literature of Caribbean Islands, Central America, Colombia and Venezuela, from colonial period to present. Special emphasis on contemporary era.

524. Contemporary Argentine Literature (3)
Prerequisites: Spanish 306A-306B.
Literature of contemporary Argentina. Leading prose writers to include Borges, Cortázar, Mallosa, Sábato.

530. Nineteenth Century Spanish Novel and Short Story (3)
Prerequisites: Spanish 305A-305B.
The development of the novel and short story in Spain in the nineteenth century.

556. Translation of Literary Works: A Critical Comparison (3)
Prerequisites: Spanish 493.
Techniques and methods of translating literary texts from English to Spanish and Spanish to English; textual and stylistic problems in different periods, genres, and dialects, with emphasis on contemporary literature.

557. Spanish/Spanish American Dialectology (3)
Prerequisites: Spanish 450; one English composition course and one linguistics course.
Phonological, morphological, syntactic and lexical characteristics of the principal dialects of Spanish.

560. Golden Age Literature (3) I, II, S
Prerequisites: Spanish 305A-305B.
Major writers and works, concentrating on prose and lyric poetry. (Formerly numbered Spanish 460 and 550.)

561. Methods in Teaching Spanish as a Second Language (3)
Prerequisite: Spanish 448 or 450.
Teaching of Spanish as a second language: contemporary theory and methods. Not open to students with credit or concurrent enrollment in French 561.

567. Spanish American Poetry (3) I, II, S
Prerequisites: Spanish 306A-306B.
Spanish American poetry of the nineteenth and twentieth centuries. (Formerly numbered Spanish 470.)

571. Spanish American Short Story (3) I, II, S
Prerequisites: Spanish 306A-306B.
Principal Spanish American short story writers. (Formerly numbered Spanish 471.)

572. Spanish American Theater (3) I, II, S
Prerequisites: Spanish 306A-306B.
Theater of social justice, underground theater, and new directions in today's Spanish drama.

Related Fields: Related courses in the fields of anthropology, geography, history, political science, comparative literature, and others, may be selected with the approval of the graduate adviser.

GRADUATE COURSES IN SPANISH

All graduate courses in the Department of Spanish and Portuguese Languages and Literatures have a prerequisite of 12 upper division units in Spanish, or consent of instructor.

601. Seminar in Hispanic Literary Theory (3)
Prerequisite: Two upper division literature courses in Spanish. Emphasis on Critical issues in Hispanic literary theory from medieval to modern times. Post-contemporary theory: formalism, hermeneutics, phenomenology, structuralism, post-structuralism, including semiotics and deconstructionism.

610. Seminar in Medieval Spanish (3)
Prerequisite: Credit or concurrent enrollment in Spanish 448 or 449.
Study of the important movements, authors and works of the literature of Spain from the colonial period to modern times.

620. Cervantes (3)
The principal prose works of Cervantes: The Novelas ejemplares and Don Quijote.

630. Golden Age Drama (3)
The works of Lope de Vega and Calderon among others.

640. The Spanish American Novel (3)
The Spanish American novel to 1955.
<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>660</td>
<td>The Gaucho Epic (3)</td>
<td></td>
<td>The Poemas gauchesca, with particular emphasis on Martin Fierro, Fausto, and Santos Vega.</td>
</tr>
<tr>
<td>660</td>
<td>Modernism (3)</td>
<td></td>
<td>The Modernista movement in Spanish America, with special attention to representative poets.</td>
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<td>670</td>
<td>The Generation of 1898 (3)</td>
<td>Prerequisite: Two upper division courses in Spanish literature</td>
<td>Major authors and works of the generation of 1898 in Spain: novel, drama, poetry, and essay.</td>
</tr>
<tr>
<td>675</td>
<td>Contemporary Spanish Prose Fiction (3)</td>
<td>Prerequisite: Two upper division courses in Spanish literature</td>
<td>Development of Spanish prose fiction since the Spanish Civil War.</td>
</tr>
<tr>
<td>680</td>
<td>The Modern Spanish Essay (3)</td>
<td></td>
<td>The thinkers, essayists and philosophers of Spain from the generation of 1898 to the present.</td>
</tr>
<tr>
<td>666</td>
<td>The Spanish American Essay (3)</td>
<td></td>
<td>Principal Spanish American essayists of the nineteenth and twentieth centuries.</td>
</tr>
<tr>
<td>669</td>
<td>Contemporary Spanish American Prose Fiction (3)</td>
<td></td>
<td>The principal writers of prose fiction in Spanish America from the mid-thirties to today.</td>
</tr>
<tr>
<td>676</td>
<td>Selected Topics (3)</td>
<td>Prerequisite: Twelve upper division units in Spanish.</td>
<td>Intensive study in specific areas of Spanish. May be repeated with new content. See Class Schedule for specific content. Maximum credit of six units of 696 applicable to a master's degree.</td>
</tr>
<tr>
<td>710</td>
<td>Images of Women in Spanish American Literature (3)</td>
<td>Prerequisite: Two upper division courses in Spanish American literature.</td>
<td>Women as literary figures in works by Spanish American women writers.</td>
</tr>
<tr>
<td>720</td>
<td>Seminar in Spanish Golden Age Literature (3)</td>
<td></td>
<td>A representative author, a genre or movement of the Spanish Golden Age. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.</td>
</tr>
<tr>
<td>730</td>
<td>Seminar in Nineteenth Century Spanish Literature</td>
<td></td>
<td>A representative author, a genre or movement of the nineteenth century in Spain. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.</td>
</tr>
<tr>
<td>740</td>
<td>Seminar in Twentieth Century Spanish Literature</td>
<td></td>
<td>A representative author, a genre or movement of the twentieth century in Spain. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.</td>
</tr>
<tr>
<td>750</td>
<td>Seminar in Spanish American Literature (3)</td>
<td></td>
<td>A genre or movement of Spanish America. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.</td>
</tr>
<tr>
<td>755</td>
<td>Seminar in Spanish American Culture and Thought</td>
<td></td>
<td>Works of representative authors of Spanish America. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.</td>
</tr>
<tr>
<td>770</td>
<td>Applied Spanish Linguistics for Teachers (3)</td>
<td>Prerequisite: Spanish 448 or 449.</td>
<td>The application of linguistic theory to the teaching of Spanish at the secondary and college levels.</td>
</tr>
<tr>
<td>780</td>
<td>Seminar in Spanish Syntax and Morphology (3)</td>
<td>Prerequisite: Spanish 450, and Linguistics 522.</td>
<td>Advanced study of the grammatical structures of Spanish.</td>
</tr>
<tr>
<td>788</td>
<td>Special Study (1-3) Cr/NC/SP</td>
<td>Prerequisite: Consent of staff, to be arranged with department chair and instructor.</td>
<td>Individual study. Maximum credit six units applicable to a master's degree.</td>
</tr>
</tbody>
</table>

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

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

General Information

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

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

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

Since the inception of the Special Major in 1977, individual students have undertaken graduate programs in such subjects as Paleobiology, Folklore and Mythology, Molecular Biology, Museum Studies, Infant Development, Animal Behavior, Sports Psychology, Environmental Resource Management, and Primitive Christianity.

Admission to Graduate Study

In addition to satisfying the requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, the student must (1) possess an appropriate academic background for the proposed program and have achieved an undergraduate grade point average of 3.0; and (2) complete the GRE General Test with a minimum score of 1100 (verbal and quantitative combined). Normally, students applying to the Graduate Division and Research for further information.

Advancement to Candidacy

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

Specific Requirements for the Master's Degree

(Major Code: 49993)

1. In addition to satisfying the requirements for classified graduate standing and the basic requirements for the master's degree, as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units of courses acceptable for advanced degree credit.

2. The official program of study must reflect careful and deliberate planning. The selection and level of courses will be based on the best standards and practices of the disciplines involved. Normally no more than six units which have been taken prior to approval of the official program of study may apply on the degree.

3. In consultation with the supervisory committee, the student will determine the subject of the research for a thesis that will be completed as the culminating experience in partial fulfillment of the requirements for the degree. Satisfactory completion of the thesis will be determined by the supervisory committee.

General Procedures for the Program

1. A prospective applicant interested in being considered for the Special Major program should complete and follow the instructions on the form, “Request for Permission to Pursue a Special Major Master’s Degree Program,” which is available in the Graduate Division and Research. The applicant must initially seek out a potential faculty adviser and two additional faculty members who have the expertise and interest in advising and supporting the applicant in the proposed program of study.

2. When the student’s portion of the form has been completed, the major adviser selected, and other potential supervisory committee members contacted, an appointment with the assistant dean of the Graduate Division and Research should be arranged. Both the assistant dean of the Graduate Division and Research and the proposed major adviser should be present at this meeting. Other applicant and the proposed major adviser members are welcome to participate in these discussions.

3. Following this meeting and after making any modifications to the proposed program proposed and to the designs of colleges and courses in which courses are being pursued a Special Major to the chairs of departments in which courses are being pursued a Special Major.

4. The student will then present the “Request,” endorsed with appropriate departmental and college approvals, to the Graduate Division and Research, where it will be reviewed by the Student Affairs Committee of the Graduate Council. Upon the recommendation of the Student Affairs Committee of the Graduate Council. Upon the recommendation of the Student Affairs Committee of the Graduate Council, the “Request” will be forwarded to the graduate dean, whose final recommendation will be reviewed by the Student Affairs Committee of the Graduate Council. Upon the recommendation of the Student Affairs Committee of the Graduate Council, the “Request” will be forwarded to the graduate dean, whose final recommendation will be reviewed by the Student Affairs Committee of the Graduate Council. Upon the recommendation of the Student Affairs Committee of the Graduate Council, the “Request” will be forwarded to the graduate dean, whose final recommendation will be reviewed by the Student Affairs Committee of the Graduate Council. Upon the recommendation of the Student Affairs Committee of the Graduate Council, the “Request” will be forwarded to the graduate dean, whose final recommendation will be reviewed by the Student Affairs Committee of the Graduate Council.

5. Virtually all other requirements for the special major are the same as those for other master's degree programs, as specified in this bulletin. Special questions should be directed to the approved graduate major adviser or the Graduate Division and Research.

GRADUATE COURSES

General Studies Courses

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

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

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

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

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

Speech and Telecommunications 201
(619) 594-6051

Faculty
Janis F. Andersen, Ed.D., Professor of Speech Communication, Chair of Department
Peter A. Andersen, Ph.D., Professor of Speech Communication (Graduate Adviser)
Susan A. Hellweg, Ph.D., Professor of Speech Communication
Myron W. Lustig, Ph.D., Professor of Speech Communication
Jerry E. Mandel, Ph.D., Professor of Speech Communication
Larry A. Samovar, Ph.D., Professor of Speech Communication
All R. Weitzel, Ph.D., Professor of Speech Communication
Wayne A. Beach, Ph.D., Associate Professor of Speech Communication
Paul C. Gaske, Ph.D., Associate Professor of Speech Communication
George N. Dionisopoulos, Ph.D., Assistant Professor of Speech Communication

Assistantships
Graduate teaching assistantships in speech communication are available to a limited number of qualified students. Application blanks and further information may be obtained from the department chair.

General Information
The Department of Speech Communication, in the College of Professional Studies and Fine Arts, offers graduate study leading to the Master of Arts degree in Speech Communication. The department offers advanced study in the areas of rhetorical and communication studies. Faculty research interests include forensics, group communication, intercultural communication, language analysis, mediated communication, organizational communication, public address, rhetorical criticism, relational communication, and social influence processes. Graduate students are encouraged to participate in these research efforts.

Admission to Graduate Study
Students must meet the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin.

Advancement to Candidacy
All students must meet the general requirements for advancement to candidacy, as described in Part Two of this bulletin. In addition, students seeking the Master of Arts degree in Speech Communication are required to have completed Speech Communication 700 (with a grade of "B" or better prior to advancement).

