

Graduate Bulletin

**Announcement of the
Graduate Division
1996-1997**

**San Diego State University
5500 Campanile Drive
San Diego, California 92182
(619) 594-5200**

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Annual Calendar

CALENDAR 1996																				
JANUARY					FEBRUARY					MARCH										
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6			1	2	3					1	2				
7	8	9	10	11	12	13	4	5	6	7	8	9	10	3	4	5	6	7	8	9
14	15	16	17	18	19	20	11	12	13	14	15	16	17	10	11	12	13	14	15	16
21	22	23	24	25	26	27	18	19	20	21	22	23	24	17	18	19	20	21	22	23
28	29	30	31	25	26	27	28	29	24	25	26	27	28	29	30					
APRIL					MAY					JUNE										
1	2	3	4	5	6			1	2	3	4					1				
7	8	9	10	11	12	13	5	6	7	8	9	10	11	2	3	4	5	6	7	8
14	15	16	17	18	19	20	12	13	14	15	16	17	18	9	10	11	12	13	14	15
21	22	23	24	25	26	27	19	20	21	22	23	24	25	16	17	18	19	20	21	22
28	29	30	26	27	28	29	30	31	23	24	25	26	27	28	29	30				
JULY					AUGUST					SEPTEMBER										
1	2	3	4	5	6			1	2	3	1	2	3	4	5	6	7			
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31	25	26	27	28	29	30	31	29	30								
OCTOBER					NOVEMBER					DECEMBER										
1	2	3	4	5			1	2	1	2	3	4	5	6	7					
6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14
13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21
20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28
27	28	29	30	31	24	25	26	27	28	29	30	29	30	31						

CALENDAR 1997																					
JANUARY					FEBRUARY					MARCH											
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
			1	2	3	4							1							1	
5	6	7	8	9	10	11	2	3	4	5	6	7	8	2	3	4	5	6	7	8	
12	13	14	15	16	17	18	9	10	11	12	13	14	15	9	10	11	12	13	14	15	
19	20	21	22	23	24	25	16	17	18	19	20	21	22	16	17	18	19	20	21	22	
26	27	28	29	30	31	23	24	25	26	27	28	23	24	25	26	27	28	29	30	31	
APRIL					MAY					JUNE											
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13	14	15	16	17	18	19	11	12	13	14	15	16	17	15	16	17	18	19	20	21	
20	21	22	23	24	25	26	18	19	20	21	22	23	24	22	23	24	25	26	27	28	
27	28	29	30	25	26	27	28	29	30	31	29	30									
JULY					AUGUST					SEPTEMBER											
			1	2	3	4	5					1	2	1	2	3	4	5	6		
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13	14	15	16	17	18	19	10	11	12	13	14	15	16	14	15	16	17	18	19	20	
20	21	22	23	24	25	26	17	18	19	20	21	22	23	21	22	23	24	25	26	27	
27	28	29	30	31	24	25	26	27	28	29	30	28	29	30							
OCTOBER					NOVEMBER					DECEMBER											
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12	13	14	15	16	17	18	9	10	11	12	13	14	15	14	15	16	17	18	19	20	
19	20	21	22	23	24	25	16	17	18	19	20	21	22	21	22	23	24	25	26	27	
26	27	28	29	30	31	23	24	25	26	27	28	29	28	29	30	31					
					30																

1996-1997

Academic Calendar

SUMMER SESSIONS 1996*

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

- May 27 Graduate admissions for fall semester 1996 closed to foreign students.
- May 28-June 14 Term A (3 weeks).
- May 28-June 21 Term B (4 weeks).
- May 28-July 5 Term C (6 weeks).
- May 28-Aug. 16 Term Z (12 weeks).
- June 11 Last day to apply for summer graduation with an advanced degree, Graduate Division.
- June 15 Graduate Management Admission Test. Applicants should contact the Test Office five weeks in advance of the test date.
- June 17-July 19 Term D (5 weeks).
- June 17-July 26 Term E (6 weeks).
- June 17-Aug. 9 Term F (8 weeks).
- July 1 Graduate admissions for fall semester 1996 closed.
- July 4 Holiday—Independence Day. Staff holiday (no classes).
- July 8-Aug. 16 Term G (6 weeks).
- July 22 Final day for submitting thesis to the Graduate Division for thesis review to ensure graduation in August. Theses may be submitted to the Graduate Division on an at-risk basis. However, August graduation is contingent upon completion of final processing by noon, August 15. Students missing this deadline will be required to reapply for graduation for the term in which the student expects to graduate.
- July 29-August 16 Term H (3 weeks).

- August 12 Last day for submission of incomplete and SP grade removals (excluding thesis) for summer graduation with an advanced degree.
- August 12 Last day for reporting results on comprehensive examinations to the Graduate Division by department or college.
- August 15 Final day for depositing approved thesis at Aztec Shops Customized Materials. (Noon deadline.)

FALL SEMESTER 1996

(Petition for concurrent master's degree credit must be filed during the first three weeks of the semester that concurrent credit is to be earned.)

- May 27 Graduate admissions for fall semester 1996 closed to foreign students.
- June 15 Graduate Management Admission Test. Applicants should contact the Test Office five weeks in advance of the test date.
- July 1 Graduate admissions for fall semester 1996 closed.
- August 1 Applications for admission or readmission to San Diego State University for the spring semester 1997 accepted. Applications are accepted after August 31 only until enrollment quotas are met.
- August 26 First day of fall semester. Opening date of the academic year for faculty.
- August 26-30 Orientation and advising days.
- August 29-30 Testing and advising days.
- August 31 Graduate admissions for spring semester 1997 closed to foreign students.
- September 2 Holiday—Labor Day. Staff holiday (no classes).
- September 3 First day of classes.
- September 3-16 Late Registration.
- September 16 Last day to drop classes.
- September 17 Last day to apply for refunds.
- September 20 Last day to file petition for concurrent master's degree credit for fall semester 1996.
- September 23 Last day to add classes or change grading basis.

*Refer to the Summer Sessions bulletin for a list of courses offered during summer. Offerings in some departments are limited.

- September 23 Last day to withdraw officially from the University for fall semester 1996.
- September 23 Last day to apply for January 1997 graduation with an advanced degree, Graduate Division.
- September 30 Census.
- October 12 Graduate Record Examination General and Subject Tests. Applicants should contact the Test Office five weeks in advance of the test date.
- October 19 Graduate Management Admission Test. 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 1997 accepted. Applications are accepted after November 30 (postmarked) only until enrollment quotas are met.
- November 15 Final day for submitting thesis to the Graduate Division for thesis review to ensure graduation in January 1997. Theses may be submitted to the Graduate Division on an at-risk basis. However, January 1997 graduation is contingent upon completion of final processing by noon, December 31. Students missing this deadline will be required to reapply for graduation for the term in which the student expects to graduate.
- November 28-30 Holiday–Thanksgiving recess. Staff holiday (no classes).

<p>December 1 Graduate admissions for spring semester 1997 closed.</p> <p>December 13 Last day of classes before final examinations.</p> <p>December 13 Last day for submission of incomplete and SP grade removals (excluding thesis) for mid-year graduation with an advanced degree.</p> <p>December 13 Last day for reporting results on comprehensive examinations to the Graduate Division by department or college.</p> <p>December 14 Graduate Record Examination General and Subject Tests. Applicants should contact the Test Office five weeks in advance of the test date.</p> <p>December 14-21 Final examinations.</p> <p>December 23 Winter recess begins.</p> <p>December 23-27 Holiday–Winter recess. Staff holiday (no classes).</p> <p>January 1 Holiday–New Year’s. Staff holiday (no classes).</p> <p>January 2 Final day for depositing approved thesis at Aztec Shops Customized Materials. (Noon deadline.)</p> <p>January 2 Grades due from instructors. (Noon deadline.)</p> <p>January 2 Last day to apply for a leave of absence for fall semester 1996.</p> <p>January 2 Last day of fall semester.</p> <p>January 6-24 Winter Session 1997.**</p>	<p>February 10 Last day to apply for refunds.</p> <p>February 10 Last day to apply for May graduation with an advanced degree, Graduate Division.</p> <p>February 14 Last day to file petition for concurrent master’s degree credit for spring semester 1997.</p> <p>February 14 Last day to add classes or change grading basis.</p> <p>February 14 Last day to withdraw officially from the University for spring semester 1997.</p> <p>February 21 Census.</p> <p>March 15 Graduate Management Admission Test. Applicants should contact the Test Office five weeks in advance of the test date.</p> <p>March 22 Last day of classes before spring recess.</p> <p>March 24-29 Spring recess.</p> <p>March 31 Classes resume.</p> <p>April 12 Final day for submitting thesis to the Graduate Division for thesis review to ensure graduation in May. Theses maybe submitted to the Graduate Division on an at-risk basis. However, May graduation is contingent upon completion of final processing by noon, May 29. Students missing this deadline will be required to reapply for graduation for the term in which the student expects to graduate.</p> <p>April 12 Graduate Record Examination General and Subject Tests. Applicants should contact the Test Office five weeks in advance of the test date.</p> <p>May 1 Last day for submitting approved doctoral dissertations to the Graduate Division for May commencement.</p> <p>May 15 Last day of classes before final examinations.</p> <p>May 16 Study and consultation day.</p> <p>May 16 Last day for submission of Incomplete and SP grade removals (excluding thesis) for May graduation with an advanced degree.</p> <p>May 16 Last day for reporting results on comprehensive examinations to the Graduate Division by department or college for May graduation with an advanced degree.</p> <p>May 16-24 Final examinations.</p> <p>May 24-25 Commencement.</p>
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**Refer to the Winter Session bulletin for a list of courses offered during winter. Offerings in some departments are limited.

SPRING SEMESTER 1997

(Petition for concurrent master’s degree credit must be filed during the first three weeks of the semester that concurrent credit is to be earned.)

<p>January 18 Graduate Management Admission Test. Applicants should contact the Test Office five weeks in advance of the test date.</p> <p>January 20 Holiday–Martin Luther King, Jr. Day. Staff holiday (no classes).</p> <p>January 21 First day of spring semester. Opening date of semester for faculty.</p> <p>January 21-24 Orientation and advising days.</p> <p>January 23-24 Testing and advising days.</p> <p>January 27 First day of classes.</p> <p>Jan. 27-Feb. 7 Late Registration.</p> <p>February 7 Last day to drop classes.</p>

Academic Calendar

- May 26 Holiday—Memorial Day.
Staff holiday (no classes).
- May 26 Graduate admissions for fall semester 1997 closed to all foreign students.
- May 28 Final day for depositing approved thesis at Aztec Shops Customized Materials. (Noon deadline.)
- May 29 Grades due from instructors. (Noon deadline.)
- May 29 Last day to apply for a leave of absence for spring semester 1997.
- May 29 Last day of spring semester.

SUMMER SESSIONS 1997*

(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 2-20 Term A (3 weeks).
- June 2-27 Term B (4 weeks).
- June 2-July 11 Term C (6 weeks).
- June 2-August 22 Term Z (12 weeks).
- June 10 Last day to apply for summer graduation with an advanced degree, Graduate Division.
- June 21 Graduate Management Admission Test.
Applicants should contact the Test Office five weeks in advance of the test date.
- June 23-July 25 Term D (5 weeks).
- June 23-August 1 Term E (6 weeks).

- June 23-Aug. 15 Term F (8 weeks).
- July 1 Graduate admissions for fall semester 1997 closed.
- July 4 Holiday—Independence Day.
Staff holiday (no classes).
- July 14-Aug. 22 Term G (6 weeks).
- July 22 Final day for submitting thesis to the Graduate Division for thesis review. Theses may be submitted to the Graduate Division on an at-risk basis. However, August graduation is contingent upon completion of final processing by noon, August 22. Students missing this deadline will be required to reapply for graduation for the term in which the student expects to graduate.
- August 4-22 Term H (3 weeks).
- August 8 Last day for submission of Incomplete and SP grade removals (excluding thesis) for summer graduation with an advanced degree.
- August 8 Last day for reporting results on comprehensive examinations to the Graduate Division by department or college.
- August 14 Final day for depositing approved thesis at Aztec Shops Customized Materials. (Noon deadline.)

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

*Refer to the Summer Sessions bulletin for a list of courses offered during summer. Offerings in some departments are limited.

1996-1997

Schedule of Fees

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

For updated information regarding the fee structure for 1996-97 refer to the fall Class Schedule.

Fees must be paid prior to calling RegLine. Checks accepted for exact amount of fees. Overpayments of \$5.00 or less are refunded only upon request. If your check is returned by the bank for any reason, your registration may be canceled and you will be billed \$40.00 (a dishonored payment charge of \$20.00 and late fee of \$20.00). Payment of fees for RegLine or late registration should be made by check or money order. The University reserves the right to refuse payment by personal check from those individuals who have previously had items returned un-paid by their bank. Refunds may be applied against other amounts due the University. Checks to be made payable to SDSU. Do not enclose cash. MasterCard/VISA is not accepted for payment of registration fees, non-resident tuition, except under the installment payment plan.

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.

Payments to clear financial holds must be made by cash, money order, or certified check. Personal checks or charge cards will NOT be accepted.

REGISTRATION FEES – ALL STUDENTS:

(On basis of units carried.)

Fee payment information and instructions are in the Class Schedule available at the campus bookstore.

Auditors pay same fees as students carrying courses for credit. Nonresident (foreign and out-of-state) students pay additional fees – see information below. Thesis extension and other zero unit courses are charged as one unit for fee purposes.

Units Attempted	Registration Fee
0 units – 6.0 units	\$618.00
6.1 or more units	\$951.00

The above fee also includes a Student Activity Fee of \$15.00, a Student Union Fee of \$71.00, a Facilities Fee of \$3.00, an Instructionally Related Activities Fee of \$15.00, a Health Services Fee of \$55.00, and a State University Fee of either \$459.00 or \$792.00, depending on unit load.

Imperial Valley Campus students pay a Student Union Fee of \$24.00 and Health Services fee of \$10.00. 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 out-of-state tuition.

REGISTRATION INSTALLMENT PAYMENT PLAN

An installment payment plan is available for students who wish to pay their registration fees in two payments. There is a \$33.00 charge

for this service, paid prior to calling RegLine. Additional information and instructions are available in the Class Schedule or may be obtained from the University Cashiers Office.

TUITION FOR NONRESIDENT STUDENT

(Foreign and Out-of-State)

Tuition will be charged for all units attempted.

Per unit..... \$246.00

(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 580.00

TUITION INSTALLMENT PAYMENT PLAN

A tuition installment payment plan is available for students required to pay non-resident (foreign and out-of-state tuition). Tuition normally must be paid prior to the first day of classes. Students who wish to pay their tuition in installments must sign an installment agreement at the University Cashiers Office prior to the first day of class. A service charge equal to 15 percent of each installment payment is required. Additional information may be obtained from the University Cashiers Office.

PARKING FEES

Nonreserved parking space, per semester \$72.00

Car pool—see Cashiers Office.

Less than four-wheeled, self-propelled vehicle

(motorcycle, moped) 18.00

Section 42201 of Title V, California Code of Regulations, provides for the waiver of campus parking fees for students with disabilities who have been issued a DMV placard or license plate, and who meet low income requirements. For further information regarding eligibility contact the Disabled Student Services Office (Student Services Building, Room 1661).

MISCELLANEOUS FEES

(Fees payable when service is rendered.)

Application for admission or readmission (nonrefundable),

payable by check or money order at time

application is made \$55.00

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) 20.00

Registration installment payment plan service charge 33.00

Tuition (Foreign or Out-of-State) installment payment plan

service charge Equal to 15% of each installment payment

Photo-identification card (One-time cost to both new

undergraduate and graduate students at time of

registration.) Valid only when accompanied by current

semester Fee Receipt Card. Non-refundable. 5.00

Schedule of Fees

Lost identification card	
Photo I.D. Card replacement	5.00
Fee Receipt Card replacement	2.00
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 (Unexpended portion is refundable.)	75.00
Check returned for any cause*	20.00
Loss of or damage to library materials	Replacement cost plus \$8.00 service charge
Commencement fee	16.00
(Paid only at time of initial filing.)	
Graduation evaluation and diploma fee	16.00
(You must pay this fee for each graduation date requested.)	
Document copying fee	1.00
Diploma replacement fee	12.00
Credential application fee	65.00
Credential evaluation fee	25.00
Musical instrument and audio/visual equipment fee	20.00
Lock and locker fee (optional)	1.00
Towel fee (optional)	4.00
Lost key fee (per key)	10.00
Miscellaneous instructional course charge (optional)	As established and approved

* Late fee also charged when applicable.

MISCELLANEOUS INSTRUCTIONAL COURSE CHARGES

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

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

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

Exercise and Nutritional Sciences 116A-116B, 119A-119B, 124, 138, 145, 146, 147, 320, 320L.

Nutrition 205, 301, 302L, 405.

UNIVERSITY CASHIERS FEE RECEIPT CARD

University Cashiers provides students a current semester fee receipt card upon initial payment or authorized deferment of registration fees. This card should be carried with the Photo I.D. Card. You must enter your student ID number (SSN) and sign the card upon receipt. ASB, Student Union and various other campus activities may require that you present this card.

POSSESSION OF A UNIVERSITY CASHIERS FEE RECEIPT CARD DOES NOT CONFIRM ENROLLMENT.

CREDIT CARDS

The University Cashiers Office does not accept MasterCard/VISA for payment of registration fees or tuition (foreign or out-of-state). MasterCard or VISA charge cards are accepted for other payments, such as housing, parking, health services, continuing education, installment payments, and miscellaneous over-the-counter payments.

Students are reminded that banks will provide cash advances against credit cards if needed to cover registration payments.

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 out-of-state students are liable for tuition related to all units held, except as provided for by the refund policy.

All continuing students participating in **RegLine** must make registration payments by the deadline as instructed.

Non-resident (foreign and out-of-state) tuition must be paid prior to the first day of classes. With the exception of doctoral students and students enrolling for 799A or 799B only, **foreign** students must pay or sign an installment agreement for a minimum of 6 units at the time of registration. **Foreign** students wishing to pay fewer than 6 units must submit 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 non-resident 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 PAYMENTS FOR FEES AND TUITION ARE SUBJECT TO AN ADDITIONAL LATE FEE AND APPLICABLE SERVICE CHARGES.

DISHONORED CHECK

If your check is returned or not accepted by the bank FOR ANY REASON, you will be billed for the \$20.00 dishonored payment charge and the \$20.00 late fee when applicable. Non-payment of fees or tuition may result in cancellation of your registration and withholding of further services until all financial liabilities have been resolved.

The University reserves the right to refuse payment by personal check from those individuals who have previously had items returned unpaid by their bank.

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 by consulting Section 42201 (parking fees), 41913 (nonresident tuition), 42019 (housing charges), and 41802 (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 of fees may be obtained from 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 of Admissions and Records at the time the withdrawal is requested, not later than 14 days following the commencement of instruction (Refund Deadline). All but \$5.00 will be refunded less any amount due to the University. YOUR UNIVERSITY CASHIERS FEE RECEIPT CARD MUST BE RETURNED AT THE TIME YOU FILE YOUR REFUND APPLICATION. (See Class Schedule for deadline dates. Note that the refund deadline is **prior to** the deadline set by Admissions and Records for Official Withdrawal.)

Fees Based on Unit Load. A student dropping from 6.1 units or more to 6.0 units or less, or a student who paid maximum fees but never obtained over 6.0 units, MUST file a refund application with the Cashiers Office, Student Services Building, Room 2620, not later than 14 days following the commencement of instruction (Refund Deadline). Application for full-time to part-time refunds may also be submitted at the Aztec Center Information Booth. All but \$5.00 will be refunded less any amount due to the University. FOR ADDITIONAL INFORMATION, CONTACT THE CASHIERS OFFICE OR TELEPHONE 594-5253.

Disqualified and Leave of Absence Candidates. If your registration has been canceled due to disqualification or by obtaining an approved leave of absence, registration fees will be refunded upon (1) notification from Admissions and Records that appropriate action has been taken and (2) return of your fee receipt card and **application for refund** to the Cashiers Office.

Refund of Registration Fees to Title IV Financial Aid Recipients

The following refund policy applies to students receiving financial aid from these Title IV programs:

- Federal Direct Stafford/Ford Loan
- Federal Direct Plus Loan
- Federal Perkins Loan
- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant (FSEOG)

The Higher Education Amendments of 1992 (Reauthorization) require that a pro rata refund be made if a student receiving Title IV funds withdraws completely on or before the 60% point of the enrollment period and is in their first term of attendance at this university. At SDSU, pro rata refunds will apply after the Refund Deadline. Calculations will be based on the withdrawal date and the percent of time remaining in the semester, rounded down to the nearest ten percent of that period. In addition, an administrative fee, the lesser of 5% of the fees to be refunded or \$100.00, will be deducted. No fees shall be refunded when the date of the student's withdrawal is after the 60% point in the semester. As required by law and determined by the University, if Title IV funds have been disbursed to the student during the enrollment period, refunds will first be returned to the Title IV programs in the order listed above.

Refund of Nonresident (Foreign and Out-of-State) Tuition

REFUNDS ARE NOT AUTOMATIC. WHETHER OR NOT YOU RECEIVE CLASSES THROUGH THE REGISTRATION PROCESS, YOU MUST APPLY FOR THE REFUND. You may also apply for tuition refunds at the Aztec Center Information Booth.

Tuition paid for a course scheduled to continue for an entire semester may be refunded less any amount due to the University in accordance with the following schedule, if application is received by the Cashiers Office within the following time limits:

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

Refund of Parking Fees

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

Nonreserved space per semester:

<i>Period</i>	<i>Amount of Refund</i>
1-30 days	75 percent of fee
31-60 days	50 percent of fee
61-90 days	25 percent of fee
91-end of term	None

Your parking permit or a receipt indicating that the permit was removed from the vehicle by a University Police Officer (Information Booth, Campanile Drive) must be turned in to the Cashiers Office at the time you file your refund application. Refund applications are available at the Cashiers Office. The amount of refund is rounded down to the nearest dollar. No refund is made for amounts of \$5.00 or less. Refunds may be applied against other amounts due to the University.

LATE REGISTRATION FEE

The Late Registration fee (\$25) pertains to those students who register during Late Registration. Newly admitted students **MAY** be exempted from this fee. See registration materials provided by Admissions and Records 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 classes.

Petitions for refunds filed beyond the appropriate refund deadline are approved only when applicants are unable to continue their enrollment for one of the following reasons: compulsory military service; administrative error; campus regulation; or physical disability or death.

SUMMER SESSION FEES

Refer to Summer Sessions Bulletin for schedule of fees.

Parking fees (nonreserved spaces) (per week) \$4.80

EXTENSION COURSE FEES

Refer to Extended Studies Bulletin for schedule of fees.

EXEMPTIONS

Students receiving vocational rehabilitation benefits (U.S. Code, Title 38, Chapter 31) or the eligible dependents of veterans with service-connected disability or death (California Education Code, Section 32320) will have eligible fees and tuition paid or waived under provisions of these respective programs. See Class Schedule for instructions regarding deadlines for submission of documents to University Cashiers.

OVER 60 FEE WAIVER PROGRAM

San Diego State University offers a fee waiver program for California residents 60 years of age and older. Both undergraduate and postbaccalaureate students may participate in the program. The program waives the \$55 admission application fee and regular registration fees (except for a nominal \$3 fee). Participants must apply for admission during the regular application filing period and be admitted under regular admission requirements. Participants register for classes on a space-available basis after regularly matriculated students have completed registration. For additional information, contact the Office of Admissions and Records.

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, *California Education Code*, Section 68121. Students qualifying for these benefits are known as Alan Pattee scholars. For further information contact the Office of Admissions and Records, which determines eligibility.

Procedure for the Establishment or Change of a Student Activity Fee

The law governing The California State University provides that a student activity fee may, with the approval of the Chancellor, 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 increased or decreased 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 (*California Education Code*, Section 89300), subject to approval by the Chancellor. An increase or decrease in the student activity fee may be approved by the Chancellor only following a referendum on the 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*). For example, the institution may withhold permission to receive official transcripts of grades from any person owing a debt. In addition, failure to pay debts to the University when due may result in the debt being sent to a collection agency. Should the debt be referred to a collection agency, the student will be responsible for costs incurred by the University, its Agents, Contractors and Assigns in the collection of the delinquent obligation. It may further result in notification of the delinquency to credit bureau organizations.

If a student believes that he or she does not owe all or part of an unpaid obligation, the student should contact the University Cashiers Office. The Cashiers Office, or another office on campus to which the student may be referred by the Cashiers Office, will review the pertinent information, including information the student may wish to

present, and will advise the student of its conclusions with respect to the debt.

Institutional and Financial Assistance Information

The following information concerning student financial assistance may be obtained from the Financial Aid Office, Student Services Building, Room 3605, 594-6323.

1. Student financial assistance programs available to students who enroll at San Diego State University;
2. The methods by which such assistance is distributed among recipients who enroll at San Diego State University;
3. The means, including forms, by which application for student financial assistance is made and requirements for accurately preparing such application;
4. The rights and responsibilities of students receiving financial assistance; and
5. The standards the students must maintain to be considered to be making satisfactory academic progress for the purpose of establishing and maintaining eligibility for financial assistance.

Information concerning San Diego State University policies regarding any refund due to the federal Title IV student assistance programs as required by the regulations is available from the Financial Aid Office, Student Services Building, Room 3605, 594-6323.

The following information concerning the cost of attending San Diego State University is available from the Financial Aid Office, Student Services Building, Room 3605, 594-6323.

1. Fees and tuition;
2. Estimated costs of books and supplies;
3. Estimates of typical student room and board costs and 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, Student Services Building, Room 2620, 594-5253.

Information concerning San Diego State University policies regarding any refund due to the federal Title IV student assistance programs as required by the regulations is available from the Financial Aid Office, Student Services Building, Room 3605, 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 program, 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 facilities and services available to handicapped students may be obtained from Disabled Student Services, Student Services Building, Room 1661, 594-6473.

Information concerning San Diego State University policies, procedures, and facilities for students and others to report criminal actions or other emergencies occurring on campus may be obtained from Public Safety, SS-1410, 594-1991.

Information concerning San Diego State University annual campus security report may be obtained from Public Safety, SS-1410, 594-1991.

Information concerning the prevention of drug and alcohol abuse may be obtained from Counseling and Psychological Services, 594-5220

Cost of Living

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:

Costs of Attendance for the 1996-97 Academic Year

	Living off Campus	Living on Campus	Commuting from Home
Registration fee for materials, service, student activity, student union, facilities	\$ 1902	\$1902	\$1902
Books and supplies	648	648	648
Room and board	6710	6192	2225
Transportation	748	583	602
Personal	1787	1714	1842
Total	\$11,975	\$11,039	\$7,219

In addition to the registration fee, non-resident (foreign and out-of-state) students pay tuition (see Schedule of Fees section). **All fees and costs are subject to change without notice.**

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 class met on November 1, 1898 in temporary quarters downtown while the first unit of the main building of the campus was under construction at Park Boulevard where El Cajon Boulevard begins.

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

Under the vigorous administration of the second president, Edward L. Hardy (1910-1935), the School was reorganized as a four-year State Teachers' College in 1921, and control was transferred from a local board of trustees to the State Board of Education. In the same year, the two-year San Diego Junior College, the antecedent institution to the present Community Colleges, was incorporated as a branch of San Diego State, where it remained through 1946.

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

In February 1931, the college moved to the seven mission-style buildings of the present campus, surrounding what is still called the Main Quad. In 1935, the Legislature removed the word "Teachers" from the name of the institution and authorized the expansion of degree programs into areas other than teacher preparation. In the same year, Walter R. Hepner (1935-1952) was appointed president, and the institution entered a period of slow growth and then, with the coming of war, of contraction. At the end of World War II, enrollment had fallen to 1,918.

In the next quarter century, under Dr. Hepner and subsequently under Malcolm A. Love (1952-1971), enrollments increased phenomenally to over 25,000 students. In 1960, the College became a part of the newly created California State College system, under a statewide Board of Trustees and a Chancellor. In 1971, recognizing that the institution had in fact achieved the status of a university, the Legislature renamed the system The California State University and Colleges, and shortly afterward renamed this institution San Diego State University.

Acting President Donald E. Walker (1971-1972), President Brage Golding (1972-1977), Acting President Trevor Colbourn (1977-1978), and President Thomas B. Day (1978-1996) were followed by the seventh President Stephen L. Weber (1996-).

Today, San Diego State University is classified by the Carnegie Foundation as a Doctoral University II. It is the unquestioned leader in The California State University system. With over 28,000 students it is one of the largest universities in the western United States.

SDSU is a teaching university with strong research programs. Research and scholarship strengthen the instruction SDSU students receive in the classroom and laboratory. SDSU's faculty conducts more than \$65 million in funded research each year. These projects provide unusual opportunities for students who can work alongside faculty using the latest equipment. The excitement of discovery spreads to the classroom, creating a unique learning experience.

To better accommodate its students, the campus continues to add

physical facilities. It currently encompasses over 4.5 million square feet in 44 academic buildings. Included are Aztec Center, the first student union building in the CSU system; the Dramatic Arts building with one of the finest theaters in the nation; the Music building, with its Recital Hall; and the 320,000 square foot Malcolm A. Love Library. The Health Services facility, Art and Humanities classroom buildings, and additional residence halls and parking facilities make up the core of buildings added in the 1970s. Several renovation projects have improved facilities for nursing, physical education, public health, and the sciences. A new Student Services Building with a prominent clock tower now houses all of the needs of entering students. A major addition to the library; the Gateway Center housing Continuing Education and KPBS; an International Student Center; and additional student housing and parking structures have been added in the past five years. Currently in the construction and planning stages are new buildings to house a student financed Activities Center and major additions to the Engineering building and the Chemistry/Geology building.

The University now offers bachelor's degrees in 76 areas, the master's in 54, and the doctorate in 10.

There are five multidisciplinary honor societies on campus that help to reinforce the high academic standards of the campus. They include Golden Key, Mortar Board, Phi Beta Kappa, Phi Eta Sigma, and Phi Kappa Phi. In addition, there are a number of disciplinary honor societies that recognize superior scholarship and leadership in specific academic fields.

Mission and Goals of San Diego State University

The mission of San Diego State University is to provide well-balanced, high quality education for undergraduate and graduate students and to contribute to knowledge and the solution of problems through excellence and distinction in teaching, research, and service.

San Diego State University provides an environment that encourages the intellectual development of students. Its undergraduate and graduate programs in the liberal arts and sciences are designed to help students learn about themselves, their cultural and social heritage, and their physical environment. Additionally, students are challenged to understand how advances in these areas may influence their present lives and their futures. Professional programs, while including many of these broad goals, are designed to meet the needs of the students who seek specific employment in many diverse fields. The University is concerned with developing leaders in cultural, economic, educational, scientific, social, and technical fields.

Closely related to the teaching mission of the University is student and faculty research. Involvement in research ensures that both students and faculty maintain currency in their disciplines and fosters the advancement of knowledge. Graduate study at San Diego State University at the master's and doctoral levels emphasizes creative scholarship, original research, and the development and utilization of research techniques.

Located in a large and ethnically diverse metropolitan center bordering Mexico and on the Pacific Rim, the University uses the social, cultural, scientific, and technical resources of this region to enrich its teaching and research programs. Through its teaching, research, and ser-

vice, the University is primarily responsive to the people of California as well as to the needs of the regional, national, and international communities it serves. The University also seeks cooperative programs with other institutions of higher education both in the United States and abroad.

Accreditation

San Diego State University is accredited by the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges. It is also approved to train veterans under the G.I. Bill.

San Diego State University's programmatic accreditation is through membership in the following associations:

- Accrediting Council on Health Services Administration
- American Association of Colleges of Nursing
- American Association of Colleges for Teacher Education
- American Chemical Society
- American Council on Education for Journalism and Mass Communication
- American Psychological Association
- American Speech-Language-Hearing Association, Educational Standards Board and Professional Services Board
- California Commission on Teacher Credentialing
- Computer Science Accreditation Commission of the Computing Sciences Accreditation Board
- Council on Education for Public Health
- Council on Education of the Deaf
- Council on Rehabilitation Education
- Council on Social Work Education
- Foundation for Interior Design Education Research
- National Association of School Psychologists
- 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 (San Diego campus)
- National League for Nursing
- National Recreation and Parks Association

The University is a member of the Council of Graduate Schools, U.S.A. and the Western Association of Graduate Schools.

The College of Business Administration and the School of Accountancy are accredited by the American Assembly of Collegiate Schools of Business at both the undergraduate and graduate levels. The M.S. in

Financial and Tax Planning and the Certificate in Personal Financial Planning are registered with the International Board of Certified Financial Planners.

The College of Engineering undergraduate 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, National League for Nursing, and California Commission on Teacher Credentialing.

The Didactic Program in Dietetics and the Preprofessional Practice Program in Dietetics in the Department of Physical Education are approved by the American Dietetic Association.

In addition, preparation for many other professions is provided. It is suggested that the student refer to the various courses of study listed in the catalog.

San Diego State University maintains and promotes a policy of nondiscrimination and nonharassment on the basis of race, religion, color, sex, age, handicap, marital status, sexual orientation, and national origin.

The Affirmative Action Program is a University effort affecting every level of activity. The policy stands as a statement of this University's moral commitment to the right of all persons to equal opportunity in a nondiscriminating, harassment-free atmosphere.

San Diego State University places high priority on that objective and expects all members of the University to support this policy fully.

Refer to the Regulations of the Graduate Division section for the California State University policy pertaining to non-discrimination.