Specific Requirements for the Master of Arts Degree
(Major Code: 15061)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master's degree as described in Part Two of this bulletin, the student must complete a graduate program which includes at least 30 units selected with the approval of the graduate adviser.

Specialization in Communication and Rhetorical Theory
Speech Communication 700, 735, 750, 751 or 790, and 799A, Thesis or Project, are required courses for those electing Plan A. Electives are to be selected with the approval of the Graduate Adviser. Recommended electives include Speech Communication 580, 751, 775, 791, 792. If Plan B is followed, a comprehensive examination must be passed, in lieu of thesis.

Courses Acceptable on Master's Degree Programs
In Speech Communication

UPPER DIVISION COURSES

503. Instructional Communication (3)
Prerequisites: Speech Communication 105, 135, 160, and 190. Communication messages and strategies as they apply to instructional contexts. Communication within traditional instructional contexts and focus on training programs, adult workshops, and other less traditional information dissemination situations.

530. Language Analysis (3)
Prerequisites: Speech Communication 105, 135, 160, and 190. Language analysis, including traditional and contemporary approaches, including conversation analysis, psycholinguistics, sociolinguistics, and the analysis of everyday language as an interactional achievement.

535. Theories of Human Communication I II (3)
Prerequisites: Speech Communication 105, 135, 160, and 190. Theoretical approaches to the study of human communications; relationship of meaning, behavior, and context in the communication process; special issues in communication theory, message, and behavior.

590. Communication and Politics (3)
Prerequisites: Speech Communication 105, 135, 160, and 190. Contemporary political communication events and processes; with a focus on speeches, debates, and campaigns.

594. Communication in Law and Medicine (3)
Prerequisites: Speech Communication 105, 135, 160, and 190. Communication in legal and medical contexts; courtroom interactions and marketing medical diagnostic interactions studied as interactional achievement.

599. Ethical Issues in Communication (3)
Prerequisites: Speech Communication 105, 135, 160, and 190. Ethical issues in communication.

590. Quantitative Methods in Communication (3)
Prerequisites: Speech Communication 105, 135, 160, and 190. Quantitative research design, and statistical applications to communication problems. (Formerly numbered Speech Communication 357.)

592. Persuasion I II (3)
Prerequisites: Speech Communication 103. Open to majors and nonmajors. Prerequisite: Speech Communication 303. Topics include the design of persuasive messages; receiver variables; propaganda; brainwashing; and cognitive, behavioral, and social theories of persuasion. Not applicable to the MA degree in Speech Communication.

593. Qualitative Methods in Communication Research (3)
Prerequisites: Speech Communication 105, 135, 160, and 190. Qualitative research design, and statistical applications to communication problems. (Formerly numbered Speech Communication 357.)

596. Selected Topics in Speech Communication (1-3)
Prerequisites: Speech Communication 105, 135, 160, and 190. Selected topics in speech communication.
GRADUATE COURSES

696. Special Topics in Speech Communication (1-3)
Prerequisite: Graduate standing.
Intensive study in specific areas of speech communication. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master’s degree.

700. Seminar in Research and Bibliography (3)
Basic reference works, scholarly and critical journals; introduction to bibliographical techniques; exercises and problems in methods and exposition of research as it relates to speech communication. Recommended for first semester of graduate work, and prerequisite to advancement to candidacy.

706. Seminar in Organizational Communication (3)
Prerequisite: Speech Communication 406.
Oral communication processes in large organizations. Topics to include information flow, communication networks, communication relations, and the design and management of communication systems.

708. Seminar in Oral Interpretation and Forensics (3)
Analysis of thought and emotional content, and aesthetic form. Advanced problems of delivery in individual and forensic settings.

730. Seminar in the Analysis of Language (3)
Prerequisite: Speech Communication 530.
Special problems in language theory which may be integrated into the larger bodies of rhetorical and communication theory.

735. Seminar in Communication Theory (3)
Prerequisite recommended: Speech Communication 535.
Methods of theory construction in study of human communication. Existing theories and models of the communication process.

745. Seminar in Relational Communication (3)
Contemporary theory and research addressing interpersonal verbal and nonverbal communication in intimate and non-intimate relationships.

750. Seminar in Rhetorical Theory (3)
Leading figures in rhetorical theory from Plato to contemporary theorists. Special attention given to the application of theory to public address.

751. Seminar in Rhetorical Criticism (3)
Methods of assessing rhetorical events.

775. Seminar in Intercultural Communication (3) I, II
Prerequisite: Speech Communication 475.
Analysis of cultural influences on human communication acts. Emphasis on cultural values, perception, social organizations, language and nonverbal codes.

780. Seminar in Public Address (3)
Case studies of rhetorical events which illustrate rhetorical theory. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

790. Seminar in Experimental Procedures In Speech Communication (3)
Prerequisites: Speech Communication 590 and 700.
Examination and evaluation of appropriate experimental procedures and traditional methods; special problems in research design.

791. Seminar in Group Communication (3)
Prerequisite: Speech Communication 491.
A study of descriptive and experimental literature on group discussion covering such topics as interaction, leadership, and means of evaluation.

792. Seminar in Persuasion (3) I, II
Prerequisite: Speech Communication 592.
Contemporary theories and models of persuasion, methods of assessing persuasive effect, and analysis of research literature.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff, to be arranged with department chair and instructor. Individual study. Maximum credit six units applicable to a master’s degree.

799A. Thesis or Project (3) Cr/NC/SP
Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master’s degree.

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

Professional Studies and Fine Arts 222
(619) 594-6575

Faculty
Hayes L. Anderson, Ph.D., Professor of Telecommunications and Film (Graduate Adviser)
Elizabeth J. Heighton, M.S., Professor of Telecommunications and Film
K. Charles Jameson, Ph.D., Professor of Telecommunications and Film
Joseph S. Johnson, Ph.D., Professor of Telecommunications and Film
Roy P. Madsen, Ph.D., Professor of Telecommunications and Film
Michael R. Real, Ph.D., Professor of Telecommunications and Film
Chair of Department
Paul J. Steen, M.A., Professor of Telecommunications and Film, and Director of University Telecommunications; General Manager, KPBS-TV-FM
John P. Witherspoon, M.A., Professor of Telecommunications and Film
Donald G. Wylie, Ph.D., Professor of Telecommunications and Film
Donald R. Martin, Ph.D., Associate Professor of Telecommunications and Film, KPBS Telecommunications Manager
Thomas C. Meador, M.A., Associate Professor of Telecommunications and Film
Carroll Parrott Blue, M.F.A., Assistant Professor of Telecommunications and Film
Sig Mickelson, M.A., The Van Deerlin Professor of Communication

General Information

The Department of Telecommunications and Film, in the College of Professional Studies and Fine Arts, offers graduate study leading to the Master of Arts degree in Radio and Television. This degree permits advanced study in the areas of: media research and theory; interaction of mass communication and society; history and criticism of broadcasting and film; scriptwriting; broadcast management and policy; business aspects of media: financing, preproduction, and postproduction; government and media regulation; advanced audio, video, and film production; broadcast and film performance; internal broadcasting and cinema; educational and instructional media; public broadcasting; technological trends: cable, satellites, computers, integrated telecommunications systems.

Graduate students in Radio and Television may select a specialization in Analysis or Creation.

I. An "Analytic" specialization focuses on advanced media research and criticism. It is especially useful for careers planned in teaching, management, planning, innovative technologies, and other areas where advanced ability to understand, organize and complete media-related functions is essential. This analytic specialization requires completion of Telecommunications and Film 600, Seminar in the Research Process, as well as general requirements listed below. Other courses suggested for the analytic specialization are concerned with media history, criticism, management, policy, regulation, instruction, developing technologies and related issues and trends. An undergraduate degree in media studies is recommended but not required for the analytic specialization.

II. A "Creative" specialization emphasizes advanced media design and production. This specialization is especially useful for careers planned in film, television, radio or related production activities where sophisticated and disciplined ability to conceive, initiate and complete original telecommunication and/or film messages is required. This creative specialization requires completion of Telecommunications and Film 702, Seminar in Media Message Design and Production, as well as general requirements listed below. Other courses suggested for the creative specialization are scripting, criticism, production planning and organization, advanced video, audio, and film techniques, and related issues and activities. Admission to the creative specialization will normally require undergraduate preparation or equivalent professional experience and submission of a portfolio of previous creative activity. The Master of Arts in Radio and Television assumes a scholarly interest in advanced theoretical and applied problems relating to media. Postbaccalaureate students who are without previous media production education or experience and who wish to learn television and film production should consider pursuing a second bachelor's degree in media production or completing basic production courses elsewhere before enrolling in graduate study at San Diego State University. Students with an undergraduate major or minor in media may enroll in advanced production courses for graduate credit as part of their master's program.

The Department of Telecommunications and Film operates as teaching facilities a large color television studio, a film production center, and radio complex. Also located on campus are KPBS TV and KPBS-FM, the public broadcasting stations for San Diego, a closed-circuit instructional television service for the entire campus, an automated color studio for off-campus instruction and programming (ITFS), a student-operated radio station (KCRH), computer facilities, and the research-oriented center for Communications.

Interdisciplinary Mass Communication Master of Science: San Diego State University also offers an interdisciplinary Master of Science degree in Mass Communication administered jointly by the Departments of Journalism, Sociology, Speech Communication, and the College of Business Administration. Refer to the section on Mass Communication for specific requirements for this degree.

Concentration in Public Telecommunications Administration: Refer to the section on Public Administration for specific requirements.

Admission to Graduate Study

Applications should be submitted prior to March 1 for the fall semester (and October 1 for the spring semester) in order to ensure consideration by the Graduate Admissions Committee of the Department of Telecommunications and Film. Fall admissions are preferred.

STUDENTS WILL BE ADMITTED TO GRADUATE PROGRAM IN TELECOMMUNICATIONS AND FILM ONLY IN THE FALL SEMESTER AND APPLICATIONS MUST BE RECEIVED BY THE DEPARTMENT OF TELECOMMUNICATIONS AND FILM NOT LATER THAN MARCH 1.

In addition to meeting the general requirements for admission to the University with classified graduate standing, as outlined in Part Two of this bulletin, a student applying for classified graduate standing, as outlined in Part Two of this bulletin, must meet the following requirements:

1. Undergraduate major or minor in radio and television, film, or a related communications discipline.
2. Undergraduate grade point average of 2.75 or higher.
3. A minimum combined score of 1,100 on the GRE General Test, of which 750 is required for students with an undergraduate major or minor in media.
4. Three letters of recommendation from individuals who can evaluate the student's ability to do graduate work.
5. A personal statement indicating the student's goals in graduate study.

Students accepted for graduate study must meet the following requirements for advancement to candidacy, which are described in Part Two of this bulletin:

Advance to Candidacy

All students must meet the general requirements for advancement to candidacy, which are described in Part Two of this bulletin.

Specific Requirements for the Master of Arts Degree

(Major Code: 06031)

Candidates for the Master of Arts in Radio and Television must complete 30 units of coursework and must include the following in their programs:

1. Telecommunications and Film 600 (required for Classified Graduate Standing)
2. Either Telecommunications and Film 701 (Seminar in the Research Process) or Telecommunications and Film 702 (Seminar in Pursuing an Analytic Specialization)

Students pursuing a creative specialization may also enroll in Telecommunications and Film 702 (Seminar in Pursuing a Creative Specialization), Media Message Design and Production, or Telecommunications and Film 100, but the latter will not apply toward the units required for the degree.

Telecommunications and Film / 411
Telecommunications and Film

3. Either Telecommunications and Film 799A (Thesis, Plan A) or Telecommunications and Film 795 (Project and Comprehensive Examination, Plan B).
4. At least 21 additional units from the courses listed below as acceptable for graduate credit.
5. At least 18 units in the total graduate program (including Telecommunications and Film 600, 701 or 702, and 795 or 799A) must be graduate level (600 or 700) courses.
6. No more than 9 units taken in other departments. These courses may be included in the program providing they are courses acceptable for graduate credit in the department which offers them and are approved by the graduate adviser in the Department of Telecommunications and Film.