Administration

Principal Officers of Administration

President of the University Stephen L. Weber
Vice President for Academic Affairs Ronald H. Hopkins
Vice President for Business and
Financial Affairs Sally F. Roush
Vice President for Student Affairs Daniel B. Nowak
Vice President for University Relations
and Development Harry R. Albers

President's Advisory Board

Vincent R. Ciruzzi	Armando M. Rodriguez
Nadine Corrigan	Gerald R. Sanders
Jerry Dressel	Thomas C. Stickel
Ronald L. Fowler	Robert J. Watkins
Arthur Madrid	Robert E. Williams
Josiah L. Nepper	Rosalind A. Winstead
Thomas Pine	Elizabeth Yamada, Chair
Ed Quinn	

Academic Administration

ACADEMIC AFFAIRS

Vice President for Academic Affairs Ronald H. Hopkins
Associate Vice President for Academic Affairs Ethan A. Singer
Associate Vice President for Faculty Affairs Dean O. Popp
Assistant Vice President for Academic Services Jane K. Smith
University Librarian Don L. Bosseau

ACADEMIC DEANS

College of Arts and Letters Paul J. Strand
College of Business Administration Allan R. Bailey
College of Education Ann I. Morey
College of Engineering Pieter A. Frick
College of Health and Human Services Dolores A. Wozniak
College of Professional Studies and Fine Arts Joyce M. Gattas
College of Sciences Donald R. Short
College of Extended Studies William P. Locke
Division of Undergraduate Studies Carole A. Scott
Imperial Valley Campus David Ballesteros

GRADUATE DIVISION

Dean of the Graduate Division and Research James W. Cobble
Associate Dean Lawrence B. Feinberg
Associate Dean Janis F. Andersen
Assistant Dean

THE GRADUATE COUNCIL

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

James W. Cobble	Dean of the Graduate Division and Research
Ronald H. Hopkins	(ex officio) Vice President for Academic Affairs
Don L. Bosseau	(ex officio) University Librarian
Lawrence B. Feinberg	Associate Dean of the Graduate Division
Janis F. Andersen	Associate Dean of the Graduate Division
	Assistant Dean of the Graduate Division
Marlowe J. Berg	School of Teacher Education
Glen M. Broom	School of Communication
Mark C. Butler	Department of Management
Clare E. Colquitt	Department of English and Comparative Literature
Ricardo J. Cornejo	School of Teacher Education
A. Stephen Dahms	Department of Chemistry

Arthur L. Ellis	School of Social Work
Kenneth D. Johnson	Department of Biology
Constantinos S. Lyrintzis	Department of Aerospace Engineering and Engineering Mechanics
Cezar M. Ornatowski	Department of Rhetoric and Writing Studies
Darrell L. Pugh	School of Public Administration and Urban Studies
Judith T. Sowder	Department of Mathematical Sciences
K. S. Thyagarajan	Department of Electrical and Computer Engineering
Carolyn L. Walker	School of Nursing
Penny L. Wright	Department of Management
Ricardo Newbery	Associated Students

(Membership for 1996-97 will be determined prior to the beginning of the academic year.)

UNIVERSITY RESEARCH COUNCIL

The University Research Council is the faculty policy-making body responsible for promoting, encouraging, and publicizing the research activities of the faculty consistent with the educational mission of the University. The Council is composed of 18 faculty representing the various colleges and is chaired by the Dean of the Graduate Division and Research. Much of the work of the Council is carried out in its Standing Committees which include:

- Biosafety Committee
- Committee on the Protection of Human Subjects
- Copyrights and Patents Committee
- Faculty Grants Committee
- Graduate Research Lecture Committee
- Publications Committee
- Research Administration Policy Committee
- University Animal Subjects Committee

For the academic year, the membership of the Council was as follows:

James W. Cobble	Dean of the Graduate Division and Research
Harry R. Albers	(ex officio) General Manager, SDSU Foundation
Janis F. Andersen	(ex officio) Associate Dean, Graduate Division and Research
Lawrence B. Feinberg	(ex officio) Associate Dean, Graduate Division and Research
	(ex officio) Assistant Dean, Graduate Division and Research
Douglas A. Cargille	University Library
Roger W. Caves	School of Public Administration and Urban Studies
David M. Dozier	School of Communication
David P. Ely	Department of Finance
Ronald W. Evans	School of Teacher Education
Richard L. Hough	Department of Sociology
Gail A. Massey	Department of Electrical and Computer Engineering
William A. Nericcio	Department of English and Comparative Literature
Nagy Nosseir	Department of Aerospace Engineering and Engineering Mechanics
Feraidoon Raafat	Department of Information and Decision Systems
Stephen B.W. Roeder	Department of Physics
Michael J. Sabath	Imperial Valley Campus
Roger A. Sabbadini	Department of Biology
Martha J. Shively	School of Nursing
Michael G. Simpson	Department of Biology
Beverly B. Wulfeck	Department of Communicative Disorders
Russell L. Young	Department of Policy Studies and Cross-Cultural Education

(Membership for 1996-97 will be determined prior to the beginning of the academic year.)

PART TWO

Graduate Division

The Graduate Division

Admissions

Regulations

Requirements for Doctoral Degrees

Requirements for Master's Degrees

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

The Graduate Dean is the chief administrative officer of the Graduate Division and is assisted by two associate deans and an assistant dean. The Graduate Dean takes general responsibility for the development, improvement, and administration of all postbaccalaureate and graduate study at the University, as well as for the research activities of faculty and graduate students.

Graduate study is highly exacting and requires intense study and scholarship and not merely the completion of a prescribed set of

courses. Further, thesis and dissertation research requires the development of intellectual skills and the demonstration of creativity that can only be achieved through dedicated and persistent scholarship. The University has the necessary faculty and facilities to offer such opportunities in over 50 different areas of knowledge.

Authorized Graduate Degrees

DOCTOR OF PHILOSOPHY

Biology	Geography
Chemistry	Language and Communicative Disorders
Clinical Psychology	Mathematics and Science Education
Ecology	Public Health
Education	
Engineering Sciences/ Applied Mechanics	

MASTER OF ARTS

The Master of Arts degree is offered in the following fields:

Anthropology	Latin American Studies
Art	Liberal Arts
Asian Studies	Linguistics
Biology	Mathematics
Chemistry	Music
Communication	Philosophy
Communicative Disorders	Physical Education
Drama	Physics
Economics	Political Science
Education	Psychology
English	Sociology
French	Spanish
Geography	Television, Film, and New Media Production
History	Women's Studies
Interdisciplinary Studies	

MASTER OF SCIENCE

The Master of Science degree is offered in the following fields:

Accountancy	Geological Sciences
Aerospace Engineering	Interdisciplinary Studies
Applied Mathematics	Mechanical Engineering
Astronomy	Microbiology
Biology	Nursing
Business Administration	Nutritional Sciences
Chemistry	Physics
Child Development	Psychology
Civil Engineering	Public Health
Computer Science	Radiological Health Physics
Counseling	Rehabilitation Counseling
Electrical Engineering	Statistics
Exercise Physiology	

MASTER DEGREES

Master of Business Administration
Master of City Planning
Master of Fine Arts in Art
Master of Fine Arts in Creative Writing
Master of Fine Arts in Drama
Master of Music
Master of Public Administration
Master of Public Health
Master of Social Work

Graduate Concentrations

A concentration is defined as an aggregate of courses within a degree major designed to give a student specialized knowledge, competence, or skill. Completion of a concentration is noted on the student's transcript.

Art (MA)

Concentrations:

studio arts
art history

Biology (MA or MS)

Concentrations:

entrepreneurship
ecology
molecular biology
physiology
plant sciences
systematics and evolutionary biology

Business Administration (MS)

Concentrations:

finance
financial and tax planning
human resource management
information systems
international business
management
marketing
production and operations management
real estate
taxation
total quality management

Communicative Disorders (MA)

Concentrations:

speech-language pathology
audiology
education of the deaf
communicative sciences

Drama (MFA)

Concentrations:

acting*
design and technical theatre
musical theatre

Education (MA)

Concentrations:

counseling
educational leadership
educational research
educational technology
elementary curriculum and instruction
policy studies in language and cross-cultural education
reading education
secondary curriculum and instruction
special education

Geography (MA)

Concentrations:

resources and environmental quality
transportation

Nursing (MS)

Concentrations:

advanced practice nursing of adults and the elderly
community health nursing
nursing systems administration

Psychology (MS)

Concentrations:

applied psychology
clinical psychology (included within the Ph.D. program; not available separately)

Public Administration (MPA)

Concentrations:

city planning
criminal justice administration
public telecommunications
administration

Public Health

Concentrations (MPH):

biometry
environmental health
epidemiology
health promotion
health services administration
maternal and child health
occupational health

Concentrations (MS):

environmental health science
industrial hygiene
toxicology

Statistics (MS)

Concentration:

biostatistics

Credentials Offered

Teaching Credentials

Adapted physical education

Multiple subject

Multiple subject cross-cultural language and academic development (CLAD) emphasis

Multiple subject bilingual cross-cultural language and academic development (BCLAD) emphasis: Spanish

Single subject

Single subject cross-cultural language and academic development (CLAD) emphasis

Single subject bilingual cross-cultural language and academic development (BCLAD) emphasis: Spanish

Specialist Credentials

Bilingual/cross-cultural

Reading/language arts

Resource specialist certificate of competence

Special education:

Communication handicapped

Gifted

Learning handicapped

Physically handicapped

Severely handicapped

Service Credentials

Administrative

Clinical or rehabilitative

Health (school nurse)

Pupil personnel:

school counseling

school psychology

school social work

Graduate Certificate Programs (nondegree)

- Certificate in applied linguistics and English as a second language (ESL)
- Certificate in bilingual (Spanish) special education
- Certificate in early intervention
- Certificate in exercise leadership
- Certificate in instructional software design
- Certificate in instructional technology
- Certificate in cross-cultural language and academic development (CLAD)
- Certificate in preventive medicine residency
- Certificate in professional services bilingual/multicultural
- Certificate in rehabilitation administration
- Certificate in supported employment and transition specialist
- Certificate in teaching the emotionally disturbed/behaviorally disordered
- Certificate in workforce education and lifelong learning

Graduate Certificate Programs

The advanced certificate at the postbaccalaureate entry level provides 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 postmaster's entry level also provides 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 degree 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.

Graduate Teaching Associates

Graduate teaching associates may be obtained by qualified graduate students pursuing a master's degree in the areas of anthropology, art, astronomy, biological sciences, business administration, chemistry, child and family development, communication, communicative disorders, drama, economics, educational technology, engineering, English, exercise and nutritional sciences, French, geography, geological sciences, linguistics, mathematical sciences, microbiology, music, physics, psychology, sociology, Spanish, and television, film, and new media production. In addition, all doctoral programs offer such appointments.

Qualifications for appointment include admission to San Diego State University with classified or conditionally classified graduate standing for the purpose of obtaining an advanced degree. Appointment 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, departmental need for the continued service in the department, and upon satisfactory teaching performance.

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

Information concerning an appointment as a graduate teaching associate may be obtained from the head of the department, school, or college in which the applicant wishes to obtain the advanced degree. *A Handbook for Graduate Assistants and Graduate Teaching Associates* is published by the Graduate Division.

Graduate Assistantships

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

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

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

Graduate Scholarships and Awards

A scholarship is a monetary award given to outstanding students in recognition of their academic excellence, leadership, achievements, and promise. They are provided by private donors, corporations, professional associations, and alumni.

Students apply on their own initiative. Occasionally, scholarships with requirements and deadlines other than those established for the general University scholarship program are designated for specific majors. Eligible students will be notified through a faculty announcement or, if time permits, by the Scholarship Office through the mail.

Competition is based on outstanding academic achievement, campus and extracurricular activities, employment, and an essay. Graduate and postbaccalaureate students must have a 3.50 overall graduate GPA for work completed after the bachelor's degree *or* in the absence of completed postbaccalaureate units, a 3.50 overall undergraduate GPA or a 3.70 in the last 30 units of university work.

Applications for the SDSU scholarship program are available in the Scholarship Office and all department secretaries. You may also write or call the SDSU Scholarship Office, 5500 Campanile Drive, San Diego, CA 92182-7438, (619) 594-6180. Please indicate that you are a graduate student.

Applications are available each year during one application period November through early-February. The SDSU scholarship application must be filed or postmarked not later than the established early-February deadline. Students need to submit only one application for the general SDSU scholarship program. Individual results will be mailed to all applicants during June for the following academic year.

The average SDSU scholarship award is \$500-\$750. There is no limit to the number of scholarships for which a student may be considered.

In addition to SDSU scholarships, the Marshall, Fulbright, Rhoades, and Rotary scholarships are prestigious international scholarships that are given annually to students pursuing educational goals outside the United States. Eligibility standards for these scholarships are closely related to those established for the SDSU scholarship program, but application forms and deadlines are separate from the program. Students may seek advisement regarding application at the SDSU Scholarship Office during the spring semester.

Fellowships

The San Diego State University Scholarship Office receives the annual announcements on 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 it 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 Examination General Test are required in applying for most fellowships, students should take this examination no later than the early fall of their senior year. The examination may be scheduled through the University Test Office.

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. Applicants must file an Application for Federal Student Aid, at the Financial Aid office, by the stated deadline (see below, "Applying for Aid"). They must also file an application for the Graduate Equity Fellowship in the Graduate Division by early June for the annual award that begins with the fall semester.

California State Graduate Fellowship Program

California residents may apply for grants administered by the California Student Aid Commission, 1410 Fifth Street, Sacramento, California, 95814. Applications are available in the Financial Aid Office during the annual application period (December to early February).

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 applicants are awarded aid.

Information about all state, federal, and institutional aid programs is available from the Financial Aid Office, (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, aid applicants must file an **Application for Federal Student Aid** 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 being requested. An application and supporting documents received after these dates will be processed and funds will be awarded to high-need applicants if funds are available. Applications for Federal Student Aid may be obtained from high schools and any college financial aid office in California.

An additional application form is required for the Guaranteed Student Loan which is a student loan made available from a participating lender.

Foreign Student Tuition Waivers: On recommendation of the graduate adviser in the department concerned, a limited number of tuition waivers are available for exceptionally well qualified foreign (non-resident) students. Information on these waivers can be obtained from the Graduate Division.

Doctoral Student Fee/Tuition Waivers: The Graduate Division makes available a certain number of fee/tuition waivers to doctoral students through two doctoral advisers. Students should contact the adviser of the specific doctoral program to which they wish to apply.

Graduate Study in the Summer Sessions

In San Diego State University summer sessions, a graduate student may earn credit in residence that may be used to satisfy the requirements for an advanced degree or for credentials. Students planning to offer work taken in a summer session only to satisfy the requirements for an advanced degree, must apply for admission to the University with classified graduate standing at the Office of Admissions and Records. No more than 12 units of coursework earned in each summer may be included on a program of study for an advanced degree. Students pursuing an advanced degree in summer only must attend for a minimum of three summers to complete a degree.

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

The regular *Summer Sessions Bulletin*, which includes the registration form and all necessary information about the summer sessions, is available for distribution after March 15.

Graduate Study for Foreign Students

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

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

Veterans and Graduate Study

San Diego State University is approved to train veterans under the G.I. Bill. Veterans who are interested in graduate work should visit the campus Veterans Affairs Office located in Student Services Building, Room 1510 for information and counseling regarding veterans' benefits prior to the date of registration.

Admission to Postbaccalaureate and Graduate Study

Admission to San Diego State University for postbaccalaureate and graduate study is open to those applicants judged by the University to be fully qualified. The requirements listed below are the **minimum** required for admission to the University. For many programs, the departments have established additional requirements. Prospective 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 Documents

San Diego State University 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 have past universities send authentic and official transcripts of all previous academic work attempted. Official transcripts are defined as transcripts sent directly from previous university admissions and records unit to the SDSU Office of Admissions and Records. Sealed transcripts carried by a student to SDSU are NOT considered official transcripts.

Failure to file complete, accurate, and authentic application documents may result in denial of admission, cancellation of academic credit, suspension, or expulsion (Section 41301 of 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 Section 41201 of Title 5, *California Code of Regulations*. 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 on or after January 1, 1957 must comply with 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 at SDSU. San Diego State University students who have not complied with this CSU mandate will receive an "I" hold on their second term registration materials. The "I" hold restricts students from enrolling in classes until the requirement is fulfilled.

Because of recent occurrences in the character of measles epidemics on college campuses nationwide all students are encouraged to consider **receiving a second immunization for measles prior to enrollment.**

In addition to demonstrating immunity to measles and rubella at Student Health Services, some students may be further required to present documentation to other campus officials.

Students subject to this additional screening 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 fieldwork 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, 5500 Campanile Drive, San Diego, CA 92182-4701. For those students unable to obtain acceptable proof of measles and rubella immunizations, Student Health Services will provide immunizations at no cost.

Application Procedures

All applicants for any type of graduate or postbaccalaureate status (advanced degree applicants, those seeking credentials or advanced certificates, and those interested in taking courses for personal or professional growth) must file a complete application within the appropriate filing period. Applicants who graduated from San Diego State University the preceding term are also required to complete and submit an application and the \$55 nonrefundable application fee. Since applicants for postbaccalaureate programs may be limited to the choice of a single campus on each application, redirection to alternative campuses or later changes of campus choice will be minimal. In the event that a postbaccalaureate applicant wishes to be assured of initial consideration by more than one campus, it will be necessary to submit separate applications (including fees) to each. Applications may be obtained from the Office of Admissions and Records, individual graduate program advisers or their respective departments, or the Graduate Division of any California State University campus. Doctoral degree applicants should consult the program director of the specific program for additional application instructions.

Application and Admission Process

Students seeking admission with classified standing to graduate programs at San Diego State University must submit all of the required documentation in a timely manner to ensure proper processing and evaluation by the Office of Admissions and Records, the school or department, and the Graduate Division. Please consult the specific departmental listing for the admission requirements. After all the documents are received by the Office of Admissions and Records, they are sent to the specific department for an admission recommendation. Even though a student may meet the minimal general standards for admission to the University, each department reserves the right to recommend a denial or conditional acceptance based upon the evaluation of documentation supplied by the applicant as well as the standing of the applicant relative to others who have applied to the specific graduate program.

The recommendation of the department or school is then sent to the Graduate Dean for an independent evaluation and the actual decision to admit. Where a department's recommendation conflicts with the judgment of the Graduate Dean, consultation will ensue between the Dean and the department, but the final decision remains with the Graduate Dean.

The student will be notified of the decision by the Graduate Dean through the Office of Admissions and Records.

General Admission Requirements

All applicants for any type of graduate or postbaccalaureate study at San Diego State University must: (a) hold an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or have completed equivalent academic preparation as determined by the Graduate Dean; (b) have attained a grade point average of at least 2.75 (when A equals 4) in the last 60 semester (90 quarter) units attempted (this calculation may not include lower division courses taken after award of a baccalaureate degree); and (c) have been in good standing at the last institution attended. Applicants who do not qualify for admission under provisions (a) and (b) may be admitted by special action if the Graduate Dean determines that there is other academic or professional evidence sufficient to warrant such action.

Members of the faculty of San Diego State University holding appointments at or above the rank of instructor or lecturer may not be admitted to degree programs at this University. Faculty may register for courses as unclassified students.

Special Action Admissions

Determination of the admissibility of students by special action shall be governed by the following guidelines when applicable. All applicants for admission by special action must submit at least two letters of recommendation from faculty at the baccalaureate degree granting institution.

1. Students holding baccalaureate degrees from accredited institutions that award credit primarily on a pass-fail basis may be admitted providing that:
 - a. At least 60 semester units of letter-graded coursework with a minimal grade point average of 2.75 are included on the student transcripts. Half of these must be at the upper division level.
 - b. If the student transcripts include less than 60 semester units of letter-graded coursework as described above, the applicant may be considered for admission on the basis of the following two criteria: A satisfactory score on both the verbal and quantitative sections of the GRE or GMAT with a minimum mean score of not less than the 30th percentile in each category, and determination by the appropriate faculty unit at San Diego State that any written documentation of classroom performance the student submits reflects academic achievement equivalent to at least a grade point average of 2.75. Such documentation should include written coursework evaluations by the faculty of the institution awarding the degree and may include other documentation such as baccalaureate theses, etc. A relative weakness in one of these criteria may be offset by a strong performance in the other.
2. Students holding baccalaureate degrees from accredited institutions that award credit for prior experiential learning may be admitted providing that:
 - a. The student meets the 60-unit requirement as described in 1. above when general admission requirements are not met.

- b. 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.
 - c. 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.
3. In some circumstances, students holding a baccalaureate degree from an institution with limited accreditation or students holding a degree that requires less than four years for completion may be admitted to postbaccalaureate standing provisionally for the purposes of validating the degree for equivalency. At the determination of the Graduate 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.

Examination Requirements

The University requires that applicants for admission to most advanced degree programs and advanced certificate programs present satisfactory scores on the Graduate Record Examination (GRE) General Test. In addition, some programs require that applicants also submit satisfactory scores on the appropriate GRE subject matter test. Applicants should consult the program listings for specific information. Applicants for admission to the College of Business Administration will take the Graduate Management Admissions Test (GMAT); students applying for admission to the concentration in Health Services Administration in the Graduate School of Public Health may submit scores from either the GRE or the GMAT.

Students who hold advanced degrees from institutions that are members of the Council of Graduate Schools are exempted from the GRE requirement. Individuals applying for admission to certain graduate programs may petition to waive the GRE General Test requirement if the applicant holds a professional doctoral degree from an institution whose professional program is accredited by an association that is recognized by the Council on Postsecondary Accreditation (COPA). The waiver must be recommended by the graduate adviser and approved by the Graduate Dean. The petitioner must demonstrate that the professional degree is integrally related to the degree program to be pursued at San Diego State University. Normally, such waivers are not approved where the object is admission to an academic as opposed to a professional 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). Individual degree programs may prescribe a higher minimum score. Applicants must also submit a score for the Test of Written English (TWE). Individual degree programs may use the score on the TWE as an admission criterion or as an advising tool to identify students who may need further training in English.

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 graduate certificate may be considered for admission with postbaccalaureate standing (unclassified) when the student meets the criteria specified under General Admission Requirements. Admission with postbaccalaureate standing (unclassified) does not constitute admission to, or assurance of consideration for admission to, advanced degree curricula. Students with postbaccalaureate standing (unclassified) may not enroll in 600-, 700-, 800-, and 900-numbered courses except by special permission.

Postbaccalaureate Standing (Classified)

A student wishing to be admitted to a program leading to a credential **only** or to an advanced certificate **only** (not an advanced degree) must meet the criteria specified under General Admission Requirements. A student must also meet the professional, personal, scholastic, and other standards prescribed by the appropriate department. The applicant should contact the department or school involved for information concerning specific admission requirements and should submit a departmental application during the appropriate filing period. Admission with postbaccalaureate standing (classified) does not constitute admission to, or assurance of consideration for admission to, advanced degree curricula.

Graduate Standing (Classified)

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

1. Achieve a satisfactory score on the GRE General Test or GMAT as required.
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-, 700-, and 900-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 in the criteria for graduate standing (classified) may be granted conditional graduate standing (classified), if the deficiencies can be met by specific additional preparation, including qualifying examinations. Not more than 15 semester units may be assigned to satisfy undergraduate deficiencies in the major and all course conditions must be met within five semesters from the time of initial enrollment. Students admitted with conditional graduate standing (classified) are admitted to authorized advanced degree curricula and may enroll in 600- and 700-numbered courses. Once the conditions established by the department, school, 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 acceptance into an advanced degree curriculum with graduate standing (classified or conditionally classified). Applications for such continuing students are available in the Graduate Division. Except in special circumstances, reports of the scores of the GRE General Test or the GMAT where appropriate must be on file at 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, Mexican American Studies, and Television, Film, and New Media Production 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 filing period for undergraduate applicants unless already enrolled at the University as a postbaccalaureate student. In addition, applicants to the impacted majors (Communication (emphases in advertising, media management, public relations, telecommunications and film), Criminal Justice Administration, International Business, Journalism, Nursing, and Television, Film, and New Media Production) must apply during the first month of the undergraduate application filing period. Upon receipt of the admission application, students will be sent a separate application for a second bachelor's degree.

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 objective.

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-, 700-, 800-, and 900-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 also fulfill all current requirements for the bachelor's 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, you must submit an application for graduation with the Office of Admissions and Records. The Class Schedule each semester specifies the exact dates for filing. (Refer to the section on Application for Graduation of the bulletin for additional information and regulations.)

For additional information and second bachelor's degree applications, contact the Office of Admissions and Records.

Filing of Records

The applicant must arrange to have two sets of official transcripts from EACH college attended sent to the Office of Admissions and Records. Transcripts requested include all extension, correspondence, summer session, or evening courses.

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

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

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

Determination of Residence for Nonresident Tuition Purposes

The Office of Admissions and Records determines the residence status of all new, returning, and continuing students for nonresident tuition purposes. Responses on the Application for Admission and, if necessary, other documentation furnished by the student are used in making this determination. A student who fails to submit adequate information to establish a right to classification as a California resident will be classified as a nonresident.

The following statement of the rules regarding residency determination for nonresident tuition purposes is not a complete discussion of the law, but a summary of the principal rules and their exceptions. The law governing residence determination for tuition purposes by The California State University is found in **California Education Code** Sections 68000-68090, 68121, 68123, 68124, and 89705-89707.5, and in Title 5 of the **California Code of Regulations**, Sections 41900-41912. A copy of the statutes and regulations is available for inspection at the Office of Admissions and Records.

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 at least one year prior to the residence determination date to show an intent to make California the permanent home with concurrent relinquishment of the prior legal residence. The steps necessary to show California residency intent will vary from case to case. Included among the steps may be registering to vote and voting in elections in California; filing resident California state income tax forms on total income; ownership of residential property or continuous occupancy or renting of an apartment on a lease basis where one's permanent belongings are kept; maintaining active resident memberships in California professional or social organizations; maintaining California vehicle plates and operator's license; maintaining active savings and checking accounts in California banks; maintaining permanent military address and home of record in California if one is in military service.

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

In general, an unmarried minor (a person under 18 years of age) derives legal residence from the parent with whom the minor maintains or last maintained his or her place of abode. The residence of an unmarried minor who has a parent living cannot be changed by the minor's

own act, by the appointment of a legal guardian or by the relinquishment of a parent's right of control.

A married person may establish his or her residence independent of spouse.

An alien may establish his or her residence, unless precluded by the Immigration and Nationality Act from establishing domicile in the United States. An unmarried minor alien derives his or her residence from the parent with whom the minor maintains or last maintained his or her place of abode.

Nonresident students seeking reclassification are required by law to complete a supplemental questionnaire concerning financial independence.

The general rule is that a student must have been a California resident for at least one year immediately preceding the residence determination date in order to qualify as a “resident student” for tuition purposes. A residence determination date is set for each academic term and is the date from which residence is determined for that term. The residence determination dates are September 20 for fall and January 25 for spring.

There are exceptions to 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 age 18, the exception continues for one year to enable the student to qualify as a resident student.
2. Minors who have been present in California with the intent of acquiring residence for more than a year before the residence determination date, and entirely self-supporting for that period of time.
3. Persons below the age of 19 who have lived with and been under the continuous direct care and control of an adult or adults, not a parent, for the two years immediately preceding the residence determination date. Such adult must have been a California resident for the most recent year.
4. Dependent children and spouses of persons in **active** military service stationed in California on the residence determination date. The exception, once attained, is not affected by retirement or transfer of the military person outside the state, if the student is continuously enrolled.
5. Military personnel in active service stationed in California on the residence determination date for purposes other than education at state-supported institutions of higher education. This exception continues until the military personnel has resided in the state the minimum time necessary to become a resident.
6. Effective January 1, 1996, military personnel in active service in California for more than one year immediately prior to being discharged from the military. Eligibility for this exception runs from the date the student is discharged from the military until the student has resided in state the minimum time necessary to become a resident.
7. Dependent children of a parent who has been a California resident for the most recent year. This exception continues until the student has resided in the state the minimum time necessary to become a resident, so long as continuous attendance is maintained at an institution.
8. Graduates of any school located in California that is operated by the United States Bureau of Indian Affairs, including, but not limited to, the Sherman Indian High School. The exception continues so long as continuous attendance is maintained by the student at an institution.
9. Certain credentialed, full-time employees of California school districts.
10. Full-time State University employees and their children and

spouses; State employees assigned to work outside the State, and their children and spouses. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for one year.

11. Certain exchange students.
12. 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.

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

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 incorrectly granted an exception from nonresident tuition are subject to reclassification as nonresidents and payment of nonresident tuition in arrears. If incorrect classification results from false or concealed facts, the student is subject to discipline pursuant to Section 41301 of Title 5 of the **California Code of Regulations**. Resident students who become nonresidents, and nonresident students qualifying for exceptions whose basis for so qualifying changes, must immediately notify the Office of Admissions and Records. Applications for a change in classification with respect to a previous term are not accepted.

The student is cautioned that this summation of rules regarding residency determination is by no means a complete explanation of their meaning. The student should also note that changes may have been made in the rate of nonresident tuition, in the statutes, and in the regulations between the time this catalog is published and the relevant residence determination date.

International (Foreign) Student Admission Requirements

San Diego State University must assess the academic preparation of foreign students. For this purpose, "foreign students" include those who hold US visas as students, exchange visitors, or in other nonimmigrant classifications. SDSU uses separate requirements and application filing dates in the admission of foreign students.

Applicants for admission as graduates whose education has been in a foreign country must file an application for admission, official certificates and detailed transcripts of record from each secondary school and collegiate institution attended. All needed documents, transcripts, and test scores must be received by the Office of Admissions and Records no later than July 1 for the fall semester or December 1 for the spring semester. If certificates and transcripts are not in English, they should be accompanied by certified English translations. Credentials will be evaluated in accordance with the general regulations governing admission to San Diego State University.

All applicants whose major education has been in a language other than English must score 550 or more on the Test of English as a Foreign Language (TOEFL). This test is administered in most foreign countries. The University must receive official test scores before admission can be granted. Information as to the time and place at which this test is given may be obtained by writing to: Educational Testing Service (TOEFL), Princeton, New Jersey 08540, USA.

Upon arrival at San Diego State University, further tests of English may be given for the purpose of placing students in an English language program commensurate with their linguistic ability in English and to

assist student advisers in planning an appropriate course of study. Depending upon students' performance on the placement test and their academic background, they may be required to enroll in one or more English language courses during their first semester at San Diego State University. This requirement must be completed as a condition for classified graduate standing. Foreign students admitted to the University will be subject to the same competency and placement examinations and standards that govern the rest of the student population.

Insurance Requirement: Effective August 1, 1995, as a condition of receiving an I-20 or IAP-66 form, all F-1 and J-1 visa applicants must agree to obtain and maintain health insurance as a condition of registration and continued enrollment in the California State University. Such insurance must be in amounts as specified by the United States Information Agency (USIA) and NAFSA: Association of International Educators. The campus President or designee shall determine which insurance policies meet these criteria. Further information may be obtained from the Office of International Student Services.

American Language Institute: Prior to admission to San Diego State University, if English instruction is needed, students may enroll in the American Language Institute. The American Language Institute (ALI) offers preparation in the English language reading, writing, and listening skills necessary for university success. For those students who are enrolling in the American Language Institute, a program called conditional admission is available. It is for those students who require acceptance to a university in order to obtain a passport, a U.S. Visa, or government sponsorship. The program is offered to students who do not have an adequate command of English or the required TOEFL (Test of English as a Foreign Language) score to qualify for 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 appropriate TOEFL scores and training at the American Language Institute.

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 Residential Life Office, San Diego State University. Scholarship aid for entering students is limited; no scholarships are specifically reserved for students from another country. Further information regarding scholarships will be found in the section of this 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.

Members of the faculty of San Diego State University holding appointments at or above rank of instructor or lecturer may not be candidates for degrees on this campus. Faculty may register for courses as unclassified students.

Registration

San Diego State University students register by the touch tone telephone registration system (RegLine). On-campus registration is not conducted. The Class Schedule and Student Information Handbook, issued each semester and obtainable at the Campus Store before the registration period, contains specific information on registration, the courses offered for the term, and a listing of the fees required for enrollment. Students will not be permitted to access RegLine until fees are paid. Payment of fees by itself does not constitute registration. **A student is considered registered when: 1) fees have been paid, and 2) at least one course has been added prior to the first day of classes.**

Late registration is allowed during the first two weeks of the semester. Students wishing to late register must pay registration fees plus a \$20.00 late fee before the end of the second week of the semester. After receiving an add code from the instructor of the course the student wants to add, the student calls RegLine to officially register. **Students who have not added at least one class by the beginning of the fourth week of classes are not registered, and may not add courses later in the semester.**

Improper Registration in Graduate Courses. Only students who are completing their bachelor's degree and who have filed a formal request for permission to enroll for concurrent master's degree credit or petition for post baccalaureate concurrently may be authorized to enroll in 600 and higher numbered courses. Undergraduate students who have not received permission for concurrent enrollment may not enroll in 600 or higher numbered courses. The registration for graduate students who have not met the stated prerequisites for Course 799A, Thesis, at the time of registration may be canceled.

Changes in Class Schedule

Students are responsible for any change in their semester's schedule of classes. Changes in the official study list are done using the touchtone registration system.

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 letter 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 degree and whose grade point average in the last 60 semester units attempted is 3.0 or above may petition the Graduate Council to take for concurrent

master's degree credit 500-numbered courses, and certain 600- and 700-numbered courses approved by the department, with the remaining requirements for the bachelor's degree. Petitions may be obtained from the Graduate Division and must be submitted to the Office of Admissions and Records by the end of the third week of classes of the semester or term in which the concurrent credit is earned. The student must have on file a current application for graduation with the bachelor's degree. The maximum number of units that may be earned as concurrent master's degree credit is determined by the difference between the number of units remaining for the bachelor's degree and 15.