Selection of Plan A or Plan B

The culminating experience in the master's degree program is completion of either a master's thesis (Plan A) or a master's project and comprehensive written examination (Plan B). Both plans require the ability to define, initiate, and complete a major advanced project with either an analytic or creative focus. Both plans require presentation to the faculty of a report written in acceptable form and evaluated as serious scholarly activity.

Before beginning either Telecommunications and Film 795 (Project Seminar) or Telecommunications and Film 799A (Thesis), a student must have completed a project or thesis proposal, have had it signed by a project or thesis adviser and have submitted it to the graduate adviser and, for Telecommunications and Film 795, to the course instructor.

Assistantships

Graduate assistantships are available in the Department of Telecommunications and Film for students working on, or interested in working on, a Master of Arts degree. Candidates must be college graduates who meet graduate admissions requirements at San Diego State University and have academic or professional experience in one of the following: television production, film production, audio production, media criticism, interactive media, or research. Graduate assistantships are needed for both teaching and research. From four to ten positions are available for each semester. Interested parties should contact Dr. Hayes Anderson, graduate adviser, or Dr. Michael Real, department chair, for application forms and further information.

Courses Acceptable on Advanced Degree Programs in Telecommunications and Film

UPPER DIVISION COURSES

500. Broadcast Management (3) I, II
Prerequisite: Telecommunications and Film 100.

505. Government and Broadcasting (3) I, II
Prerequisite: Telecommunications and Film 100.

510. Script Writing for Broadcasting and Film (3) I, II
Prerequisite: Telecommunications and Film 260 or 280, and satisfaction of the English Placement Test and Writing Competency requirements. Proof of completion of prerequisites required.

520. Directing Television and Film Drama (3) I, II
Two lectures and three hours of activity.
Prerequisite: Telecommunications and Film 260 or 280.

530. Radio Programming (3) II
Two lectures and three hours of scheduled activity.
Prerequisite: Telecommunications and Film 100 and 121.

535. Television Programming (3) I
Prerequisite: Telecommunications and Film 100.

540. Broadcast Advertising (3) I, II
Prerequisites: Two courses in advertising, journalism or marketing. Theory, procedures, and the role of broadcast advertising, including marketing and media research, campaign planning, media strategy, time purchasing, and evaluation.

550. Art Direction for Television and Film (3) I, II
One lecture and four hours of activity.
Prerequisites: Telecommunications and Film 260 or 262 and consent of instructor.

551. Production Design for Television and Film (3) I, II
Prerequisite: Credit or concurrent registration in Telecommunications and Film 401.

560. Advanced Film Production (3) I, II
One lecture and more than six hours of activity.
Prerequisites: Telecommunications and Film 260, 510 and consent of instructor.

565. Animated Film Techniques (3) II
Two lectures and more than three hours of activity.
Prerequisite: Telecommunications and Film 200.

570. Organizational Behavior in Telecommunications (3) I
Prerequisite: Twelve units in telecommunications and film. Development and trends in telecommunications and related technology, with their implications for the future.

580. Advanced Television Producing and Directing (3) I, II
One lecture and more than six hours of activity.
Prerequisites: Telecommunications and Film 260, 510 and consent of instructor.

590. International Broadcasting (3)
Prerequisite: Telecommunications and Film 100 or 315, or Journalism 200.

599. Comparative Study of Broadcasting (3)
Prerequisite: Telecommunications and Film 100 or 315, or Journalism 200.
596. Selected Topics in Telecommunications and Film (1-3) I, II
Prerequisite: Twelve units in telecommunications and film.
Specialized study of selected topics from the areas of telecommunications and film. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

600. Seminar in Research and Bibliography (3)
Basic reference works, scholarly and critical journals; bibliographical techniques; exercises and problems in methods and exposition of research as it relates to the various areas of telecommunications and film.

610. Seminar in Writing for Broadcast and Film (3)
Prerequisite: Telecommunications and Film 510. Dramatic structures as they apply to broadcasting and cinema. Writing a full-length script or scenario.

615. Seminar in Criticism of Broadcasting and Cinema (3)
Prerequisite: The equivalent of an undergraduate major in telecommunications and film. Standards for objective appraisal of the ethical and artistic aspects of radio, television and film programs.

620. Seminar in the Development of Telecommunications Systems (3)
Prerequisite: The equivalent of an undergraduate major in telecommunications and film. Development of telecommunications and broadcasting in their social, legislative and economic settings.

640. Seminar in Broadcast Advertising Problems (3)
Prerequisite: Telecommunications and Film 540. Analysis of social, economic and cultural context of advertising in commercial broadcasting; criticism and evaluation of the function of the advertiser; survey of broadcast advertising theory and research.

660. Seminar in Dramatic and Documentary Forms in Mass Media (3)
Prerequisite: Admission to the Creative Specialization. Techniques and stylistic contributions of major directors as seen in their film and television productions. Production of a short film or videotape embodying concepts learned.

670. Seminar in Public Telecommunications (3)
Prerequisite: The equivalent of an undergraduate major in telecommunications and film. 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.

675. Seminar in Telecommunication Technology and Policy (3)
Prerequisite: Telecommunications and Film 575. Contemporary trends in telecommunications and information technology, implications of trends for public policy and affected businesses. Interaction between technology and regulation.

680. Seminar in Programming and Production (3)
Prerequisite: Admission to the Creative Specialization. Theory and analysis of programming and production in broadcasting and film. Production of a short film or videotape embodying concepts learned.

696. Advanced Research Topics (1-3)
Prerequisite: Graduate standing. Intensive study in specific areas of telecommunications and film. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

700. Seminar in Telecommunications Management (3)
Prerequisite: The equivalent of an undergraduate major in telecommunications and film. Legal and regulatory milieu of telecommunications from perspective of managers of telecommunications and broadcasting.

701. Seminar in the Research Process (3)
Prerequisite: Telecommunications and Film 600. Literature, methods, and designs for research. Different methodological and conceptual approaches to mass communication research. Emphasis on (1) selection of topic for thesis or project, (2) development of detailed research plan, and (3) research activities preliminary to Telecommunications and Film 795 or 799.

702. Seminar in Media Message Design and Production (3)
Prerequisite: Telecommunications and Film 600. Effects of various types of media formats, methods of presentation, and creative production approaches on individuals and groups. Selection, organization, and creative techniques of message design elements in the telecommunications and film media. (Formerly numbered Telecommunications and Film 693.)

705. Seminar in Telecommunications Policy and Regulation (3)
Prerequisite: Telecommunications and Film 505 or Journalism 502. Analysis of legal concepts and issues as applied to commercial and noncommercial broadcasting; relationship of local, state and federal government to broadcast media.

750. Seminar in Contemporary Telecommunications Issues and Trends (3)
Prerequisite: The equivalent of an undergraduate major in telecommunications and film. Prerequisite: Admission to the Creative Specialization. Analysis of legal concepts and issues as applied to commercial and noncommercial broadcasting; relationship of local, state and federal government to broadcast media.

795. Project Seminar (3) Cr/NC/SP
Prerequisites: Telecommunications and Film 701 or 702, consent of instructor, and advancement to candidacy. Project in some aspect of the telecommunications and film media, culminating in a written report. Limited to students following Plan B for the Master of Arts degree in Radio and Television. Admission limited to students who have completed an approved proposal for a project in a previous course or special study.

798. Special Study (1-3) Cr/NC/SP
Prerequisites: Consent of instructor. To be arranged with department chair and instructor. Individual study. Maximum credit six units applicable to a master's degree.

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

799B. Thesis or Project Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP. Following assignment of SP in Course 799A, registration in this course is required in any semester in which the student expects to use the facilities and resources of the University; also in the semester in which the completed thesis or project is granted final approval.
Women's Studies

Faculty
Marilyn Jacoby Boxer, Ph.D., Professor of Women's Studies, Dean of the College of Arts and Letters
Maria-Barbara Watson, Ph.D., Professor of Women's Studies
Bonnie S. Zimmerman, Ph.D., Professor of Women's Studies, Chair of Department
Susan E. Cayleff, Ph.D., Associate Professor of Women's Studies
Patricia Huckle, Ph.D., Associate Professor of Women's Studies, Associate Dean of North County Center
Kathleen B. Jones, Ph.D., Associate Professor of Women's Studies
Janet A. Kohen, Ph.D., Associate Professor of Women's Studies
Gloria J. Romero, Ph.D., Assistant Professor of Women's Studies

General Information
The Department offers advanced coursework in women's studies which may be used toward fulfilling the advanced degree requirements in other departments with the approval of the student's graduate adviser.

UPPER DIVISION COURSES

590. Feminist Thought (3) I
Prerequisite: Six upper division units in women's studies.
Readings in feminist theory and contemporary theoretical perspectives on core concepts and issues in feminist scholarship. Focus on understanding from a feminist perspective and on the significance of analyzing female experiences.

595. Seminar in Women's Studies (3) II
Prerequisites: Six upper division units in women's studies and consent of instructor.
Directed research in women's studies. Field of investigation will vary with instructor. Methods of investigation, development of bibliography, presentation of paper based on original research. See Class Schedule for specific content.

597. Research Project (3) I, II
Prerequisites: Six upper division units in women's studies and consent of adviser.
Individual research project. May be taken in place of Women's Studies 595 Seminar in Women's Studies.

GRADUATE COURSES

696. Selected Topics In Women's Studies (3-6)
Prerequisite: Classified graduate standing.
Intensive study in specific areas of Women's Studies, with emphasis on theoretical and methodological issues. May be repeated with new content. Maximum credit of six units of 696 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

798. Special Study (1-3) I, II Cr/NC/SP
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Independent study. Maximum credit six units applicable to a master's degree.

Upper Division Courses
(Also Acceptable for Advanced Degrees)

The following courses are acceptable on selected advanced degree programs.

AMERICAN INDIAN STUDIES COURSE

533. Problems In American Indian Education (3) II
Prerequisite: Three units of American Indian Studies.
Survey of education system imposed on Indian America from the close of the Indian-White military conflict period to the present. Philosophies, government policy and public school accommodation will be central to the topic. Studies, recommendations and resultant programs that affect the overall educational process will be assessed.

CLASSICS COURSES

599. Special Study (1-3) I, II
Prerequisites: Consent of major or graduate adviser; to be arranged by department chair and instructor. For 599C: Classics 304G or 304L, for 599D: 304G, for 599L: 304L.
C. Special Study in Classics
G. Special Study in Greek
L. Special Study in Latin

GENERAL STUDIES COURSE

550. Interdisciplinary Topics (1-4)
General Studies 550 is an interdisciplinary selected topic course. Questions about individual courses should be directed to the department or departments listed immediately after the General Studies number in the Class Schedule.

HUMANITIES COURSES

580. Seminar: Topics (3)
Special topics appropriate to the interdisciplinary study of civilization. Reading, observation, and evaluation of scholarly literature of topic under consideration. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

596. Topics In Humanities (1-3)
Prerequisites: Upper division standing and six units in courses listed in Humanities section of General Education.
Special topics focusing upon selected aspects of civilization and studied from an interdisciplinary perspective in the humanities. See Class Schedule for specific content. Limit of interdisciplinary perspective in the humanities. See Class Schedule for specific content. Limit of interdisciplinary perspective in the humanities. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

599. Special Study (1-3)
Prerequisites: Twelve upper division units in humanities or in humanities disciplines and consent of instructor and program chair.
Directed individual study. Maximum credit six units.

JUDAIC STUDIES COURSE

580. Special Topics In Judaic Studies (1-3)
Prerequisite: Upper division standing.
Special topics appropriate to the interdisciplinary study of the modern Jewish experience. May be repeated with different content. Maximum credit six units.