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. Graduate 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 Office of Admissions and Records, SS-1563.

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 deadlines as set forth in the General Catalog of the University and in the Graduate Bulletin. All questions concerning graduate study at San Diego State University should be referred to the Graduate Division.

All students beginning graduate study at San Diego State University after August 1992, will be required to follow the procedures and regulations stated in the 1996-97 edition of the Graduate Bulletin. A student who was admitted to a graduate degree curriculum at this university prior to that date and who has been enrolled in one or more courses during each consecutive semester since first enrolling as a graduate student, or whose attendance has not been interrupted by more than two consecutive semesters, will be held responsible for the regulations in effect at the time 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 the Graduate Division attempts to preserve requirements for students subject to this bulletin, 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 consequences may result.

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 change from time to time and that these changes may alter the information contained in this publication. Changes may come in the form of statutes enacted by the Legislature, rules and policies adopted by the Board of Trustees of The California State University, by the Chancellor or designee of The California State University or by the President or designee of this institution. Further, it is not possible in a publication of this size to include all of the rules, policies and other information that pertain to the student, San Diego State University, and The California State University. Additional information may be obtained from the appropriate department, school, or administrative office. Each semester, the Class Schedule and Student Information Handbook outlines changes in academic policy and procedure and current deadlines that are of importance to students.

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

Privacy Rights of Students in Education Records

The federal Family Educational Rights and Privacy Act of 1974 (20 U.S.C. 1232g) and regulations adopted thereunder (34 C.F.R. 99) and California Education Code Section 67100 et seq, set out requirements designed to protect the privacy of students concerning their records maintained by the campus. Specifically, the statute and regulations govern access to student records maintained by the campus, and the release of such records. In brief, the law provides that the campus must provide students access to records directly related to the student and an opportunity for a hearing to challenge such records on the grounds that they are inaccurate, misleading or otherwise inappropriate. The right to a hearing under the law does not include any right to challenge the appropriateness of a grade as determined by the instructor. The law generally requires that written consent of the student be received before releasing personally identifiable data about the student from records to other than a specified list of exceptions. The institution has adopted a set of policies and procedures concerning implementation of the statutes and the regulations on the campus. Copies of these policies and procedures may be obtained at the Office of the Vice President of Student Affairs. Among the types of information included in the campus statement of policies and procedures are: (1) the types of student records and the information contained therein; (2) the official responsible for the maintenance of each type of record; (3) the location of access lists which indicate persons requesting or receiving information from the record; (4) policies for reviewing and expunging records; (5) the access rights of students; (6) the procedures for challenging the content of student records; (7) the cost which will be charged for reproducing copies of records; and (8) the right of the student to file a complaint with the Department of Education. An office and review board have been established by the Department to investigate and adjudicate violations and complaints. The office designated for this purpose is The Family Educational Rights and Privacy Act Office (FERPA), U.S. Department of Education, 330 "C" Street, Room 4511, Washington, D.C. 20202.

The campus is authorized under the Act to release "directory information" concerning students. "Directory information" includes the student's name, address, telephone listing, place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student. The above designated information is subject to release by the campus at any time unless the campus has received prior objection from the student specifying information which the student requests not be released. Students are given an opportunity to restrict the release of "directory information" about themselves by calling the Office of Admissions and Records touch-tone system, (619) 594-7800.

The campus is authorized to provide access to student records to campus officials and employees who have legitimate educational interests in such access. These persons are those who have responsibilities in connection with the campus' academic, administrative, or service functions and who have reason for using student records connected with their campus or other related academic responsibilities. Disclosure may also be made to other persons or organizations under certain conditions (e.g., as part of accreditation or program evalua-

tion; in response to a court order or subpoena; in connection with financial aid; to other institutions to which the student is transferring.)

Nondiscrimination Policy

San Diego State University does not discriminate on the basis of race, color, national origin, sex, physical handicap or sexual orientation in the educational programs or activities it conducts.

San Diego State University prohibits discrimination and harassment on the basis of race, religion, color, sex, age, handicap, marital status, sexual orientation, and national origin. Students may file a complaint alleging violation of this policy. Detailed procedures for filing a complaint are available in the Office of the Ombudsman.

Disability

San Diego State University does not discriminate on the basis of disability in admission or access to, or treatment or employment in, its programs and activities. Section 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (1990), and the regulations adopted thereunder prohibit such discrimination. The Office of Student Affairs has been designated to coordinate the efforts of San Diego State University to comply with the Acts in their implementing regulations. Inquiries concerning compliance may be addressed to this office at AD-231; telephone 594-5211.

Race, Color, or National Origin

San Diego 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, be denied the benefits of, or be otherwise subjected to discrimination under any program of San Diego 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-156, 594-6464.

Sex

San Diego State University does not discriminate on the basis of sex in the educational programs or activities it conducts. Title IX of the Education Amendments of 1972, as amended, and the administrative regulations adopted thereunder prohibit discrimination on the basis of sex in education programs and activities operated by San Diego State University. Such programs and activities include admission of students and employment. Inquiries concerning the application of Title IX to programs and activities of San Diego State University may be referred to the Affirmative Action Officer (594-6464), the campus officer assigned the administrative responsibility of reviewing such matters, or to the Regional Director, Office for Civil Rights, Region 9, 220 Main Street, 10th Floor, San Francisco, California 94105.

San Diego State University is committed to providing equal opportunities to men and women CSU students in all campus programs, including intercollegiate athletics.

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) and intended for undergraduates; those numbered 500 through 599 are in the upper division and are also acceptable for advanced degrees when taken by students admitted to graduate standing; those numbered 600 through 799 are graduate courses; and those numbered 800 through 899 are doctoral courses.

Courses numbered at the 900 level are reserved for graduate courses in certain professional curricula as part of advanced certificate, credential, and licensure programs and are specifically intended for students admitted to the University with post-baccalaureate classified standing. Courses numbered at the 900 level are not applicable to other graduate programs.

Courses numbered X-01 through X-79 and X-397 are professional advancement units offered only through Extension to meet specific academic needs of community groups and are not acceptable toward an undergraduate or graduate degree. Courses X-01 through X-49 are designated as lower division and X-50 through X-79 and X-397 are designated as upper division.

Undergraduate Enrollment in 600-, 700-, and 800-Numbered Courses

1. You must obtain permission of the instructor.
2. You must be a senior in good standing and have a B (3.0) GPA average.
3. Undergraduate enrollments may not cause the exclusion of a qualified graduate student in a graduate course.

Grading System

Grades and grade points per unit used in reporting are as follows: Grade of **A** (outstanding achievement; available for the highest accomplishment), 4 points; **B** (average; awarded for satisfactory performance), 3 points; **C** (minimally passing), 2 points; **D** (unacceptable for graduate credit, course must be repeated), 1 point; **F** (failing), 0 points; **SP** (satisfactory progress), not counted in the grade point average; **W** (withdrawal), not counted in the grade point average; **AU** (audit), no credit earned and not counted in the grade point average; **Cr** (credit), signifying units earned, but not counted in the grade point average; **NC** (no credit), no credit earned and not counted in the grade point average; **I** (authorized incomplete), no credit earned and not counted in the grade point average until one calendar year has expired at which time it will count as an "F" for grade point average computation; **U** (unauthorized incomplete), counted as "F" for grade point average computation.

Plus/Minus Grading

A plus/minus grading system is utilized at San Diego State University. Plus/minus grading is not mandatory but is utilized at the discretion of the individual instructor. The grades of A+, F+ and F- are not issued. The decimal values of plus and/or minus grades are utilized in the calculation of grade point averages as follows:

$$A = 4.0 \quad C+ = 2.3 \quad D- = 0.7$$

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

Satisfactory Progress Grade – “SP”

The “SP” symbol is used in connection with courses that extend beyond one academic term. It indicates that work is in progress and has been evaluated and found to be satisfactory to date, but that assignment of a precise grade must await completion of additional work. Work is to be completed within a stipulated time period not to exceed one calendar year except for graduate thesis (799A), or dissertation (899). Failure to complete the assigned work within one calendar year except for courses 799A, 899, General Mathematics Studies 90A, 99A, and Rhetoric and Writing Studies 92A, 94, 97A will result in the course being computed into the grade point average as an “F” (or a “NC” if the course was taken for a credit/no credit grade). Graduate courses for which the “SP” symbol is appropriate are specifically designated in the departmental listings of this bulletin.

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

Withdrawal Grade – “W”

The symbol “W” indicates that you were permitted to drop a course after the first four weeks of instruction because of a verified serious and compelling reason.

Dropping a class after the end of the tenth day of instruction and prior to the last three weeks of instruction is permissible only for verified serious and compelling reasons. Permission to drop a class during this period is granted only with the signature of the instructor, who indicates your grade status in the class, and the approval of the college dean or designee. Approvals are made in writing on prescribed forms. Students are not permitted to drop a class during the final three weeks of instruction, except in cases such as accident or serious illness where the cause of dropping the class is due to circumstances clearly beyond the student’s control and the assignment of an Incomplete is not practicable. All such requests must be accompanied by appropriate verification. Ordinarily, withdrawals in this category will involve total withdrawal from the University, except that credit, or an Incomplete, may be assigned for courses in which sufficient work has been completed to permit an evaluation to be made. Requests to withdraw under such circumstances must be approved by the Graduate Dean or designee.

Auditing – “AU”

Enrollment as an auditor is subject to permission of the instructor provided that enrollment in a course as an auditor shall be permitted only after students otherwise eligible to enroll on a credit basis have had an opportunity to do so. Auditors are subject to the same fee structure as credit students and regular class attendance is expected. Failure to meet required class attendance may result in an administrative drop of the course. To enroll as an auditor, obtain the Change to Audit Grade form from the Office of Admissions and Records. Obtain instructor approval and return the completed form on or before the fifteenth day of instruction to the Office of Admissions and Records. Once enrolled as an auditor, you may not change to credit status unless such a change is requested prior to the end of the fifteenth day of instruction. If you enrolled for credit you may not change to audit after the end of the fifteenth day of instruction.

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, 799A, and certain 500- 600- 700- and 800-numbered courses specifically designated in the Graduate Bulletin and Class Schedule. Failure to complete satisfactorily such courses will result in the assignment of “NC.” No other 600, 700-, or 800-numbered courses may be taken for credit/no credit. No 500-numbered courses graded credit/no credit, except those offered only for credit/no credit, are acceptable on a master’s degree program.

A grade of “Credit” in graduate level courses is awarded for work equivalent to all grades which earn 3.0 or more grade points (A through B). “No Credit” is awarded for work equivalent to all grades which earn less than 3.0 grade points (B- through F).

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

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, but fully justified, reasons and that there is still a possibility of earning credit. It is your responsibility to bring pertinent information to the instructor and to reach agreement on the means by which the remaining course requirements will be satisfied. The conditions for removal of the Incomplete shall be reduced to writing by the instructor and given to you with a copy placed on file with the department chair until the Incomplete is removed or the time limit for removal has passed. A final grade is assigned when the work agreed upon has been completed and evaluated. An Incomplete shall not be assigned when the only way the student could make up the work would be to attend a major portion of the class when it is next offered.

Contract forms for Incompletes are available at department offices.

An Incomplete must be made up within one calendar year immediately following the end of the term in which it was assigned. This limitation prevails whether or not you maintain continuous enrollment. Failure to complete the assigned work within one calendar year will result in an Incomplete being counted as equivalent to an “F” (or an “NC” if the course has been taken Cr/NC) for grade point average computation. An Incomplete may not be removed by reenrollment in the course.

Candidates for graduation whose record carries a grade of Incomplete will be graduated provided they are otherwise eligible for graduation. However, the Incomplete cannot be made up after the degree has been granted, and it will be counted as an “F” for grade point purposes 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 you enrolled in a course, did not withdraw from the course but failed to complete course requirements. It is used when, in the opinion of the instructor, the number of completed assignments or course activities or both were insufficient to make normal evaluation of academic performance possible. For purposes of grade point average computation this symbol is equivalent to an “F.” If you attend a portion of a course and then, after receiving failing grades, stop attending without officially withdrawing, you should normally receive a final grade of “F” and not “U.”

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. If you believe that an appropriate grade has not been assigned you should first seek to resolve the matter informally with the instructor of record. If the matter cannot be resolved informally, you may present the case to the appropriate campus entity, have it reviewed and, where justified, receive a grade correction.
4. It is your responsibility to resolve grade disputes in a timely manner, typically during the semester following the semester the questioned grade was received. If twelve or more months have elapsed since the grade was issued, or the student has graduated, no grade change will be made.

Computation of Grade Point Average

To compute the grade point average, divide the total number of grade points earned by the total number of units attempted in courses in which letter grades are assigned. Units earned with a Cr (credit) are not included in the computation. A grade of “I” (authorized incomplete) is not counted in the grade point computation until one calendar year has expired, at which time it will count as an “F”. For details see the section of this bulletin under Basic Requirements for the Master’s Degree.

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 the recommendation of the Thesis Committee Chair, will receive an SP (satisfactory progress) grade. This grade symbol will remain on the student’s record until the thesis is completed. *A second registration in Course 799A, Thesis, is expressly prohibited.*

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

Withdrawals

A graduate student who has been admitted to a graduate degree curriculum but has completed no courses at this University for two consecutive semesters is considered to have withdrawn from the curriculum. The student will be required to file application for readmission to the Graduate Division upon resumption of graduate study. A student who withdraws from a graduate curriculum will be required to comply with regulations and requirements in effect at the time of readmission to the Graduate Division.

Official Withdrawal

Students who wish to withdraw from the University must initiate action formally through the Office of Admissions and Records. Failure to withdraw will result in a failing grade in all courses. A student who is not enrolled in at least one class (other than for audit) at the end of the fourth week of instruction (census date) is considered to have withdrawn from the University for that semester. Refunds are obtainable only for the first 11 days after the start of classes. In order to receive a refund, you must file an official withdrawal form and refund request at the Office of Admissions and Records within the first 11 days of the term.

Withdrawal from the University is permitted before the end of the fifteenth day of classes. No courses will appear on the permanent record.

Dropping a course, or courses, after the end of the tenth day of classes and prior to the last three weeks of instruction is permissible only with the signature of each instructor and the approval of the college dean or designee. Withdrawal from the University after the end of the fifteenth day of classes and prior to the last three weeks of instruction is permissible only with the signature of each instructor and the approval of the college dean or designee of the student’s major. Post-baccalaureate (unclassified) students wishing to withdraw from the University must have the signature of each instructor and the approval of the Graduate Dean or his designee. To be permitted to drop from a course or courses, or withdraw from the University during this period, the student must have serious and compelling reasons and documentation of those reasons must be provided. Poor academic performance is not an acceptable reason for dropping a course or for withdrawal from the University.

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

Withdraw Retroactively. After the last day of the semester, a graduate student who wishes to withdraw retroactively should request withdrawal from the full semester’s work. Such requests may be granted only in verified cases such as accident or serious illness where the cause for substandard performance was due to circumstances clearly beyond the student’s control. Ordinarily, requests for changes in individual classes will not be accepted.

Unofficial Withdrawal

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

Veterans unofficially withdrawing will have veteran’s allowances

immediately suspended and will be subject to full repayment of allowances received after date of unofficial withdrawal.

Leaves of Absence

One-Semester Stop Out

With certain exceptions, matriculated 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. Students who are disqualified or are subject to disqualification are not eligible for a one semester stop-out.

Educational Leave of Absence

Students are permitted to take up to four consecutive semesters of approved leave of absence. An educational leave of absence is appropriate in those cases where students will be engaged for the majority of the leave time in an activity, other than attending an accredited college or university, that is directly related to their formal academic careers or otherwise contributes to specific academic goals. Students must apply for the particular semester they wish to be absent from school. If they wish to extend a leave for additional semesters, a separate request must be filed previous to the deadline for submitting leaves as outlined in the Academic Calendar.

You can request a leave from the Office of Admissions and Records by calling (619) 594-7800. If you wish to cancel a leave you must do so prior to the first day of classes by calling (619) 594-7800. The Class Schedule and Student Information Handbook contains specific deadlines. For students participating in the CSU visitors' program, units completed at the visitor campus will be considered resident units; they will not, however, be calculated into the San Diego State University grade point average.

Approval for educational leaves of absence will be granted only to graduate students who have completed a minimum of one semester at San Diego State University, who are in good academic standing, and who are eligible to register. Leaves will not be granted to students on probation, students who are subject to disqualification or have been disqualified, students who qualify for a change from undergraduate to graduate status, or students who have a registration hold.

Readmission

An enrolled student is eligible (if not disqualified) to stay out one semester without penalty. No application is necessary and registration information 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 \$55 application fee. If the student was enrolled at another institution subsequent to the last attendance at San Diego State University, an official transcript showing work completed must be sent by the transfer institution directly to the Office of Admissions and Records before readmission can be completed. SDSU students in good academic standing will retain their original catalog status if they are absent 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 the official master's degree program. With prior permission of the graduate adviser, however, a graduate student may repeat one course on the official program of study in which a grade of

C, D, F or U has been received. When a graduate student in any category of admission repeats a course in which a C, D, or F has been earned, both grades will remain on the student's permanent record and both grades will be calculated in the grade point average. If a student repeats a course in which a U has been earned, the original U grade will remain on the permanent record, but only the second grade will be used in computation of the grade point average. A course in which a U has been earned may be repeated only once. Repeated courses may not be taken for credit/no credit. Students who have successfully repeated a "U" graded course should notify the Office of Admissions and Records if they wish immediate adjustment of their grade point average.

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 subsequent to admission to the university.

Students in a graduate degree program in conditional or classified standing should consult the section of this bulletin entitled "General Requirements for Doctoral Programs" and "Basic Requirements for the Master's Degree" for grade point average requirements for degree seeking students.

Scholastic Disqualification

A graduate student in any admission category shall be subject to disqualification from further attendance at the University if, while on academic probation, the student fails to earn sufficient grade points to warrant removal from probationary status.

Graduate students who have been admitted to an advanced degree program and whose performance therein is judged to be unsatisfactory, with respect to scholastic or professional standards established by the Graduate Council, will be subject to academic dismissal from their program and may also be academically disqualified from further attendance at the University by the Graduate Dean in consultation with the department (examples: failure to fulfill conditions for fully classified admission within the time specified; denial of advancement to candidacy for a degree; failure in presentation of a thesis or comprehensive examination).

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

Petition for Readmission

A graduate student disqualified from further attendance at the University for any academic or professional reason may request reinstatement by filing a petition with the Graduate Division. A student who has not attended the University for one or more semesters after disqualification will also be required to apply for readmission during the specified filing period. Petition forms are available at the Graduate Division.

Reinstated students who were disqualified for failure to meet the scholastic or professional standards in a particular program may not subsequently enroll in courses carrying graduate credit in that program without approval of the program graduate adviser and the consent of the Graduate Dean. If reinstated students enroll in such courses without prior approval, the corresponding academic credit may not be used to meet the curricular requirements of that program.

Administrative Academic Probation and Disqualification

Administrative Academic Probation

A student may be placed on administrative academic probation by action of the Graduate Dean 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 an academic requirement or regulation which is routine for all students or a defined group of students (examples: failure to list all colleges attended on the application for admission, failure to take placement tests, failure to complete a required practicum).

Administrative Academic Disqualification

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

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

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 discipline process and establishes standards and procedures in accordance with regulations contained in Article 1.1, Sections 41301 through 41304 of Title 5, *California Code of Regulations*. These sections are as follows:

41301. Expulsion, Suspension and Probation of Students.

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

- (a) Cheating or plagiarism in connection with an academic program at a campus.
- (b) Forgery, alteration or misuse of campus documents, records, or identification or knowingly furnishing false information to a campus.
- (c) Misrepresentation of oneself or of an organization to be an agent of a campus.
- (d) Obstruction or disruption, on or off campus property, of the campus educational process, administrative process, or other campus function.
- (e) Physical abuse on or off campus property of the person or property of any member of the campus community or of members of his or her family or the threat of such physical abuse.
- (f) Theft of, or nonaccidental damage to, campus property, or property in the possession of, or owned by, a member of the campus community.
- (g) Unauthorized entry into, unauthorized use of, or misuse of campus property.
- (h) On campus property, the sale or knowing possession of dan-

gerous drugs, restricted dangerous drugs, or narcotics as those terms are used in California statutes, except when lawfully prescribed pursuant to medical or dental care, or when lawfully permitted for the purpose of research, instruction or analysis.

- (i) Knowing possession or use of explosives, dangerous chemicals or deadly weapons on campus property or at a campus function without prior authorization of the campus president.
- (j) Engaging in lewd, indecent, or obscene behavior on campus property or at a campus function.
- (k) Abusive behavior directed toward, or hazing of, a member of the campus community.
- (l) Violation of any order of a campus president, notice of which had been given prior to such violation and during the academic term in which the violation occurs, either by publication in the campus newspaper, or by posting on an official bulletin board designated for this purpose, and which order is not inconsistent with any of the other provisions of this Section.
- (m) Soliciting or assisting another to do any act which would subject a student to expulsion, suspension or probation pursuant to this Section.
- (n) For purposes of this Article, the following terms are defined:
 - (1) The term "member of the campus community" is defined as meaning California State University Trustees, academic, nonacademic and administrative personnel, students, and other persons while such other persons are on campus property or at a campus function.
 - (2) The term "campus property" includes:
 - (a) real or personal property in the possession of, or under the control of, the Board of Trustees of The California State University, and
 - (b) all campus feeding, retail or residence facilities whether operated by a campus or by a campus auxiliary organization.
 - (3) The term "deadly weapons" includes any instrument or weapon of the kind commonly known as a blackjack, slingshot, billy, sandclub, sandbag, metal knuckles; any dirk, dagger, switchblade knife, pistol, revolver, or any other firearm; any knife having a blade longer than five inches; any razor with an unguarded blade, and any metal pipe or bar used or intended to be used as a club.
 - (4) The term "behavior" includes conduct and expression.
 - (5) The term "hazing" means any method of initiation into a student organization or any pastime or amusement engaged in with regard to such an organization which causes, or is likely to cause, bodily danger or physical or emotional harm to any member of the campus community; but the term "hazing" does not include customary athletic events or other similar contests or competitions.
 - (o) This Section is not adopted pursuant to Education Code Section 89031.
 - (p) Notwithstanding any amendment or repeal pursuant to the resolution by which any provision of this Article is amended, all acts and omissions occurring prior to that effective date shall be subject to the provisions of this Article as in effect immediately prior to such effective date.

41302. Disposition of Fees: Campus Emergency; Interim Suspension.

The President of the campus may place on probation, suspend, or expel a student for one or more of the causes enumerated in Section 41301. No fees or tuition paid by or for such student for the semester, quarter, or summer session in which he or she is suspended or expelled shall be refunded. If the student is readmitted before the close of the semester, quarter, or summer session in which he or she is suspended, no additional tuition or fees shall be required of the student on account of the suspension.

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

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

41303. Conduct by Applicants for Admission.

Notwithstanding any provision in this Chapter 1 to the contrary, admission or readmission may be qualified or denied to any person who, while not enrolled as a student, commits acts which, were he enrolled as a student, would be the basis for disciplinary proceedings pursuant to Sections 41301 or 41302. Admission or readmission may be qualified or denied to any person who, while a student commits acts which are subject to disciplinary action pursuant to Section 41301 or Section 41302. 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 Chancellor 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 the Student Services building.

Plagiarism

Plagiarism is formal work publicly misrepresented as original; it is any activity wherein one person knowingly, directly, and for lucre, status, recognition, or any public 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.

Lindley, Alexander. *Plagiarism and Originality*. 1952.

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

The objective of university endeavor is to advance humanity by increasing and refining knowledge and is, therefore, ill served by students who indulge in plagiarism. Accordingly, one who is suspected or accused of disregarding, concealing, aiding, or committing plagiarism must, because of the gravity of the offense, be assured of thorough, impartial, and conclusive investigation of any accusation. Likewise, one must be liable to an appropriate penalty, even severance from the University and in some cases revocation of an advanced degree, should the demonstrated plagiarism clearly call into question one's general competence or accomplishments.

Maintenance of Integrity in Research

San Diego State University expects the highest standards of ethical behavior of all members of the academic community involved in the conduct of research, including graduate students. While instances of misconduct in research are rare in occurrence, reports of possible scientific fraud concerning faculty, staff and graduate students employed in research contracts and grants are dealt with in accordance with the university's assurance of compliance with the United States Public Health Service scientific misconduct regulations. The administrative process for handling allegations of scientific misconduct and for protecting the rights and reputations of all persons involved is detailed in the *Policy on Maintenance of Integrity in Research* and published in the *SDSU Policy File*. Reports and/or charges of misconduct in research at SDSU should be directed to the chair of the department or dean of the college in which the alleged misconduct has occurred. Such reports may also be directed to the Associate Dean for Research in the Graduate Division and Research for referral to the appropriate college dean.

Transcripts of Record

You may obtain an official transcript of your record by filing a transcript request form at the Cashiers Office. A fee is charged for all transcripts and must be paid in advance. Ten to fifteen days should be allowed for the processing and mailing of the transcript. Transcripts from other schools or colleges become the property of this University and will not be released or copied.

Unofficial Transcripts

You may obtain an unofficial copy of your SDSU transcript by paying the unofficial transcript fee at the Office of 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 scheduled must make arrangements with the instructor to have an incomplete grade reported and must take the deferred final examination within the time allowed for making up incomplete grades.

Transfer, Extension, Foreign, or Open University 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 acceptable on master's degree programs is 9 units. Exceptions are the Master of Public Health degree, which permits 6 units; Master of Science degree in Nursing, which permits 12 units (including a maximum of 12 units of extension credit); Master of City Planning degree, which permits 27 units (including a maximum of 9 units of extension credit); the Master of Fine Arts degree in Art and the Master of Fine Arts degree in Drama, which permits 30 units (including a maximum of 9 units of extension credit); the Master of Fine Arts in Creative Writing which permits 18 units (including a maximum of 9 units of extension credit); the Master of Social Work degree which permits 28 units (including a maximum of 9 units of extension credit); Master of Science degree in Rehabilitation Counseling which permits 30 units (including a maximum of 9 units of extension credit); and the Master of Science degree in Counseling which permits 24 units including a maximum of 9 units of extension credit. All credit earned in other colleges and universities including foreign universities or in San Diego State University exten-

sion courses is subject to approval by the appropriate graduate adviser and the Graduate Dean. Credit earned by correspondence, by examination, or by extension at other institutions is not accepted as satisfying advanced degree requirements.

Credit earned by first-time students through one semester of enrollment in Open University may be considered residence credit for the master's degree. Such enrollment allows nonmatriculated students, who have completed individual course prerequisites and who meet the standards for regular enrollment, to enroll in regular campus classes on a space-available basis with the approval of the course instructor and department chair. Enrollment in 600-, 700-, and 900-numbered courses also requires approval of the departmental graduate adviser. Matriculated students are ineligible for enrollment in Open University.

Study List Limits in the Graduate Division

Full-time student status for undergraduates at SDSU is 12 units per semester. Full-time enrollment for a graduate student is nine units of coursework numbered 500 through 999. Enrollment in Thesis (799A) or Doctoral Dissertation (899) is also considered full-time enrollment.

Graduate students are advised that 12 units of 600-900 numbered courses or 15 units of a combination of 500-, 600-, 700-, 800-, 900-numbered courses are the recommended maximum for one semester. Graduate students who are employed full time should not attempt to earn more than 6 units per semester.

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

Graduate students employed as graduate assistants are limited to 20 hours of work per week combined with a maximum of 8 units of coursework. Any excess load must be approved by the department chair and the Graduate Dean. Graduate assistants who enroll for more units than authorized will not receive credit on their official programs for the excess number of units completed.

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, engineering sciences/applied mechanics, language and communicative disorders, mathematics and science education, and public health with the University of California, San Diego; in ecology with the University of California, Davis; in education with the Claremont Graduate School; and in geography with the University of California, Santa Barbara. The general requirements in these programs are identical; however, each program has some specific requirements that will be found in Part Three of this bulletin under Biology, Chemistry, Communicative Disorders, Ecology, Education, Engineering, Geography, Mathematics and Science Education, Psychology, and Public Health.

Students who wish to become candidates for the degree Doctor of Philosophy should understand that the degree is granted for original, independent, imaginative, and self-critical research rather than for the fulfillment of residence or course requirements alone. For those candidates who wish to prepare for a career in an academic institution the degree is also oriented toward excellence and enthusiasm in teaching. Students with acceptable baccalaureate degrees will normally spend at least three years of full-time study in earning the degree. 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 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 Bulletins of each of the cooperating campuses of the University of California or of Claremont Graduate School. Formal admission to the two universities with appropriate graduate standing occurs when the student is formally accepted by the graduate deans of each of the two universities. Applicants are advised to consult the appropriate director at San Diego State University for specific details on application procedures.

Residency Requirements

After formal admission to a doctoral program, the student must spend at least one year in full-time residence on each of the two campuses. The definition of residence must be in accord with the regulations of the university cooperating with SDSU. At San Diego State University the minimum of one year of full-time residence consists of registration in and completion of at least six semester units each semester of the required year's residence. Except for the program in education, students must be enrolled at one campus or the other each semester or quarter in order to maintain good standing.

Financial Support

Doctoral students are eligible to apply for financial aid through the Financial Aid Office at San Diego State University. The SDSU Foundation provides some scholarship funds to cover all or part of the fees and tuition required by each institution for students in many of the doctoral programs. These funds are partially derived from the Richard G. Ahrens Memorial Scholarship and Reuben C. Marks Endowment Funds. In addition, most programs offer doctoral students financial support by providing them with appointments as research assistants, graduate assistants, or graduate teaching associates.

Procedures

Doctoral students are expected to make steady progress toward completion of requirements for the degree. The time required is not expressed as units of credit or semesters of attendance but rather depends on the mastery of the subject matter field and completion of a satisfactory dissertation at a minimum. Doctoral students must maintain a 3.0 grade point average in all coursework attempted to remain in good standing. Some programs may have additional GPA requirements.

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

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 both written and oral parts. The purpose of this examination is to satisfy the faculty of the cooperating departments that the student is adequately prepared in the discipline to warrant continuation in the program.
2. After passing the Qualifying Examination the student apply to the graduate dean at the cooperating campus with which the student is associated for advancement to candidacy. After approval by both graduate deans, the student will be notified of advancement to candidacy by the graduate dean, University of California campus or Claremont Graduate School.
3. A dissertation (or thesis) on a subject chosen by the candidate and approved by a committee chosen by the Graduate Councils of the cooperating institutions is required of every candidate. Approval of the dissertation by this committee affirms that the candidate has conducted an organized, independent investigation that has added significantly to the body of knowledge in the particular field and that 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.

Students conducting dissertation research involving human subjects must submit a protocol to the departmental Human Subjects Committee (where applicable) and then to the University's Committee on Protection of Human Subjects (CPHS). Students should allow two weeks for CPHS review. Certain categories of research with human subjects may qualify for exemption from full committee review. Guidelines and forms for protocols or claims of exemptions can be obtained from the CPHS Office or from the Graduate Division

Upon written CPHS approval or certification of exemption from CPHS review, students can register for dissertation and initiate the activity with human subjects. (Literature review and other work not involving human subjects may be conducted prior to CPHS review.)

Students planning to conduct research involving live animals housed on campus must receive approval of the research from the Animal Welfare Coordinator. Upon written approval of the coordinator, students may begin their research and register for dissertation.

Award of Degree

The degree Doctor of Philosophy in Biology, Chemistry, Clinical Psychology, Ecology, Education, Engineering Sciences/Applied Mechanics, Geography, Language and Communicative Disorders, Mathematics and Science Education, or Public Health will be awarded jointly by the Regents or Trustees of the cooperating institution and the Trustees of The California State University in the names of San Diego State University and the appropriate cooperating university campus. Students may participate in the commencement ceremonies of both institutions providing they have completed all degree requirements, including the submission of copies of the approved dissertation to the two graduate offices, by the deadlines of the respective institutions. The deadline dates of the cooperating institutions will vary. Students who intend to participate in the commencement ceremonies at San Diego State University should consult the academic calendar for the last date to submit an approved copy of the dissertation to the Graduate Division. San Diego State University also requires that the students apply for graduation in any term they intend to graduate. Consult the academic calendar for the deadline date.

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.

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 requirements governing the official program will be those specified in the bulletin in effect at the time the program is approved in the Graduate Division.

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

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

When course requirements listed on an official master's degree program deviate from those prescribed in the *Graduate Bulletin*, the student must submit to the Graduate Dean a petition for adjustment of academic requirements.

It is the student's responsibility to complete the specific courses listed on the official program of study. No changes will be permitted unless approved by the graduate adviser and the Graduate Dean. No course can be deleted from an official program of study after the course has been completed. This includes a course for which a student has registered and received an "Incomplete" or "SP" grade.

Foreign Language Requirement

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

Advancement to Candidacy

A student who holds classified graduate standing at San Diego State University and who meets its scholastic, professional, and personal standards may be considered for advancement to candidacy for the master's degree provided an official program of study has been filed and approved by the graduate adviser and the Graduate Dean. For the Master of Arts, the Master of Science, the Master of Business Administration, the Master of Music, the Master of Public Administration, and the Master of Public Health degrees, a student may be advanced to candidacy after completing at least 12 units of course-

work listed on the official program of study with a minimum grade point average of 3.0 (B); for the Master of City Planning, the Master of Science in Counseling, the Master of Science in Rehabilitation Counseling, and the Master of Social Work degrees, the student must have earned at least 24 units of coursework listed on the official program of study with a minimum grade point average of 3.0 (B); for the degree of Master of Fine Arts in Art, or the degree of Master of Fine Arts in Drama, the student must have earned at least 30 units of coursework listed on the official program of study with a minimum grade point average of 3.0 (B); for the degree of Master of Fine Arts in Creative Writing, the student must have earned at least 30 units of coursework listed on the official program of study with a minimum grade point average of 3.25.