MEXICAN AMERICAN STUDIES COURSE

596. Topics in Mexican American Studies (1-3)
Prerequisite: Consent of instructor.
Advanced topics in Mexican American Studies. See Class Schedule for specific content. May be repeated with new content. Limit of nine units of any combination of 296, 496 or 596 courses applicable to a bachelor's degree.
PART FOUR

General Information

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

University Library

The University Library supports the curricular and research needs of the University community through the development of pertinent collections and the provision of services designed to facilitate access to information. The Library provides assistance to faculty and students in several areas: Circulation, General Reference, Government Publications, Maps, Media Center, Microforms and Newspaper Center, Periodicals Reading Room, Reserve Book Room, Science Reference, and Special Collections.

The Library has automated acquisitions, cataloging, circulation, and serials control systems. Computer-based bibliographic search services are offered in over 100 databases. The Library provides for interlibrary loan through a direct link with several thousand other libraries using the computer and telecommunications facilities of the OCLC bibliographic utility. Instruction in the use of library resources is offered in conjunction with specific courses, clinics, and a comprehensive workshop program.

The Library's holdings include 955,498 volumes (monographs and bound periodicals); 534,000 government documents; 3 million microforms; 57,000 reels of microfilm; 153,000 maps; 5,200 phonograph records; 23,718 curriculum items; and 300 linear feet of archival papers. The Library receives 10,375 periodical and serial titles, excluding government publications. It is a depository for United States and California government publications, and receives all United Nations and Organization of American States publications. The Library is designed to eventually accommodate three thousand reader stations and to provide shelving for one million volumes.

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 that students may utilize are those provided in organized bureaus, centers, and institutes located on the campus.

University Center on Aging

E. Perci Stanford, Director

The University Center on Aging is a multidisciplinary organization located in the College of Health and Human Services. The Center is active in such areas of aging as (1) supporting interdisciplinary educational and curriculum efforts; (2) undertaking research, demonstration, and evaluation activities; (3) providing technical assistance and agency consultation for the community; (4) coordinating workshops and seminars, including students, and community members; and (5) providing opportunities for student involvement in aging activities on campus and the community. The Center has a commitment to include minority ethnic content in each area described.

An A.B. degree in Gerontology is offered through the Center under the guidance of a multidisciplinary steering committee. Efforts are made to work with a variety of disciplines to give students an opportunity to focus on gerontology. Courses pertaining to aging are being offered within Communicative Disorders, Physical Education, Psychology, Public Health, Social Work, Health Science, Sociology, Family Studies and Consumer Sciences, Anthropology, Recreation, Nursing, and Biology. Students wishing to organize a series of courses to meet their needs in the area of gerontology are encouraged to contact the Center Director or staff for more specific information on course offerings.

The Center is responsible for the coordination of a certificate program in conjunction with the College of Extended Studies. This program is geared toward individuals who are likely to be currently working in gerontologically related professions. In addition, the Center administers an undergraduate minor in gerontology.

Other major activities of the Center are administering a National Institute on Minority Aging, a national resource center for special aging populations, a geriatric education center (with UCSD), a summer program, and RAVE—Retired Active Volunteers in Education. It serves as a central point for the development and dissemination of minority aging data nationally.

Asian/Pacific American Studies Consortium

Ray T. Smith, Director

The Asian/Pacific American Studies Consortium is an interdisciplinary research organization established to conduct, coordinate and support basic, exploratory and applied activities of benefit to Asian and Pacific American students. The purpose of the Consortium is to develop Asian/Pacific American research centers, seminars, colloquia, and other activities on campus and to carry on programs of research, seminars, colloquia, and other activities on campus and to carry on programs of research, seminars, colloquia, and other activities on campus and to carry on programs of research, seminars, colloquia, and other activities on campus. The current emphasis is on the study of Asian and Pacific American communities in the Americas and in the Pacific Basin. The Consortium has acquired organizational records in particular from the Union of Pan Asian American Communities (UPAC) and the University of San Diego. These and other Asian studies materials are maintained in the University Library. Inquiries about their use can be made through the Director of the Asian/Pacific American Studies Consortium or the Director of the Asian/Pacific American Studies Consortium or the Director of the Asian/Pacific American Studies Consortium.

The Consortium maintains connections with campus organizations including the Center for Asian Studies, Asian American Student Alliance, and San Diego State University Foundation. General liaison is maintained with the University Library.
The principal objectives of the Bureau are to (1) secure and administer grants and other support for conducting research in the areas of economics and business; (2) facilitate research in these areas by the faculty and students; (3) seek cooperative arrangements with outside individuals and organizations for conducting specific research projects; (4) respond to campus and community requests for information and services; (5) publish the results of its investigations and faculty in publication of their research.

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

**Center for Communications**

John P. Witherspoon, Director

The Center for Communications was established to develop and administer interdisciplinary research and planning projects concerned with telecommunications technology, issues, and applications. Center projects are funded from grants and contracts with industry, government, education, and philanthropy. The Center seeks to stimulate recommendations for research from faculty members in participating departments; to conduct studies and planning projects relating to developments in the communications field, problems in communications, and applications of communications technology; to conduct conferences and seminars related to these areas; to examine methods by which the University can extend its reach by use of communications technology; and to develop cooperative enterprises in the communications field with other institutions in the San Diego area.

**Computer Aided Manufacturing Center**

George A. Mansfield Jr., Director

Established in 1987, the Center's activities focus on relevant research and meaningful education in state-of-the-art manufacturing engineering. Students and faculty are involved in projects using computerized milling machines, vision systems, computers, training robots, tooling, and instrumentation.

**Counselor Education**

The Center for the Study of Counselor Education is a unit within the College of Education, designed to provide support for activities such as (1) securing and administering grants and other support for research and development in counselor education, (2) encouraging cooperation with faculty members from other relevant disciplines such as anthropology, economics, psychology, social work, sociology, and the University Counseling Center, and (3) conducting programs or rendering services designed to promote counselor education at San Diego State University. The Center is administered by the Department of Counselor Education. Fiscal matters are coordinated through the San Diego State University Foundation.

**Center for Research in Economic Development**

Yiannis P. Venieris, Director

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

**Center for Economic Education**

Kathleen Mikita, Director

The Center for Economic Education is a unit within the College of Education. The center is affiliated with the California Council on Economic Education and the Joint Council on Economic Education, and has the mission to provide the following services and functions: 1) inservice training for teachers at both the elementary and secondary levels; 2) curriculum development and consultation with school district personnel; 3) development and distribution of media and materials on economic education; 4) research in economic education; 5) consultation with other university faculty as requested; and 6) workshops, speakers, and materials on economic education for adult constituencies from business, labor, social, and professional organizations. The service area for the center encompasses both San Diego and Imperial counties.

**Business and Economic Research**

The Bureau of Business and Economic Research is an organized research facility located in the College of Business Administration. The Bureau facilitates research activities of the faculty in interdisciplinary projects. The Bureau is a full service member of the National Association of University Bureaus of Business and Economic Research and maintains a national survey research network.
The San Diego State University Center for Energy Studies (CES) facilitates, promotes and serves as a community resource in matters concerning local energy issues. The Center is located in the College of Sciences and administered by an executive committee consisting of faculty from the colleges of Sciences, Engineering, Arts, Letters, and Professional Studies and Fine Arts.

European Studies Center
Leon Rosenstein, Director
The European Studies Center coordinates and supports teaching and research related to the European area. It supervises the major and the minor in European Studies for the A.B. degree. It sponsors the annual San Diego State University Summer Seminar and Travel Study Tours to Europe at various times in the year. It administers the European Studies Center Laboratory in AH-3172 which contains books, pamphlets, English and foreign language periodicals, and a slide collection on European art and geography.

Interdisciplinary Center for Health and Human Services
Marla Roberts-DeGennaro, Director
The Interdisciplinary Center for Health and Human Services is a multidisciplinary training, research and service facility. It is located in the College of Health and Human Services, and its activities involve departments from all parts of the University. The Center promotes interdisciplinary educational and research opportunities for SDSU faculty and students. Students from Communicative Disorders, Nursing, Psychology, Reading/Learning and Social Work participate in the Center's Central Intake program. They learn the skills of interdisciplinary collaboration as well as those specific to their respective disciplines as they assess the behavioral, cognitive, communicative, educational and physical potential of health problems being experienced by clients of all ages. Central Intake is offered as a low-cost service to the San Diego community. In this, as well as all other Interdisciplinary Center for Health and Human Services programs, a high priority is placed on serving the needs of the ethnic minority and economically disadvantaged individuals and families.

The Assistive Device Assessment Program of the Interdisciplinary Center is related to augmentative/assistive devices and systems. The Assistive Device Assessment Program is a multidisciplinary service which is oriented to the communicative, educational, physical, social, environmental and vocational needs of individuals who have disabilities.

These and all other Interdisciplinary Center for Health and Human Services programs are used as vehicles for both experimental and didactic teaching. Lower division, upper division, and graduate students observe the clinical activities directly and/or on videotape as part of their preparation for professional practice. Additional information about the Interdisciplinary Center for Health and Human Services programs is available at 594-6121.

Center for Instructional Technology Research and Training
Allison Rossett, Director
The purpose of the Center is to (1) secure grants and contracts for research and development in instructional technology; (2) conduct workshops, seminars and conferences relating to applications of instructional technology to teaching, training and management; (3) respond to campus and community requests for information and assistance; (4) assist in conducting needs assessments, task analyses, instructional program designs and evaluation of instructional products or programs; and (5) disseminate information reflecting the model use of instructional technologies. The Center uses instructional technology to address education and training problems in health, school, military, business and social service settings. The Center functions within the Department of Educational Technology of the College of Education to interested persons in the San Diego area. It also seeks to complement regular course offerings through sponsorship of lectures, conferences, and the development of bibliographic resources.

General Information
The Center seeks to foster not only a network of interested faculty within the College of Education but also encourages faculty involvement from other colleges on campus as well as from other organizations and universities in the San Diego region.

International Population Center
John R. Weeks, Director

The International Population Center (InterPop) was created to promote the implementation of effective population policy through the conduct and application of population research, the short-term training of program personnel, the graduate training of potential population researchers and administrators, and the provision of technical assistance to population-related agencies and organizations. The activities of InterPop focus geographically on Africa, the Middle East, and Mexico, but one of the goals of the Center is to relate country or regional demographics to global population issues, trends, and activities.

InterPop provides a variety of services including (1) the preparation, submission, and administration of research proposals for population-related research; (2) the dissemination of preliminary research findings in a Working Papers series; (3) the short-term training of personnel who are associated with population-related programs; (4) the provision of population technical assistance to such programs; and (5) the coordination of graduate programs for students interested in pursuing a master’s degree in a population-related area.

Although it is located in the College of Arts and Letters, InterPop is a multidisciplinary facility, linking Center faculty from several departments on campus with Center associates from other organizations and universities in the San Diego region.

Japan Studies Institute
Alvin D. Cox, Director

The Japan Studies Institute coordinates and encourages research and instructional programs on campus concerning various aspects of Japan and nurtures ties between the University and organizations and individuals in Japan. The Institute seeks to foster not only a network of interested faculty within the College of Education but also encourages faculty involvement from other colleges on campus as well as from other organizations and universities in the San Diego region.

Institute of Labor Economics
Adam Gifford, Director

The Institute of Labor Economics is a faculty of the Department of Economics which encourages research by students and faculty in all phases of labor problems, collective bargaining, labor legislation, and social security. The Institute is designed to complement the curricular and degree programs in the Department of Economics and to be of service to related disciplines. Publications are exchanged with 75 similar institutes at other universities. Research materials, both printed and machine readable, are available from the Institute.