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

A minimum of nine units of courses listed on the official program of study must be enrolled in and completed *concurrently with or after* advancement to candidacy for the Master of Arts, the Master of Science, the Master of Public Administration, the Master of Public Health, and the Master of Business Administration degrees. A minimum of 24 units on programs of study for the Master of City Planning, the Master of Fine Arts, the Master of Science in Rehabilitation Counseling, and the Master of Social Work degrees must be enrolled in and completed *concurrent with or after* advancement to candidacy. Removal of incomplete grades does not meet this requirement. A student may not enroll in 799A or take a Plan B comprehensive examination until advanced to candidacy.

Unit Requirements

Credit earned by correspondence or by examination is not acceptable on advanced degree programs. Courses applied toward one advanced degree may not be used to fulfill the requirements of another advanced degree.

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

Thirty units (60-62 units for the Master of Science in Counseling degree; 36 units for the Master of Public Administration and the Master of Science degree in Psychology; 42 units for the Master of Science in Nursing) of approved 500-, 600- and 700-numbered courses earned in graduate standing, at least 21 of which must be completed in residence. At least half of the units required must be in 600- and 700-numbered courses. Not more than a total of nine units in approved extension and transfer courses may be used to satisfy the minimum units required for the degree. Courses required to remove undergraduate deficiencies are in addition to the minimum 30 units required for

the degree. *Not more than a total of six units in courses numbered 797 and 798 will be accepted for credit toward the degree.*

Master of Business Administration Degree

Forty-nine units of 500-, 600-, and 700-level courses specified by the College of Business Administration. A maximum of six units of 500-level courses are acceptable. Up to nine units of coursework may be accepted for transfer credit. *Not more than a total of six units in courses numbered 797 and 798 will be accepted for credit toward the degree.*

Master of City Planning Degree

Fifty-seven units of approved 500-, 600- and 700-numbered courses earned in graduate standing, at least 30 of which must be completed in residence. Courses required to remove undergraduate deficiencies are in addition to the minimum 57 units for the degree. *Not more than a total of nine units in courses numbered 797 and 798 will be accepted for credit toward the degree.*

Master of Fine Arts in Art Degree

Sixty units of 500-, 600- and 700-numbered courses specified by the Department of Art 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 nine units in course 798 will be accepted for credit toward the degree.*

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. *Not 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 (55 units for Health Services Administration) of approved 500- 600- and 700-numbered courses earned in graduate standing, at least 39 (except for the Maternal and Child Health concentration) 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. The concentration in Maternal and Child Health requires 36 units of residence credit. Twelve additional units of field experience are required unless the student has previous equivalent experience as determined by the graduate adviser. *Not more than a total of six units in courses numbered 797 and 798 will be accepted for degree credit.*

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-eight units of 500-, 600- 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 58 units for the degree.

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

No transfer or extension credit may be used to improve the grade point average of units completed at San Diego State University whether computed to determine the average on the official degree program or the overall average.

Grade Restrictions for Master's Degree Programs

No course in which a final grade below "C" (2.0) was earned may be used to satisfy the requirements for an advanced degree. No 500-numbered courses graded Credit/No Credit except those offered for Credit/No Credit only are acceptable on a master's degree program. No undergraduate courses graded Credit/No Credit may be assigned to the deficiencies listed on a master's degree program. At least 70 percent of the units used to fulfill the minimum requirements on a master's degree program shall be letter graded.

Units graded Credit/No Credit earned in practica, field experiences, and internships explicitly stated as specific requirements for a graduate degree will not be included in the determination of the number of non-lettergraded units allowable on the program of study.

Degree Time Limitations

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

Students validating by examination either individual courses or an entire program will be required to specify a date certain by which all requirements for the degree will be completed. Only in exceptional circumstances will this time limit exceed one calendar year from the date of validation. A course or program may be validated by examination only once.

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

Thesis, Plan A and Non-Thesis, Plan B

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

(b) A project is a significant undertaking appropriate to the fine and applied arts or to professional fields. It evidences originality and independent thinking, appropriate form, language use, 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.

(c) 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 subject matter. The results of the examination evidence independent thinking, appropriate organization, high level of writing competency, critical analysis, and accuracy of documentation. A record of the examination questions and responses shall be maintained in accordance 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 degree provided the department or school concerned approves the listing of Course 799A, Thesis, on the official program of study. Three units of "Cr" are granted for the satisfactory completion of the thesis or project following its acceptance by the student's thesis committee, the department or school concerned, and the Graduate Council. Assigning of "Cr" grade for the thesis is the responsibility of the Graduate Division. Registration in Course 799A, Thesis, is required; however, students will not be permitted to register for this course until they have received official notification of advancement to candidacy from the Graduate Division and 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 obtain this clearance may result in cancellation of enrollment in 799A.

Two microfiche copies and one bound copy of all master's theses or projects are accessioned by the library of San Diego State University and are subject to the regulations of the library with respect to the circulation or duplication of its cataloged materials. Students are required to obtain a current edition of the *Master's Thesis and Project Manual, San Diego State University*. The manual is available at Aztec Shops Campus Store.

Plan B, requiring a comprehensive written examination in lieu of a thesis, may be followed in certain graduate degree curricula as indicated in Part Three of this bulletin. Dates on which comprehensive examinations in lieu of theses are given are determined by the department or school concerned. Results of comprehensive examinations must be reported to the Graduate Division by the department or school. Refer to the academic calendar in Part One of this bulletin for deadline dates. To be eligible to take the Plan B comprehensive examination, the student must have a program of study on file and have been advanced

to candidacy.

Thesis Committee

In consultation with the graduate adviser, a student will select a chair for the thesis committee. The student, the graduate adviser, and the thesis committee chair select the other faculty members who will be asked to serve on the thesis committee. The student needs to obtain the signature of the thesis chair, the other committee members, and the graduate adviser on the Appointment of Thesis Committee Form and submit it to the Graduate Division and Research. After the committee is approved, the student may enroll in Course 799A, Thesis, through the Graduate Division and Research. Enrollment must occur during the normal registration period each semester. Dates are listed in the academic calendar each year.

Normally, the thesis committee is composed of three full-time faculty members. At least two of the members of the thesis committee, including the chair of the committee, must hold permanent faculty appointments. Two of the committee members should be members of the department or of the interdisciplinary faculty group in which the thesis is written. The third committee member should be from a department other than the department in which the thesis is written.

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 Committee on Protection of Human Subjects (CPHS). Students should allow two weeks for CPHS review. Certain categories of research with human subjects may qualify for exemption from full committee review. Guidelines and forms for protocols or claims of exemptions can be obtained from the CPHS Office or from the Graduate Division.

Upon written CPHS approval or certification of exemption from CPHS review, students can register for thesis and initiate the activity with human subjects. (Literature review and other work not involving human subjects may be conducted prior to CPHS review.)

Students planning to conduct research involving live animals must receive approval of the research from the Animal Welfare Coordinator. Upon written approval of the coordinator, students may begin their research and register for thesis.

Theses in Foreign Languages

As presentations of original research to the academic community, theses are ordinarily prepared for the University in the English language. In certain cases, however, a student's thesis in the history and literary analysis of non-English languages and literatures may be presented in the subject language. When this is deemed academically appropriate for the specific research topic by the departmental graduate adviser and the proposed thesis 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 approved by a formally appointed committee of the faculty and by the Graduate Dean; that the thesis conform to the appropriate format and presentation requirements as approved by the Graduate Council; i.e., requirements stipulated by the sponsoring department as well as those presented in the San Diego State University *Master's Thesis and Project Manual*; and that the thesis be deposited in the University Library. In conformity with this policy, the following procedures shall apply to the submission of theses:

The University requires that the student be enrolled in 799A, Thesis, or 799B, Thesis Extension, in the term in which the thesis is granted final approval. Students will not be required to reregister for Thesis in any subsequent term if the thesis is approved and signed by all members of the thesis committee, cleared by the Graduate Division, and submitted to the Thesis Review Service by the end of the last working day of the semester or summer session in which the student is enrolled in 799A or 799B. Consult the academic calendar in Part One of this bulletin for specific deadline dates. A "credit" grade will not be recorded or the degree awarded, however, unless the thesis has been approved by the Thesis Review Service and arrangements made to deposit the required copies in the University Library (this can be done most conveniently through Aztec Shops Customized Materials). If this final process is not completed by noon of the day preceding the last working day of the term, the student will be required to reapply for graduation in any subsequent term in which he or she expects to graduate.

Manuscripts deemed unready for submission, as determined by the Graduate Dean, will be rejected and returned to the student. Manuscripts will be rejected if there are gross deficiencies of format or presentation or if they are incomplete. Students who cannot meet the final deadline for submission because of such rejection will be required to reenroll in Thesis as well as to reapply for graduation.

Students are expected to make all required changes and submit the final revised manuscript within 30 days following the date of the initial review by the Thesis Review Service. Students who fail to complete the submission process within this period may be required to repeat the process in the term in which the thesis is completed.

Final Approval

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

Writing Competency

The University requires that all candidates for an advanced degree demonstrate writing competency in the English language. This requirement may be met by successful completion of the written comprehensive examination in Plan B or final approval of a thesis or project in Plan A.

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 \$16 commencement fee and a \$16 graduation evaluation and diploma fee. Students who do not graduate in the semester or term for which they have applied must reapply (and pay the \$16 graduation evaluation and diploma 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.

PART THREE

**Courses
and
Curricula**

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 specific requirements of departments or schools supplement and are in addition to the basic requirements for advanced degrees as stated in Part Two of this bulletin. All official master's degree programs must be prepared in conformity with the 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 units. Not all courses are offered every semester or every academic year. Ordinarily each listed course will be 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-, 700-, 800-, and 900-numbered courses except by special permission. 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. Classified or conditionally classified students whose status is changed to postbaccalaureate (unclassified) for any reason may not enroll in any 600-, 700-, 800-, or 900-numbered course in the program in which they were previously classified without the consent of the graduate adviser of the program and the Graduate Dean. Students who enroll in such courses without consent may be administratively disenrolled or, if they complete any courses, those courses may not be used subsequently to meet any degree requirements.

Prerequisites for Graduate Courses

Graduate level (600-, 700-, 800-, and 900-numbered) courses require, as general prerequisites, graduate standing, and competence in the specified field as indicated by a substantial amount of upper division study in the field or in a closely related field. Unless otherwise specified in the course description, graduate level courses are open to classified graduate students with the permission of the instructor. Undergraduate students are not permitted to enroll in 600-, 700-, 800-, and 900-numbered courses except under special circumstances (see section "Concurrent Master's Degree Credit"). Unauthorized enrollment of undergraduate students in 600-, 700-, 800-, and 900-numbered courses may be canceled or, if the course is completed before graduate standing is attained, only undergraduate credit will be earned for the course.

Prerequisites for each course are stated in the course description.

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.

Undergraduate Enrollment in 600-, 700-, and 800-Numbered Courses

1. Student must obtain permission of the instructor.
2. Student must be a senior in good standing and have a B (3.0) GPA average.
3. Undergraduate enrollments may not cause the exclusion of a qualified graduate student in a graduate course.

Special Prerequisites for Registration in 798 and 799A

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

Only those students who have been advanced to candidacy and who have an officially appointed thesis committee are permitted to register for course 799A, Thesis. 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.

Special Prerequisite for Registration in 899

Registration in course 899, Doctoral Dissertation, is limited to those doctoral students who have been advanced to candidacy and who have an officially appointed dissertation committee.

Thesis Extension (799B)

This course is intended solely for those graduate students who have had prior registration in Thesis 799A with an assigned grade symbol of SP. Students are required to register in 799B (0 units, Cr/NC) in any semester or term following assignment of SP in course 799A in which they expect to use the facilities and resources of the University; also, they must be registered in the course when the completed thesis is submitted for thesis review.

Unit or Credit Hour

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

Anthropology

In the College of Arts and Letters

OFFICE: Storm Hall 143B
TELEPHONE: (619) 594-5527
FAX: (619) 594-1150

Faculty

Ronald S. Himes, Ph.D., Professor of Anthropology, Chair of Department
Joseph W. Ball, Ph.D., Professor of Anthropology
Philip J. Greenfeld, Ph.D., Professor of Anthropology
Edward O. Henry, Ph.D., Professor of Anthropology
Larry L. Leach, Ph.D., Professor of Anthropology (Undergraduate Adviser)
Lois K. Lippold, Ph.D., Professor of Anthropology
Wade C. Pendleton, Ph.D., Professor of Anthropology
Vivian J. Rohrl, Ph.D., Professor of Anthropology
Dan Whitney, Ph.D., Professor of Anthropology
Mary Jane Moore, Ph.D., Associate Professor of Anthropology (Graduate Adviser)
Alexander Sonek, Jr., Ph.D., Assistant Professor of Anthropology

Associateships

Sources of financial assistance available to qualified graduate students in anthropology each academic year include two Norton Allen Scholarships, the Paul Ezell Internship in Archaeology and occasional graduate teaching associateships. Application forms and additional information may be obtained from the chair of the department.

General Information

The Department of Anthropology, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in anthropology. The Master of Arts degree in anthropology provides 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 an academic setting; (2) an applied anthropology specialization primarily for those who plan to seek employment in the nonacademic sector. This specialization is concerned with the application of anthropological method and theory to practical problems in business, government, and other settings.

Research and special instructional facilities provided by the Department of Anthropology include laboratories for archaeology, ethnology, linguistics, physical anthropology, and world prehistory. 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 classified graduate standing, as described in Part Two of this bulletin. In addition, students seeking the Master of Arts degree in anthropology must have completed or complete at least 15 upper division units including Anthropology 301, Principles of Physical Anthropology; Anthropology 302, Principles of Archaeology; Anthropology 303, History of Ethnological Theory; and

Anthropology 304, Principles of Anthropological Linguistics, or the equivalent to those required for an undergraduate major in anthropology at San Diego State University. The student must have an overall 3.0 (B) grade point average in undergraduate courses or consent of the department.

Copies of transcripts and GRE General Test scores are to be sent to the Office of Admissions and Records. In addition to these documents and the University admission forms, students applying to the department are asked to submit (1) at least three letters of recommendation from persons in a position to judge academic ability; and (2) at least one typewritten example of their previous work (e.g., a term paper or an original experiment). Materials should be submitted by November 1 for admission for spring semester and April 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: Biology 215 and 597B; Mathematics 250 and 350A; Psychology 270 and 472; Sociology 201 and 406 or 407.

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 the three core seminars; (2) satisfactorily complete Anthropology 620 or 621; 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 specializations 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 complete a graduate program of at least 30 units of which at least 21 units must be in 600- and 700-numbered courses in anthropology, to include:

1. 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 797, Research (3) (to be taken after advancement to candidacy);

3. Anthropology 799A, Thesis (3).

Students selecting the Applied Anthropology specialization must complete a graduate program of at least 30 units, of which at least 21 units must be in the 600- and 700-numbered courses in anthropology, or with the approval of the graduate coordinator, in related disciplines. The coursework for this specialization must include:

1. Nine units of core seminars chosen from Anthropology 601, 602, 603, or 604 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. Anthropology 580 (3) and Anthropology 620 (3) or 621 (3) (courses to be taken prior to advancement to candidacy and prior to internship placement);

3. Anthropology 795 (6) (to be taken after advancement to candidacy);

4. Anthropology 799A, Thesis (3).

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

Courses Acceptable on Master's Degree Programs in Anthropology

UPPER DIVISION COURSES

500. Primate Social Behavior (3)

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 101.

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

501. Paleoanthropology (3)

Prerequisite: Anthropology 101. Recommended: Anthropology 301.

Fossil evidence for human evolution. Comparative and functional anatomy of fossil human and infrahuman primates; geochronology, paleoecology, and cultural associations; taxonomic implications.

503. Human Variation (3)

Prerequisite: Anthropology 101.

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

504. Primate Anatomy (3)

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 101.

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

505. Human Osteology (3)

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 101. Recommended: Anthropology 301 and/or Biology 150.

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

506. Physical Anthropology of the Living (3)

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 101. Recommended: Anthropology 301.

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

507. Genetic Markers and Anthropology (3)

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 101.

Use of genetic markers in the study of human populations. Biology of blood groups, serum proteins, enzymes, etc., and analyses of gene frequencies. Significance of genetic markers in evolutionary studies.

508. Medical Anthropology (3)

Prerequisite: Anthropology 101 or 102.

Evolution and ecology of disease, medical beliefs and practices in non-Western cultures, and complexities of health care delivery in pluralistic societies.