Latin American Studies
Thomas M. Davies, Jr., Director

The Center for Latin American Studies seeks to encourage teaching and research related to Latin America. It has primary responsibility for the administration of the Latin American undergraduate and graduate degrees. The U.S. Office of Education has designated the center as one of eleven “National Resource Centers for Latin America,” in consortium with the Center for Iberian and Latin American Studies at the University of California, San Diego. In conjunction with this award, the Center administers programs that focus on: (1) the initiation of a problem-oriented approach to Latin American studies through the creation of courses dealing with urbanization and modernization of the area; (2) the development of innovative methods of instruction in Spanish and Portuguese; (3) the provision of informative and in-service training programs for elementary and secondary school teachers; and (4) the provision of services for the general public through the sponsorship of conferences, workshops, and films.

The Center also assists in the development of the University library’s Latin American holdings and has created a special collection of Latin American materials which is available in the Center’s reading room, SH-146.

Institute for Leisure Behavior
Gene G. Lamke, Director

The Institute for Leisure Behavior is the research and community service unit within the department of recreation at San Diego State University. It is primarily concerned with the development of population recreation services and is responsible for a comprehensive program of leisure services in the San Diego region. The Institute also assists in the development of recreation programs for elementary and secondary schools in the San Diego region.

Institute for Judaic Studies
Lawrence Baron, Director

The Lipinsky Institute for Judaic Studies, located in the College of Arts and Letters, serves to coordinate and support teaching and research in modern Jewish history and contemporary Jewish and Israeli affairs. Established with contributions from the Lipinsky Family and the State of Israel, the Institute provides financial support for an annual visiting professor from Israel. The Lipinsky Institute also sponsors a series of conferences, workshops, and colloquia on contemporary Jewish issues and trends. The Institute is operated as a special unit of the College of Arts and Letters and is administered by an advisory board.

Center for Marine Studies
James H. Mathewson, Director

The Center for Marine Studies provides a focus for oceanography and marine studies at SDSU. The Center assists departments within the University in the development of instructional and research programs for special students. The Center is operated as a special unit of the College of Sciences and is administered by a director and an executive committee consisting of faculty members elected from participating departments.

Center for Research in Mathematics and Science Education
Sandra P. Marshall, Director

The Center for Research in Mathematics and Science Education (CRMSE) is an interdisciplinary consortium of faculty interested in the research on substantive questions...
related to the learning and teaching of science and mathematics. The Center currently has members from the faculties of Mathematical Sciences, Natural Science, Psychology, Teacher Education, and Physics. It is administered by a Director appointed by the Dean of the College of Sciences and an Associate Director appointed by the Dean of the College of Education. Through its activities CRMSE initiates, encourages, and supports the scholarly pursuit of important theoretical and applied problems in mathematics and science education. CRMSE supports faculty in their current research projects and in the preparation of manuscripts for publication and grant proposals for continued research. The Center also provides information and guidance to students intending to pursue graduate degrees or careers in mathematics or science education. CRMSE works closely with local, state, and national groups concerned with these issues. The Center is located at 6475 Alvarado Road, Suite 206; 594-5090.

Molecular Biology Institute
A. Stephen Dahms, Director
Sanford I. Bernstein, Associate Director

The Molecular Biology Institute was established to serve interested departments of the biological and physical sciences in the coordination, support and enhancement of research and instruction in the molecular biological sciences. Interests and activities of the MBI encompass all approaches which aim to explain biology at the molecular level. Currently, full members of the Institute are drawn from the departments of Biology and Chemistry, and participate in the respective Ph.D. programs. Associate members are drawn from a variety of disciplines that are cognate with the molecular biological sciences. The Institute is also constituted as the university unit authorized to administer the master's program with an emphasis in Molecular Biology. The research programs of the MBI members are supported by a variety of agencies including the National Institutes of Health, the National Science Foundation, NASA, the American Heart Association, the American Diabetes Association, the Muscular Dystrophy Association, NOA, the Department of Energy, the U.S. Department of Agriculture, and the California Metabolic Research Foundation. Additional information is available from the MBI office: CG 403, 594-2822.

Paleobiology Council
Richard D. Estes, Director

The Paleobiology Council is an interdisciplinary research and teaching group concerned with exploration of the fossil record. It is composed of faculty members from the departments of Biology and Geological Sciences, and the San Diego Natural History Museum. Students interested in pursuing an interdisciplinary Special Major leading to an M.A. in Paleobiology may do so under the direction of the committee.

Center for Policy Studies in Education
Alberto M. Ochoa, Director

The Center for Policy Studies in Language and Cross-Cultural Education is a unit within the College of Education. The Center houses projects funded by federal, state and private sources. Center, and the Social Equity Technical Assistance Center. These centers focus on issues of social equity; conduct research on questions related to educational policy; and provide technical assistance to districts throughout Southern California.

Institute of Public and Urban Affairs
Louis M. Rea, Director

The Institute of Public and Urban Affairs is located in the School of Public Administration and the College of Social Science and Public Policy. The Institute was established to conduct research in community and public administration and public policy including urban planning, management, and public administration and public policy. The Institute publishes occasional working papers and research monographs. Selected students and faculty of San Diego State University staff the Institute. An integral part of the Institute is the Public Administration Center which contains a specialized and unique collection of research materials emphasizing issues in public affairs particular to San Diego and California.
and data archiving and retrieval. The section maintains a VAX 750 computer system to support faculty research.

Instructional Services offers consultation in computer applications to social research, including a full range of statistical analysis programs. The section also provides a range of specialized workshops and demonstrations about computer uses and applications, data management, and analysis. Graduate assistantships, undergraduate internships and research assistant positions are available to qualified students.

Survey Research
Oscar Kaplan, Director

The Center for Survey Research was established to encourage nonprofit research in the sample survey field. The Center is prepared to undertake surveys requested by government or nongovernment organizations, and to do fieldwork throughout the state, social or national basis. Faculty members who wish to submit applications for off-campus support in survey research in the committee. The Center is administered by a director.

Systems Ecology Research Group
James R. Reynolds, Director

The Systems Ecology Research Group (SERG) is an interdisciplinary research group established to conduct basic research and promote graduate education in ecosystem science. Group expertise exists in general ecology, physiological plant ecology, hydrology, meteorology, mathematical and simulation modeling. At present, major emphasis is on integrated research plant production, water relations, phenology, herbivory, soil processes and nutrient cycling, and simulation models are used to integrate the results of ecosystem model projects. Funding for the systems ecology research projects include the National Science Foundation, the U.S. Department of Agriculture, the U.S. Forest Service, and the U.S. Department of Energy. Additional information may be obtained at the SERG office, second floor Physical Sciences or by calling 594-5976.

Distinguished Graduate Research Lecture Series

The Distinguished Graduate Research Lecture Series is sponsored by the Graduate Division and Research and the University Research Council and is supported in part through donations to the campus scholars of national and international preeminence to present public lectures on the distinguished lecturer provides a unique educational opportunity for graduate students and faculty under the auspices of the Publications Committee of the University Research Council and made available to graduate students, faculty, and other interested persons.

Past Distinguished Research Lecturers have included Dr. Noam Chomsky, Institute of Linguistics, Massachusetts Institute of Technology; Dr. Arthur Komberg, Professor of Biochemistry, Stanford University; Dr. Nathan Glazer, Professor of Education and Sociology, Harvard University; Dr. Jane Goodall, Director, Gombe Stream Research Centre, Dr. Jonathan Miller, well-known author, stage producer and director, and Dr. Stephen Jay Gould, Professor of the Systems Ecology Research Group and was incorporated in 1943 as an auxiliary organization authorized by the State of California. It is a nonprofit corporation that provides and augments support for faculty and staff research and administration of grants and contracts for faculty and staff research and development. Administration of grants and contracts for faculty and staff research.

San Diego State University Foundation

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University Computing Services

University Computing Services provides equipment, communication facilities, software, and the campus community.

A Control Data Corporation CYBER 170-750 mainframe computer running the Network Operating System is a primary on-campus source of computer power. Additional instructional of two VAX-11/780's and one VAX 11/750 running the Virtual Memory System; Harris HX-7 minicomputer running an AT&T System V UNIX system; and a Prime 9750 minicomputer running the PRIMOS operating system. Very large computer programs and/or data bases may also be processed on the Systemwide Computing Services CYBER 170/760 or an ELXSI 6400.

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International Programs

In its 25th year of continuous operation, the California State University (CSU) International Programs offers students the opportunity to continue their studies overseas for a full academic year while they remain enrolled at their home CSU campus. The International Programs’ primary purposes are to enable selected students to gain firsthand understanding of other areas of the world and to advance their knowledge and skills within their academic disciplines in pursuit of established degree objectives. Since its inception, the International Programs has enrolled nearly 9,000 CSU students.

A wide variety of academic majors may be accommodated by the 34 foreign universities institutions: the University of Queensland (Australia), the University of São Paulo (Brazil); the institutions have an abiding interest in and commitment to broader institutional arrangements for student exchanges and student exchanges, and student exchanges, contact the Office of the Executive Director for International Programs, Administration Building 221, (619) 594-1354.

Alumni & Associates

Membership in the Alumni & Associates is open to those persons who have an abiding interest in and commitment to the growth and future of SDSU and the community it serves.

The Alumni & Associates is a dynamic, moving organization whose purpose is to promote the welfare of the University; it offers a number of programs and services designed to meet the needs and interests of its alumni, including library privileges, reduced admission to special events and conferences, membership in the Alumni & Associates Student Association, and Student Services.

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regarding hearing loss, hearing aid evaluations, earmolds and earprotectors for faculty, students, staff and the community, including Hispanic and Asian clients and their families. A minimal fee is charged for audiological services. The center operates throughout the school year. Referrals may be made through health professionals, agencies, school districts or as self-referrals.

Aztec Shops, Ltd. (Campus Store, Food Services, Copy Services)

Aztec Shops, Ltd. is a California nonprofit corporation which has existed since 1931 to serve San Diego State University. It owns and operates services such as the Campus Store, Food Services, and copy centers. Aztec Shops is governed by a board of directors comprising faculty, students, and staff of SDSU.

The Campus Store provides required textbooks, assigned class materials, reference works, supplies, computer sales, imprinted items and a selection of over 30,000 general books titles. A good selection of art supplies may be found at Art Etc., located in the Art Building. The Copy Center, located behind the Campus Store, provides Xerox copying, binding, supplemental class materials, and typewriter and computer rentals. The Campus Store is open on weekdays and Saturdays when classes are in session. Aztec Shops also operates Campus Stores on the Imperial Valley and North County campuses.

Food Services includes Commons East, West Commons, Monty’s Den, Little Pete, Courtyard Cafe, the Faculty/Staff Centre, Betty’s Hotdogger, Catering, the Oasis, Aunt Mary’s, and the Bagelteria. Specialized food items are available at all locations, offering wide menu varieties to accommodate those on campus.

Meal Cards are available to any enrolled student. Options include 14- and 10-meal plans. Meal tickets enable the holder to dine at the Courtyard Cafe, West Commons, Commons East, and Monty’s Den.

Aztec Shops is dedicated to providing quality services to the students, faculty, and staff of SDSU. Questions may be directed to the corporate office, second floor, Commons East.

Campus Children’s Center

The Associated Students Campus Children’s Center, a parent participation program, provides child care for SDSU students’ children, six months through five years of age. Preference is given to families with the greatest financial need and to earliest enrollments. Children are accepted as space permits.

Tuition for children is determined on a sliding fee scale based on family size and income, participants, and Child Development majors. Parents make a weekly contribution of time as a volunteer or serve on a fund-raising committee. They also have the opportunity to serve on the representatives committee.

The program is designed so that a variety of activities are offered that will foster the child’s social, emotional, intellectual, and physical development and help the child view himself/herself and the environment positively.

The hours of operation are 7:45 a.m. to 5:00 p.m. for the preschool center (children 30 months through 5 years) and 7:45 a.m. to 3:30 p.m. for the infant center (children 6 months to 27 months). Kindergartners are not accepted for after school care.

Career Placement

Counseling Services and Placement may furnish, upon request, information about the employment opportunities and student services available to graduates from programs or courses of study preparing students for a particular career field. This information includes data concerning the average starting salary and the percentage of previously enrolled students who obtained employment. The campuses in California are

Catalogs and Bulletins

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

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

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

Counseling Services and Placement

Hardy Annex 850, (619) 594-8651

Students at SDSU may need to make decisions which will shape and determine their future. The University’s Counseling Services and Placement (CSP) provides information, guidance, and assistance in selecting programs for career research. The recom-
Faculty Office Hours
All faculty members are required to hold regularly scheduled office hours during the week to allow for student consultation. A schedule of those hours is posted outside each faculty member's office door.

Health Services
Corner, Campanile Drive and Hardy Avenue, (619) 594-5261
One of the benefits provided to regularly registered SDSU students is quality medical care at little or no cost. Fees have been prepaid through regular registration fees. Some services, for example annual Pap smears and pharmacy, require a minimal fee. Charges associated with these services are usually dramatically lower than those found elsewhere. This care is provided at Student Health Services, an off-campus center where over 75 health care providers offer a wide range of programs and services. Services include:

- Care by physicians board certified in family practice, gynecology, pediatrics, dermatology, internal medicine, orthopedics, psychiatry, and radiology
- Primary care nurse practitioners
- Nursing, x-ray, and laboratory staff
- Choice of a designated family practitioner to monitor health care needs
- Associated Students Student Health Advisory Board where students can offer input regarding current health care needs

Student Health Advisory Board
Student Health Advisory Board (SHAB) is an important advocacy group of dedicated, concerned students. Members meet regularly throughout the year to talk about and make decisions concerning all aspects of health service provided at SDSU. The SHAB Board of Directors is elected by the Associated Students. Members are encouraged to attend these meetings to be informed about Student Health Services. The Board of Directors acts as liaison between the SDSU Student Health Services and the Associated Students. Members of the SHAB Board sit on many advisory committees in addition to helping with the day-to-day operations of Student Health Services. SHAB members work closely with faculty and staff at different levels to ensure that the services provided meet the needs of the student population.

Required: Proof of Measles and Rubella

Immunizations or Immunity
Now or readmitted students, born on or after January 1, 1957, must demonstrate proof of immunity to measles and rubella (German Measles) by the beginning of their third term of enrollment at SDSU. Students who have not complied with this California State University mandate prior to the registration deadline will not be assigned classes for the upcoming semester.

Measles and rubella immunization is now required because both of these diseases continue to cause disability and sometimes death in college-age individuals. Epidemics have occurred among college campuses during the past few years because a sizeable percentage of突破 and potential fatalities among students in The California State University system. A proof of either previous illness or immunization to Student Health Services. An immunization must be given during the current year. Students may also receive free (619) 594-5261.

Strongly Recommended Health Screening
Immunization from the following diseases may also protect students against potentially serious illnesses: tetanus, diphtheria, whooping cough, meningococcal, polio, mumps, smallpox, influenza. Like measles, these too can be cost in Student Health Services.

To help Student Health Services provide more continuous care, students are encouraged to obtain a health history and physical examination from their local medical provider prior to arrival at SDSU. Copies of these records can be brought or mailed to Student Health Services.

Appointments
Students may visit Student Health Services on a future or same-day appointment basis. Those in need of urgent care can walk into Student Health Services for immediate attention. Students are strongly encouraged to make an appointment. Student Health Services is open twelve months of the year. During the fall and spring semesters, the clinic is open from 8:00 a.m. until 5:00 p.m., Monday through Friday. During intersession and summer, the clinic closes at 4:15 p.m. All medical care provided at Student Health Services is strictly confidential. No one, on or off campus, has access to medical record information without written permission from the student.

Student Health Advisory Board
Students can participate in the clinic activities and offer important feedback about services through membership on the Student Health Advisory Board (SHAB) sponsored by SDSU. Students are encouraged to attend these meetings to be informed about Student Health Services. SHAB members work closely with faculty and staff at different levels to ensure that the services provided meet the needs of the student population.

Accidents and Student Insurance Coverage
Under Trustee policy, first aid or emergency medical care is provided to students, faculty, staff, and campus guests. In the event of accidents and injuries occurring on or near the University campus, the California State University Student Health Services (SHS) is responsible for their own safety and health in connection with participation in campus activities. Additional information on insurance coverage for students participating in health care will be available immediately to the Student Health Services Department. Public Safety, 594-5955.

SDSU students are treated by the University as adults. Accordingly, students are responsible for their own safety and health in connection with participation in campus activities. The University does not and should not exercise the authority to govern the conduct of students at all times. The University does not and should not exercise the authority to govern the conduct of students at all times. The University does not and should not exercise the authority to govern the conduct of students at all times. The University's mandate prior to the registration deadline will not be assigned classes for the upcoming semester.

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November and December for the fall term of the upcoming academic year. For the spring semester, applications are available in September and October. Confirmation of a room reservation is made after the following requirements have been met: (a) the student has been accepted by SDSU; (b) the contract has been returned to the Housing and Residential Life office; and (c) the first payment has been received as specified, and the contract is returned. Though consideration will be given to a student’s request for an individual hall and roommate, a specific assignment cannot be guaranteed. During the Summer Sessions, rooms are available on a receipt-of-check date priority. Full payment must accompany the application. Students should contact the Housing and Residential Life office in mid-April for information concerning summer session housing.

REMEMBER: IT IS THE RESPONSIBILITY OF EACH STUDENT TO CONTACT THE HOUSING AND RESIDENTIAL LIFE OFFICE TO OBTAIN ON-CAMPUS HOUSING. APPLICATIONS ARE SUBJECT TO A PRIORITY SYSTEM AS THE DEMAND EXCEEDS THE NUMBER OF SPACES ON CAMPUS.

Off-Campus Housing

Off-campus housing accommodations in the San Diego area include apartments, houses, rooms in private homes, and privately owned residence halls near campus. Listings of available dwellings and addresses of students seeking roommates are located next to the Housing and Residential Life Office. The Aztec Housing Guide, published each year in May, provides information on apartment complexes, including prices, locations, phone numbers, amenities, and evaluations based on opinions of current residents. Because off-campus housing is limited, students should begin their housing search at least one month before the first day of classes. The Housing and Residential Life office organizes programs to assist in locating off-campus housing and to provide information about tenant rights and responsibilities. Assistance is also available for students signing leases or involved in landlord-tenant conflicts. For additional information please write: Off-Campus Housing, Housing and Residential Life Office, San Diego State University, San Diego, CA 92182.

Residential Greek Letter Organizations

Fraternities and sororities offer students opportunities for friendship, social and recreational activities, community service projects, and development of leadership skills. At SDSU there are approximately 50 interfraternity and sorority chapters on campus. Students interested in fraternity or sorority life are encouraged to view the general information and to contact the Residential Greek Coordinator, Housing and Residential Life Office, San Diego State University, San Diego, CA 92182.

International Student Services

Scripps Cottage Porch, (619) 594-5258

More than 650 international students and scholars from 75 countries attend SDSU. Through the support provided by International Student Services, these students and scholars can find assistance in reaching their educational goals. Services include prearrival advising, orientation, academic and immigration advising, and a housing referral service.

International Student Services also coordinates a variety of activities designed to foster Intercultural Ambassadorship, through which selected international students make home-country presentations in San Diego schools. In addition, the ISS utilizes faculty, staff, and the community to become American Friends to international students new to the SDSU community and to participate in the many events listed in the ISS Calendar of Intercultural Activities. These include the International Coffee Hour, the Whole Earth Dialogue Series, the International Festival, and the Intercultural Cultural Exchange Camp.

Ombudsmen

Aztec Center 168, (619) 594-6578

Becoming a student at SDSU also means becoming a member of a special community, which includes students, faculty, staff, and administrators. As a member of this community, students are responsible for knowing and complying with established rules and regulations. The Ombudsmen act as liaisons between students and the University, assisting students through formal grievance procedures and mediating and suggesting compromise solutions between parties. If the problem is still unsolved, the student may file a grievance with the student grievance committee. If student grievances cannot be resolved at the referral level, the Ombudsmen may act as mediators.

Parking and Transportation

Where possible, carpooling or use of alternate modes of transportation is recommended. Parking and the use of a vehicle are required only. Parking structures and lot visitors are available for students living off-campus.

Speech, Language, and Hearing Clinics

Communications Clinic 126, (619) 594-6477

Services include prearrival advising, orientation, academic and immigration advising, and a housing referral service. The clinic provides many opportunities for the international student and the SDSU community to interact, understand, and develop friendships. Students interested in fraternity or sorority life are encouraged to view the general information and to contact the Residential Greek Coordinator, Housing and Residential Life Office, San Diego State University, San Diego, CA 92182.

Information about nonresidential fraternities and sororities is available from the Student Resource Center.

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Services include prearrival advising, orientation, academic and immigration advising, and a housing referral service. The clinic provides many opportunities for the international student and the SDSU community to interact, understand, and develop friendships. Students interested in fraternity or sorority life are encouraged to view the general information and to contact the Residential Greek Coordinator, Housing and Residential Life Office, San Diego State University, San Diego, CA 92182.

Information about nonresidential fraternities and sororities is available from the Student Resource Center.
Other student government activities include monitoring academic policies; appointments to educational or campus-related committees; lobbying to provide student input to city, county, state and federal governments; and representing SDSU's interests with the California State Student Association.

Test Office
Library East 406, (619) 594-5216

The Test Office is an important resource for the entire University community. The Test Office serves both students and faculty through administering tests for the purpose of admission, class placement, competency for graduation, licenses, credentials, and career planning. A library of many different tests is maintained for use by faculty and students in testing classes, and test scoring and analysis services are provided for classroom tests.

Test dates for San Diego State University competency and placement tests are listed in the Special Tests section of the current Class Schedule and advance reservations as well as fee registration procedures for major national examinations in the form of a bulletin of information or with the counseling process, and career planning must contact Counseling Services and made through the Disabled Student Services office.

Although competency test requirements are monitored by various offices on campus, the Test Office will attempt to assist students in signing up for the required examinations or refer them to the proper agency.

Veterans Affairs
Administration 121, (619) 594-5813

Students who are eligible for veterans, dependents, or reservists education benefits should visit SDSU's Veterans Affairs Office (VAO). Services available through the VAO include processing tutorial assistance paperwork (old G.I. Bill and dependents only).

Students planning to attend SDSU should contact the Veterans Affairs Office two months before the beginning of their first semester; they may be eligible for an advance payment of the processing tutorial assistance paperwork. (VAO).

Veterans Affairs Services are available through the VAO. Students who are interested in assessments, assisting with the counseling process, and career planning must contact Counseling Services and made through the Disabled Student Services office.

The College of Extended Studies serves as the principal University liaison with the adult education check. For additional information, about the education benefits include:

Continuing Education

College of Extended Studies

Functions

The California State University regards its Extended Education credit-bearing programs as integral parts of the institution. These programs are viewed as extensions of the institution's overall mission and purpose. These programs include credit-bearing programs and are in concert with the institution's overall mission and purpose. The educational services and are in concert with the institution's overall mission and purpose.

In additional, it provides a range of academic and career programs that are designed to fit the life-style and expectations of mature adults.

The College of Extended Studies provides academic and career programs that are designed to fit the life-style and expectations of mature adults.

The College of Extended Studies administers a comprehensive summer program for San Diego State University. Approximately 600 courses, workshops, summer sessions, and special programs are available for matriculated students, and experimental offerings, and special programs are available to those who wish to earn credit during the summer months. The programs are designed to fit the life-style and expectations of mature adults.

The majority of the programs are offered on a self-support basis since state funds are not provided for Continuing Education activities.

Summer Programs

The College of Extended Studies provides academic programs for students who wish to earn credit during the summer months. The programs include credit-bearing programs, and experimental offerings, and special programs are available to those who wish to earn credit during the summer months. The programs are designed to fit the life-style and expectations of mature adults.

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Winter Session

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

The Winter Session is offered on a self-support basis since state funds are not provided for Winter Session attendance.

American Language Institute (ALI)

The American Language Institute offers noncredit intensive (20 hours per week) English programs throughout the year to students and professionals interested in improving their English proficiency. By enrolling in ALI students may take advantage of a program called Conditional acceptance. Conditional acceptance is available to those students who require admission or proof of English language skills. It is offered to students who do not have an adequate command of government and have an adequate command of English or the required TOEFL (Test of English as a Foreign Language) score to qualify for English.
admission to the University. After transcripts of their academic work have been evaluated by SDSU staff, students may receive an official letter of conditional admission which states that the student has met all University requirements except English language proficiency and may enter the University after training at the American Language Institute and appropriate TOEFL scores.

Programs offered by ALI are as follows:

**English for Academic Purposes** — A 16-week course for students planning to enter San Diego State or other colleges or universities. Classes are offered in reading, writing, grammar, English for specific purposes (e.g., English for Business and Economics, English for Science and Technology, English for Computers, and Academic Skills). In addition, students may choose from over 30 elective course offerings, and TOEFL, GMAT and GRE preparation.

Advanced students may register for three to nine units in the Open University in addition to their English classes.

**Intensive English Communications** — A 6-20 week course focusing upon oral skills and cultural experiences. Classes include eight hours of oral communication in addition to reading, writing, structure and pronunciation. Elective courses are offered and directed community activities provide experiences for real language use. Regular field trips to places of educational and recreational interest are an integral part of the program.

**Specific Purposes Programs** — Programs for students and professionals with specific needs, including Management and Business English, Seminar for International Teachers of English, GMAT/GRE and TOEFL preparation, as well as advanced academic skills (statistics review, graduate report writing, research library skills, etc.), are arranged.

**Summer Special Programs** — A number of special short-term language programs are offered by the ALI each summer (e.g., Management and Business English). These can be arranged for groups or individuals.

**Services** — All students at the Institute are offered housing assistance, counseling for university entrance, health services, and orientation to university life.

Information about and applications for the ALI can be obtained from the Director, American Language Institute.

### Travel Study Programs

The College offers a variety of domestic and foreign travel study programs which are designed to give students and community members an opportunity to travel and earn extension credit offered for the longer programs. Units of credit earned through travel study may be used However, participants need not be regularly matriculated students at SDSU. Independent study students must select an instructor and prepare a plan of study. For further information contact the Coordinator of Travel Study Programs.

### Extension

In order to meet the needs of the adult community, as well as matriculated students, the College provides a variety of extension courses, workshops and open university programs. For most regular, on-campus classes are open to qualified extension students by special permission of the department and the instructor. Students who take advantage of "Open University" are required to pay regular extension fees. They are permitted to enroll only after University is excluded from the Student's San Diego State University scholastic average.

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Most regular, on-campus classes are open to qualified extension students by special permission of the department and the instructor. Students who take advantage of "Open University" are required to pay regular extension fees. They are permitted to enroll only after University is excluded from the Student's San Diego State University scholastic average.

Open University classes may not be taken by the following:

1. Nonmatriculated foreign students (nonresidents from non-English-speaking countries) with a score of less than 450 on the Test of English as a Foreign Language (TOEFL) or its equivalent.
2. Foreign students with I-20 visas from another university.
3. SDSU matriculated students.

### External Degree Programs

In addition to its role of administering external degree programs for the civilian population, Extended Studies serves as the liaison with the military installations in the University service area. Programs offered by Extended Studies in the University service area include:

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Management, Materials Management, Personnel and Industrial Relations, and Accounting. The Division also offers Noncredit Certificate Programs in special interest areas.

**Custom On-Site Training**

SDSU's Professional Development Division of the College of Extended Studies specializes in developing and implementing on-site training programs and consulting projects which meet specific needs of the San Diego business community. The programs serve small as well as large businesses with topics ranging from computer, team building, and communication skills to supervision and management. Program leaders and training consultants are drawn from the academic and business worlds and have extensive practical experience. Programs are cost effective and designed with quality and adaptability.

**Seminars and Workshops**

The Division coordinates practical two- and three-day seminars and workshops aimed at increasing the skills of the business professional. These seminars are taught by local and national seminar leaders chosen from the business and academic worlds for their expertise and outstanding teaching ability. Topics addressed cover a wide range of business and engineering subjects, such as management, finance, marketing, engineering, construction, manufacturing, purchasing, and computer literacy.

**Center for Study of Data Processing and Management Development Center**

The Centers offer a series of practical, intensive noncredit training in the fields of data processing and management. The Division has established these programs in cooperation with the San Diego corporate community. The purpose of these unique cooperative programs is to provide quality, cost-effective continuing education for business, industry and government personnel in specific fields. The corporate members form a fellowship in which all participate in applying proven solutions to their education and training needs.

**Manufacturing Programs**

A new certification program in Configuration Management and the Institute of Quality and Productivity are programs designed to increase the productivity and profitability of manufacturing companies.

**Retired Adults Education Program**

Programs for retired adults are sponsored by the College of Extended Studies at San Diego State University and operate out of two locations—downtown San Diego (Educational Growth Opportunities—EGO) and Rancho Bernardo (The Continuing Education Center at Rancho Bernardo). These programs are planned and instructed by senior adults who are interested in furthering lifelong learning. For further information, contact the Director of Retired Adult Education Programs.

**Pacific Region Training Center**

The Pacific Region Training Center addresses the new opportunities in professional development, training, and technical services created by the increasing business and economic interdependence between the US and Mexico and other key exporting countries in the Pacific region. The mission of the Center is to (1) Serve as an information clearinghouse and "neutral ground" where business leaders and public officials from various Pacific region countries can explore the practical aspects of multinational investment and production sharing; (2) Enhance the capability of the regional business community to engage in multinational ventures; and facilitate communication between foreign entities and city, county, state, and federal agencies in the US and Mexico; (3) Facilitate communication between city, county, state and federal agencies in the U.S., Mexico and other Pacific Rim nations, by cosponsoring special programs to serve them, with the appropriate academic Colleges.

Drawing on the academic resources of SDSU and the telecommunications and language training programs of the College of Extended Studies, the Center is developing a wide variety of activities. Programs include INTERNET, a Distant Learning Program, is the first formally approved interactive distant education network using microwave and satellite communications infrastructure for transmission across U.S. borders. Televised academic courses and technological and professional training are being transmitted into Mexico, and eventually Central and South America and other Pacific Rim countries. Other Center programs include seminars and institutes such as the annual Summer Institute on U.S.-Mexico Issues from Mexico's Perspective and the Teacher Training Institute for the Pacific Region. Research and data assistance on international economic, political and human resource topics are also provided by the Center.
External Degree Programs

Purpose

External degree programs have been established by the Board of Trustees of The California State University to increase educational opportunities for adults who characteristically have not had access to traditional academic programs, to aid them in expanding their job and career potential or in pursuing personal enrichment goals. External degree programs are designed for mature adults who by reason of geography, employment, family responsibilities, or other personal circumstances find it difficult to spend extensive periods of time "in residence" on a university campus, or who are employees of particular firms, agencies or institutions, or occupational groups for whom an external curriculum is appropriate.

Admission Requirements

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

Application for Admission

Application for admission to external degree programs may be obtained from the College of Extended Studies. An application fee of $45.00 must be submitted with the application. The application for admission must be supported by official transcripts of all previous academic work.

Instruction and Scheduling

Fees

Fees Since Extension and External Degree programs do not receive state support, they are required to be financially self-supporting. Contact Extended Studies for exact fees.

Degree Requirements

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

Master of Arts Degree in Education

The general objectives of the special program to prepare naval officers are:
1. To develop basic principles of resources and personal management.
2. To develop the knowledge for planning and budgeting quality instructional programs.
3. To possess the knowledge of organizations and their development.
4. To understand the principles and applications of instructional systems development.
5. To develop the basic knowledge of the theory of educational philosophy.

Program Requirements

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

Program Requirements

The professional courses required are as follows:

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

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

Professional Core Courses (15 semester units)

- Administration, Rehabilitation and Postsecondary Education 600 Principles of Educational Administration (3)
- Administration, Rehabilitation and Postsecondary Education 610 Educational Leadership (3)
- Education 793A Seminar (3)
- Education 793B Seminar (3)
- Education 795A Seminar (3)
- Education 795B Seminar (3)

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

Electives selected under advisement (15 semester units)

- Administration, Rehabilitation and Postsecondary Education 611 Curriculum Theory and Development in Postsecondary Education (3)
- Administration, Rehabilitation and Postsecondary Education 630 Seminar in Educational Administration (1-6)
- Administration, Rehabilitation and Postsecondary Education 730 Seminar in Adult Learning (3)
- Administration, Rehabilitation and Postsecondary Education 740 Advanced Seminar in Educational Administration (3)
- Educational Technology 540 Instructional Technology (3)
- Educational Technology 541 Media Production (3)
- Educational Technology 544 Instructional Design (3)
- Educational Technology 553 Workshop in Educational Television (3)
- Educational Technology 572 Computer Solutions to Instructional Problems (3)
- Educational Technology 575 Advanced Instructional Technology (3)
- Educational Technology 653 Interactive Video Instructional Design (3)
- Educational Technology 667 Seminar in Instructional Technology (3)
- Educational Technology 684 Seminar in Management of Educational Technology (3)
- Education 701A Evaluation Techniques (3)
- Education 701B Management of Organizations (3)
- Management 601 Management of Organizations and Human Resources Management (3)
- Management 611 Organizational Behavior and Human Resources Management (3)
- Management 670 Seminar in Personnel Planning and Staffing (3)
- Management 680 Seminar in Management of Educational Technology (3)
- Public Administration 632 Seminar in Organization Development in the Public Sector (3)
- Public Administration 650 Seminar in Public Financial Management (3)
- Teacher Education 628 Advanced Educational Psychology (3)
- Teacher Education 650 Seminar in Public Financial Management (3)
- Teacher Education 650 Seminar in Professional Development (3)

To earn the ETMS (XX-37P), code officers must complete at least one course in each of ten skill areas. Course substitutions may be made if approved by the ETMS coordinator at San Diego State University and the Navy Program Manager.
North County

Graduation and academic requirements for degree programs offered at North County are identical to main campus requirements.

Faculty teaching at North County are regular full-time SDSU faculty and part-time faculty selected by departments on the basis of their academic preparation and teaching experience.

Degree, Credential and Certificate Programs Offered at North County

- Master of Arts degree in education with a concentration in educational administration and/or administrative services credential.
- Master of Arts degree in education with a concentration in educational technology; specialization in educational computing.
- Multiple Subject Teaching Credential.
- Single Subject Teaching Credential.
- Certificate in Instructional Technology.
- Coursework pursuant to Master of Arts degrees in education with concentrations in elementary curriculum and instruction, secondary curriculum and instruction, multicultural education, reading education, and special education is also available.

General Information

San Diego State University, North County has been established to assist individuals living in the northern San Diego, southern Orange and Riverside counties in meeting their academic objectives.

Establishment of San Diego State University, North County was approved by the state legislature and Governor in the summer of 1979. The first North County classes were offered in academic work will be provided by local community colleges.

San Diego State University, North County is located at the intersection of North San Marcos and Vallecitos Boulevards, San Marcos, California.

Admission and Registration

To attend classes at San Diego State University, North County, students must file a complete application and transcripts as outlined in Part Two of this bulletin and be admitted to San Diego North County, or both.

Students may register for North County classes by using the mail registration procedures or Schedule for registration dates.

Student Services

In addition to on-site registration and payment of fees, student services provided at North County include academic advising, career counseling, veterans' benefit information, financial aid information, testing, health services, library services, student activities, organizations, and a bookstore.

Fees

Fees for courses offered at North County are the same as those charged on the main campus. For specific information, see the Schedule of Fees in this bulletin.

Imperial Valley Campus, Calexico

Faculty

Emeritus: Baldwin, Erzen, Franklin, Harmon, King, Lovely, Rodhey, Smith, Spencer, Wilson

Professors: Ayala, Polcinhorn

Associate Professors: Balch, Dunn, Polich, Reyes, Ryan, Shenas, Simon, Varela-Ibarra

Assistant Professors: Cuellar, DeJeter, Hill, Stimpf

Offered by the Imperial Valley Campus

Offered by the Imperial Valley Campus, in cooperation with academic units and the Graduate Division of the San Diego Campus, offers selected graduate programs leading to advanced degrees, credentials, and certificates. Such programs, offered on a part-time basis for working professionals, have been offered for the Master of Arts degree in Education, for the Master of Science in Administration and Supervision, and for a concentration in Multicultural Education and Administration.

Some classes are offered on the Imperial Valley Campus, with additional classes in the Imperial Valley. The Imperial Valley Campus offers students the advantages of small classes, individual contact with faculty, and offers students the opportunities to participate in the Master of Arts degree programs in education, particularly in the areas of administration and supervision.

General Information

The Imperial Valley Campus is a two-year upper-division campus of San Diego State University, serving the desert area of southwestern California. It is accredited as an integral part of SDSU and operates under the same academic calendar. Established in 1959 by an act of the State legislature, the campus is located in the Imperial Valley on the Mexican Border.

The Imperial Valley Campus is part of the State University system, and operates under the same academic standards and policies as the main campus. The campus is located in Imperial Valley, California, and serves the educational needs of the Imperial Valley and the surrounding area.

The campus is located on the Mexican border, providing opportunities for cultural exchange and international cooperation. The campus is situated in a desert environment, with a warm climate and limited rainfall.

The Imperial Valley Campus offers a range of programs, including undergraduate and graduate degrees, certificates, and credentials. Students have the opportunity to participate in educational programs that are tailored to the needs of the desert area.

The campus is also home to the Imperial Valley Education Center, which provides educational opportunities for students in the Imperial Valley and beyond.

Facilities

The campus is located on an eight-acre site in the heart of Calexico's Civic Center. It offers a variety of facilities, including a library, a student center, and classrooms.

The campus is also home to the Imperial Valley Education Center, which provides educational opportunities for students in the Imperial Valley and beyond.
North County

Graduation and academic requirements for degree programs offered at North County are identical to main campus requirements. Faculty teaching at North County are regular full-time SDSU faculty and part-time faculty selected by departments on the basis of their academic preparation and teaching experience.

Degree, Credential and Certificate Programs Offered at North County

- Master of Arts degree in education with a concentration in educational administration and/or administrative services credential.
- Master of Arts degree in education with a concentration in educational technology.
- Single Subject Teaching Credential.
- Certificate in Instructional Technology.
- Coursework pursuant to Master of Arts degrees in education with concentrations in elementary curriculum and instruction, secondary curriculum and instruction, multicultural education, reading education, and special education is also available.

General Information

San Diego State University, North County has been established to assist individuals living in the northern San Diego, southern Orange and Riverside counties in meeting their academic objectives.

Establishment of San Diego State University, North County was approved by the state legislature and Governor in the summer of 1979. The first North County classes were offered in September 1979. Courses are at the upper division and graduate level. Lower division academic work will be provided by local community colleges.

San Diego State University, North County is located at 800 West Los Vallecitos Boulevard, San Marcos, California.

Admission and Registration

To attend classes at San Diego State University, North County, students must file a complete application and transcripts as outlined in Part Two of this bulletin and be admitted to San Diego State University. Upon admission to the University, students may register for classes at SDSU, at North County, or both.

Students may register for North County classes by using the mail registration procedures or by registering in person at North County prior to the start of classes. See the current Class Schedule for registration dates.

Student Services

In addition to on-site registration and payment of fees, student services provided at North County include academic advising, career counseling, veterans benefit information, financial aid information, testing, health services, library services, student activities, organizations, disabled student services, and a bookstore.

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Offered by the Imperial Valley Campus

Occasionally the Imperial Valley Campus, in cooperation with academic units and the Graduate Division of the San Diego Campus, offers selected graduate program leading to advanced degrees, credentials, and certificates. Such programs are scheduled on a part-time basis for working professionals, have been offered for the Master of Arts degree in Education for the last two or more years, and for the master's in Multicultural Education and Special Education Specialist credentials.

Some programs are available to on-campus students. For more information, contact the respective departments.

General Information

The Imperial Valley Campus is a two-year upper-division campus of San Diego State University serving the desert area of southeastern California. It is accredited as an integral division of SDSU and operates under the state legislature and Governor in the summer of 1979. The first North County classes were offered in September 1979. Courses are at the upper division and graduate level. Lower division academic work will be provided by local community colleges.

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Fees for courses offered at North County are the same as those charged on the main campus. For specific information, see the Schedule of Fees in this bulletin.

Facilities

The campus is located on an eight-acre city block in the heart of Calexico's Civic Center, across from Rockwood Plaza. This was originally the site of Calexico's first high school, and some of the campus buildings, including Rodney Auditorium, are part of the original school building.
structures. In 1980 the Legislature approved funding to construct a new classroom building and a library media center which was dedicated in February 1983.

The library, located in the center of campus, is designed to facilitate research and to provide a pleasant atmosphere for study. It features open stacks and a variety of study areas including carrels, large tables, and comfortable, upholstered chairs. The collection of over 50,000 volumes supports the curricula offered on the Imperial Valley Campus and includes a large bicultural collection. The library receives over 500 periodical and serial titles as well as a significant collection of microfilm and microfiche resources. Among the services provided library patrons are reference assistance, photocopying machines for print and microforms, typing rooms, interlibrary and intercampus loans, and computerized information retrieval.

The Media Center provides assistance to the faculty in the use of educational technology. It has a wide range of equipment for use in the classroom. A modern language laboratory, computer laboratory, and tutoring center are available to the campus community.

A student union, bookstore, administration, student services, faculty office and shop buildings complete the facilities on the campus.

**Admission, Registration, and Commencement**

To apply for admission to the Imperial Valley Campus, students must file a complete application and transcripts as outlined in Part Two of this bulletin. Both completed application forms and transcripts should be sent to the Admissions Office, San Diego State University, Imperial Valley Campus, 720 Heber Avenue, Calexico, California 92231. Please telephone (619) 357-0270 for further information. Applications for admission to the campus are accepted through registration week for both the fall and spring semesters. Because of the size of the campus, the registration process is easily accomplished in a short period of time with little chance of classes closing.

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

The California State University

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 in 1982 the system became The California State University. Today, all nineteen campuses have the title "University."

The oldest campus—San Jose State University—was founded as a Normal School in 1857 and became the first institution of public higher education in California.

Responsibility for The California State University 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, 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 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.

The CSU offers more than 1,500 bachelor’s and master’s degree programs in some 200 subject areas. Many of these programs are offered so that students can complete all upper division and graduate requirements by part-time late afternoon and evening study. In addition, a variety of teaching and school service credential programs are available. A limited number of doctoral degrees are offered jointly with the University of California and with private universities in California.

System enrollments total approximately 355,000 students, who are taught by some 19,700 faculty. Last year the system awarded over 50 percent of the bachelor’s degrees and 30 percent of the master’s degrees granted in California. More than one million persons have been graduated from the nineteen campuses since 1960.
Average Annual Cost of Education and Sources of Funds per Full-time Equivalent* Student in The California State University

The 19 campuses and the Chancellor’s Office of The California State University are financed primarily through funding provided by the taxpayers of California. The total State appropriation to the CSU for 1988/89, including capital outlay and employee compensation increases, is $1,588,416,000. The total cost of education for CSU, however, is $1,906,075,325 which provides support for a projected 261,049 full-time equivalent (FTE)* students.

The total cost of education in the CSU is defined as the expenditures for current operations, including payments made to students in the form of financial aid and all fully reimbursed programs contained in state appropriations, but excluding capital outlay appropriations. The average cost is determined by dividing the total cost by the total FTEs. The average cost is further differentiated into three categories: State Support (the State appropriation, excluding capital outlay), Student Fee Support, and Support from Other Sources (including Federal Funds).

Thus, excluding costs which relate to capital outlay (i.e., building amortization), the average cost of education per FTE student is $7,302. Of this amount, the average student fee support per FTE is $1,028. The calculation for this latter amount includes the amount paid by nonresident students.

Source of Funds and Average Costs for 1988/89 CSU Budget
(Projected Enrollment: 261,049 FTE)

<table>
<thead>
<tr>
<th>Source of Funds</th>
<th>Amount</th>
<th>Average Cost Per Student (FTE)*</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cost of Education</td>
<td>$1,906,075,325**</td>
<td>$7,302</td>
<td>100.0</td>
</tr>
<tr>
<td>− State Appropriation</td>
<td>1,466,139,000***</td>
<td>5,617</td>
<td>77.0</td>
</tr>
<tr>
<td>− Student Fee Support</td>
<td>288,290,444</td>
<td>1,028***</td>
<td>14.0</td>
</tr>
<tr>
<td>− Support from Other Sources</td>
<td>171,645,881</td>
<td>657****</td>
<td>9.0</td>
</tr>
</tbody>
</table>

* For budgetary purposes, full-time equivalent (FTE) translates total head count into total academic student load equivalent to 15 units per term. Some students enroll for more than 15 units; some students enroll for fewer than 15 units.

** The total cost of education does not include the amount related to the lottery and capital investment of the CSU. The estimated replacement cost of all the system’s permanent facilities and equipment on the 19 campuses is currently valued at $5.3 billion, excluding the cost of land.

*** This figure does not include the capital outlay appropriation of $122,277,000.

**** The average costs paid by a student include the State University Fee, Application Fee, and Nonresident tuition. Individual students may pay less than $1,028 depending on whether they are part-time, full-time, resident, or nonresident students.

Trustees of The California State University

Ex Officio Trustees

<table>
<thead>
<tr>
<th>Name</th>
<th>State Capitol</th>
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</thead>
<tbody>
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<td>Sacramento 95814</td>
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<td>Governor of California</td>
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<td>Sacramento 95814</td>
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<tr>
<td>Dr. W. Ann Reynolds</td>
<td>400 Golden Shore</td>
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<tr>
<td>Chancellor of The California State University</td>
<td>Long Beach 90802-4275</td>
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</tbody>
</table>

Officers of the Trustees

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<tbody>
<tr>
<td>Governor George Deukmejian</td>
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<tr>
<td>President</td>
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<td>Mrs. Marianthi K. Lansdale</td>
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<td>Chair</td>
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<td>Mr. William D. Campbell</td>
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<tr>
<td>Vice Chair</td>
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<tr>
<td>Chancellor W. Ann Reynolds</td>
<td></td>
</tr>
<tr>
<td>Secretary-Treasurer</td>
<td></td>
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</tbody>
</table>

Appointed Trustees

Appointments are for a term of eight years, except for a student Trustee, alumni Trustee, and faculty Trustee whose terms are for two years. Terms expire in the year in parentheses. Names are listed in order of appointment to the Board.

Mr. Lee A. Grissom (1988)
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Mr. William D. Campbell (1995)
Ms Martha C. Faigutter (1995)
Ms Marian Bagdasarian (1996)
Mr. Ralph R. Pesqueira (1996)

Correspondence with Trustees should be sent:

c/o Trustees Secretariat
The California State University
400 Golden Shore, Suite 322
Long Beach, CA 90802-4275
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San Diego State University
Graduate Division and Research

Please send the following information regarding graduate school opportunities at SDSU:

- Application form
- Financial aid information
- Graduate Bulletin

<table>
<thead>
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<th>Name</th>
<th>Tel.</th>
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<tbody>
<tr>
<td>Address</td>
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<tr>
<td>City</td>
<td>State</td>
</tr>
<tr>
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<td>Graduate Area of Interest</td>
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<th>Graduate Degree/Major/Date</th>
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