509. Culture and Biological Aging (3)

Prerequisite: Anthropology 101 or 102.

Do different cultures age at different rates? Theories of biological aging, genetics of longevity and cultural influences on biological aging. Process of aging and role of the aged in various cultures.

560. Advanced Archaeological Field Methods (3)

One lecture and six hours of laboratory.

Prerequisite: Anthropology 312.

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

561. Archaeological Laboratory Methods (3)

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 560.

Application of palynology, paleontology and relevant technologies. Individual laboratory research project required.

580. Anthropological Data Analysis (3)

Two lectures and three hours of laboratory.

Prerequisites: Anthropology 101 or 102 and a statistics course. Recommended: Psychology 270 or Sociology 201.

Computer oriented data analysis class utilizing anthropological data sets. Special section of the SPSS computer workshop is required.

582. Regional Anthropology (3)

Prerequisite: Anthropology 102.

Study of societies in a major geographical region of the world such as Africa, the Arctic, East Asia, Europe, Latin America, the Middle East, North America, Oceania, or South Asia. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units.

583. Topical Anthropology (3)

Prerequisite: Anthropology 102.

Study of a major subdiscipline such as political anthropology, economic anthropology, social anthropology, psychological anthropology, cultural ecology, applied anthropology, anthropological genetics, or environmental archaeology. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units.

GRADUATE COURSES

600. Seminar (3)

An intensive study in advanced anthropology. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

601. Seminar in Physical Anthropology (3)

Prerequisite: Twelve upper division units in anthropology.

History and theory in physical anthropology stressing the significant literature on such topics as functional anatomy, human paleontology, population genetics, and primatology.

602. Seminar in Archaeology (3)

Prerequisite: Twelve upper division units in anthropology.

History and theory in archaeological data collection, analysis, and interpretation.

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, social anthropology, psychological anthropology, cultural ecology, applied 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.

795. Internship in Anthropology (3-9) Cr/NC

Prerequisites: Classified graduate standing and/or consent of staff.

Students will be assigned to various government and private agencies in which anthropological theory can be applied. Supervision will be shared by departmental graduate advisory committee and on-the-job supervisor. Maximum credit nine units; three 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 the preparation of a paper on a specific problem. May be repeated with variable content, 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.

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

Art

In the College of Professional Studies and Fine Arts

OFFICE: Art 505
TELEPHONE: (619) 594-6511
FAX: (619) 594-1217

Faculty

Fredrick J. Orth, M.F.A., Professor of Art, Director of School
Joan F. Austin, M.F.A., Professor of Art
Richard J. Baker, M.F.A., Professor of Art
Walter E. Cotten, M.F.A., Professor of Art
Jesus Y. Dominguez, M.F.A., Professor of Art
Janet B. Esser, Ph.D., Professor of Art
Arline M. Fisch, M.A., Professor of Art
Joanne Hayakawa, M.F.A., Professor of Art
Allan W. Miller, M.F.A., Professor of Art
Eugene Ray, M.F.A., Professor of Art
Ida K. Rigby, Ph.D., Professor of Art, Graduate Adviser,
Art History
Gail C. Roberts-Fields, M.A., Professor of Art
John J. Rogers, M.S., Professor of Art
Helen Z. Shirk, M.F.A., Professor of Art
Richard A. Burkett, M.F.A., Associate Professor of Art, Graduate
Coordinator, Studio Arts
Janet L. Cooling, M.F.A., Associate Professor of Art
Gerald C. Dumlao, M.F.A., Associate Professor of Art
Robert A. Mansfield, M.F.A., Associate Professor of Art
Susan C. Merritt, M.A., Associate Professor of Art
Kerry Ann Nelson, M.S., Associate Professor of Art
Tina Marie Yapelli, M.A., Associate Professor of Art
Jo-Anne Berelowitz, Ph.D., Assistant Professor of Art
Wendy L. Maruyama, M.F.A., Assistant Professor of Art
Eric R. Moaney, M.F.A., Assistant Professor of Art
Kotaro Nakamura, M.A., Assistant Professor of Art

Associateships

Graduate teaching associate positions in art are available to a limited number of qualified students. Application blanks and additional information may be secured from the director of the school.

General Information

The School of Art, Design and Art History, in the College of Professional Studies and Fine Arts, offers graduate study leading to the Master of Fine Arts degree in art and the Master of Arts degree in art. The objectives of the graduate program in all areas of specialization are to provide the essential education, technical training and creative experience necessary for professional activity or college-level teaching in the visual arts.

The Master of Arts degree is a 30-unit graduate program requiring one to two years to complete. The M.A. degree in studio arts is designed to prepare students for proficient and successful practice as professional artists and is offered in the following areas: applied design, environmental design, graphic design, interior design, painting, printmaking, and sculpture. The M.A. degree with an emphasis in art history is designed to prepare students for professional positions in galleries and museums and for doctoral degree programs.

The Master of Fine Arts degree requires an additional 30 units in the area of specialization and professional seminars, with the expectation that the student will achieve a higher level of excellence and distinction in the chosen area of specialization. The M.F.A. degree

requires 60 units and can be completed in three years. The degree is offered in applied design, environmental design, graphic design, painting, printmaking, and sculpture.

The Art building has expansive facilities offering the student excellent studio space and equipment. In addition, the San Diego Museum of Art, the San Diego Museum of Contemporary Art, the Putnam Foundation collection in the Timken Gallery, and the Museum of Man in Balboa Park offer valuable original materials as well as specialized libraries for research. There are also numerous community college galleries and commercial 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 comprise a survey 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 and portfolios to the graduate coordinator by March 1. Applications and portfolios for the spring semester are due October 1.

Advancement to Candidacy

In addition to meeting the requirements for advancement to candidacy as described in Part Two of this bulletin, all students must have (1) completed a minimum of 30 units on the official program with a minimum grade point average of 3.0 [B]; and (2) been reviewed by the graduate faculty of the emphasis area and received approval of an acceptable body of graduate work completed since classified standing fulfilling the requirements of the area of emphasis.

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 the 600- and 700-level. Art 694, 760, 791, and 792 are required. Normally, a student will focus on one of the studio art fields (applied design, painting, environmental design, graphic design, sculpture, and printmaking). With approval of the Director and graduate coordinator a student may focus on a program of study combining two studio art fields. Six units must be

included in art history, art criticism, and aesthetics courses. Nine units must be included on the program from studio electives outside the area of emphasis or electives in other departments. Art 799A, Thesis must be included on the program. In addition, there will be an oral examination of each candidate by the graduate faculty of the School of Art, Design and Art History. This examination will occur at the time of the candidate's master's exhibition, and will encompass an in-depth discussion of the candidate's thesis project.

No more than 15 units of graduate work may be transferred from another institution. Requests for more than six units must be approved by a committee of representatives from the area of emphasis. Applicants holding an M.A. degree in studio art from an accredited institution may transfer up to 30 units upon review and recommendation of the faculty in the area of emphasis, and approval of the graduate coordinator of the School of Art, Design and Art History. Candidates must be prepared to spend at least two semesters (24 units) in residence as full-time students. Coursework taken as a graduate student to fulfill undergraduate deficiencies may not be used to satisfy any unit requirement for the M.F.A. degree program. A 3.0 grade point average must be maintained at all times. Continuation in the program will be determined by a review of each candidate by the graduate faculty in the emphasis area. This review will be held upon completion of 30 units in the M.F.A. program, or at any time upon request of the graduate coordinator.

Master of Arts Degree in Art

Admission to Graduate Study

Studio Arts

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, students must have completed an undergraduate major in art with a minimum of 24 upper division units, including two semesters of work in the general history of art, before they will be permitted to enter the graduate program. Students must also be able to show that they are adequately advanced to carry out projects which measure up to graduate standards. In studio areas this requirement will be measured by a formal presentation (the Graduate Review) to the emphasis area faculty of a portfolio of examples of the candidate's undergraduate or postbaccalaureate work. The range should be great enough to give the committee a knowledge of the candidate's strengths and weaknesses. A statement of the candidate's objectives in the graduate program should accompany this presentation. If it is determined that the student is capable of doing graduate art work, he/she may be permitted to begin such work even though he/she has not completed an appropriate undergraduate major in art. Those students whose work is insufficiently advanced for classified graduate standing may enroll for courses with postbaccalaureate unclassified standing, under guidance from the school, in order to meet the standard requirements. Students seeking admission for the fall semester must submit graduate review applications and portfolios to the graduate coordinator by March 1. Applications and portfolios for the spring semester are due October 1.

Art History

In addition to meeting the requirements for admission to the University, students wishing to be admitted to the art history graduate program with a classified graduate standing must complete the equivalent of the graduation requirements as specified in the current General Catalog (a minimum of 39 units of art history to include Art 593), with a GPA of 3.0 on a 4.0 scale in the last 60 units attempted.

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

Art history applications, obtainable from the graduate coordinator, are due on March 1 or October 1 for the following semester and should be accompanied by transcripts of all undergraduate or postbaccalaureate work.

Advancement to Candidacy

Studio Arts

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

Art History

Classified graduate students working for the Master of Arts degree with a concentration in art history must pass a comprehensive examination in art history (Western and non-Western) no later than the second semester as classified graduate students before advancement to candidacy. Classified graduates should contact the graduate adviser to sign up for the comprehensive examination and to discuss their individual graduate programs before their third week of the first semester.

Before advancement to candidacy graduate students in art history must have completed three semesters of college level French or German or with consent of art history faculty, a language necessary for thesis research. 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 French MLA examination is given by the Test Office during the beginning of each semester; contact the School of Art, Design and Art History 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 before 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 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 electing 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 electing 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 history and approved by the graduate adviser. A written thesis is required as fulfillment of 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 Arts degree in art history is a written document; the project required for the Master of Arts degree with a concentration in studio arts and the Master of Fine Arts degree is an original body of work of creative art accompanied by a written report. All theses and written reports accepted in satisfaction of a requirement for the master's degree are cataloged and accessioned in the library. Color slides of the project must be provided by the candidate and are retained in the slide library. One copy of art history theses must be given to the School of Art, Design and Art History.

Courses Acceptable on Master's Degree Programs in Art

UPPER DIVISION COURSES

500. Advanced Drawing (3)

Six hours.

Prerequisites: One year of 400-level studio art coursework and consent of instructor.

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

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

Two hours for each unit of credit.

Prerequisites: Art 102 and 103.

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

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

Six hours.

Prerequisites: Art 204 and 403.

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

504. Advanced Painting (3) I, II

Six hours.

Prerequisite: Six units of Art 404.

Approaches to contemporary concepts in 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, linoleum, collograph, and relief printmaking processes. Emphasis on fine print quality and technical development using mixed media. Maximum credit six units.

510. Intaglio Printmaking in Color (3) 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.

516. Advanced Sculpture (3) I, II

Six hours.

Prerequisite: Art 416.

Individual investigations into sculpture ideas, methods and materials. Individual development in sculpture. Materials may include clay, plastics, paper or wood. Maximum credit six units. (Formerly numbered Art 516A, 516D.)

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.

518. Advanced Metal Sculpture (3)

Six hours.

Prerequisite: Art 418.

Sculpture ideas and methods using metal fabrication and foundry processes. Individual development in sculpture. Maximum credit six units. (Formerly numbered Art 516C.)

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 12 units in Art 323, 423, and 523.

525. Advanced Ceramics (3) I, II

Six hours.

Prerequisite: Art 425.

Study of ceramic design through creative projects of clay forms. Maximum credit six units.

526. Clay and Glaze Technology in Ceramic Design (3)

Six hours.

Prerequisite: Art 425.

Experimentation and application of research concerning the use of ceramic materials and techniques as an integral part of the design process. Maximum credit six units.

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 Metalsmithing (3) I, II

Six hours.

Prerequisite: Art 432.

Advanced problems involving metal processes 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 nonloom techniques. Techniques to include: looping, braiding, plaiting, and special fabricating techniques. Experimentation with new man-made fibers and with synthetic commercial dyes. Maximum credit six units.

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, S

Six hours.

Prerequisite: Art 240 or 340.

Investigation of experimental photographic and technical reproductive media.

541. Advanced Graphic Design – Communication Systems (3) I, II

Six hours.

Prerequisite: Art 441. **Proof of completion of prerequisite required:** Copy of transcript.

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 situations. Study of professional responsibilities, conduct and business procedures. Development of a professional level portfolio.

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

Prerequisite: 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, 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. **Proof of completion of prerequisites required:** Copy of transcript.

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. **Proof of completion of prerequisite required:** Copy of transcript.

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

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

Prerequisites: Art 258 and 259. Recommended: 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.

568. Art of Crete, Mycenae, 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.

573A. Early Renaissance Art in Italy (3)

Prerequisites: Art 258 and 259.
Italian arts, architecture, artists, and patrons from fourteenth century Proto-Renaissance period through fifteenth century revival of classical humanism in city states of Florence, Siena, Bologna, Mantua, and Padua.

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.

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)

Prerequisite: 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.

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) II

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 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 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.
Prerequisite: Art 504.
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.

616. 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.

Prerequisite: Six units completed in upper division courses in sculpture or ceramics or printmaking or a combination of these courses.

Advanced creative work in selected craft media. Maximum credit six units applicable 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.

631. Seminar in Jewelry and Metalwork (3)

Prerequisite: Art 331.

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

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

Each course may be taken to a maximum of six units. Maximum credit six units of 700 applicable to the M.A. degree; nine units of 700 applicable to the M.F.A. degree in art.

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

716. Individual Research Problems in Sculpture (3)

Prerequisite: Art 616 (six units).

Graduate research problems including independent research in sculpture. Projects will be determined by the individual student in conference with the instructor. Maximum credit six units applicable 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 558 and 559.

Visual arts and art criticism since 1900.

773. Seminar in Renaissance Art (3)

Prerequisites: Art 258 and 259.

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

791. Seminar in Professional Practices (3)

Reading and discussion about subjects of direct concern to the professional artist. Open only to classified graduate students in studio art. This is an art forum for the practicing artist.

792. Seminar in Professional Problems (3)

Reading and discussion pertinent to professional activities in specific media. Open only to classified graduate students.

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

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

Individual study. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

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.

Asian Studies

In the College of Arts and Letters

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Faculty Members of the Center for Asian Studies

Murugappa C. Madhavan, Ph.D., Professor of Economics, Director of Center
Milton M. Chen, Ph.D., Professor of Information and Decision Systems
Li-Rong Lilly Cheng, Ph.D., Professor of Communicative Disorders
Paochin Chu, Ph.D., Professor of History
Alvin D. Coox, Ph.D., Professor of History
Thomas S. Donahue, Ph.D., Professor of Linguistics
Waldo Heinrichs, Ph.D., Professor of History, The Dwight E. Stanford Chair in American Foreign Relations
Edward O. Henry, Ph.D., Professor of Anthropology
Marcia K. Hermansen, Ph.D., Professor of Religious Studies
Yoshiko Higurashi, Ph.D., Professor of Japanese
Ronald S. Himes, Ph.D., Professor of Anthropology
Kenji Ima, Ph.D., Professor of Sociology
Willard L. Johnson, Ph.D., Professor of Religious Studies
Woo Hyun Nam, Ph.D., Professor of Economics
Lewis E. Peterman, Jr., Ph.D., Professor of Music
William N. Rogers, II, Ph.D., Professor of English and Comparative Literature
Larry J. Shaw, Ed.D., Professor of Teacher Education
Ray T. Smith, Jr., Ph.D., Professor of History (Graduate Adviser)
Paul J. Strand, Ph.D., Professor of Political Science, Dean of the College of Arts and Letters
Dan Whitney, Ph.D., Professor of Anthropology
Catherine Yi-yu Cho Woo, Ed.D., Professor of Chinese
Elena S.H. Yu, Ph.D., Professor of Public Health
Marilyn Chin, M.F.A., Associate Professor of English and Comparative Literature
David V. DuFault, Ph.D., Associate Professor of History
Rizalino A. Oades, Ph.D., Associate Professor of History
Lillian L. Chan, M.A.L.S., Librarian
Gloria H. Rogers, M.L.S., M.A., Associate Librarian

General Information

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

The program is designed to offer systematic advanced training (a) for those planning to enter educational, business, government, or community service involving Asian studies; (b) for those in a specific academic discipline who have regional interest in Asian studies and wish to promote more effective understanding of the cultures, societ-

ies, peoples, and social forces at work in the Asian/Pacific world; and (c) for those who plan to pursue further graduate study in Asian studies beyond the Master of Arts degree.

Admission to Graduate Study

In addition to meeting the requirements for admission to the University with classified graduate standing, as described in Part 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. A student whose preparation is deemed inadequate by the graduate committee will be required to complete specific 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, 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 from 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.

	600- and 700-level Courses	500-, 600- and 700-level Courses
Asian Studies	6 units	3 units
Department A.....	6 units	3 units
Department B	3 units	3 units
	<hr/> 15 units	<hr/> 9 units

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.

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

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.

Japanese business and trade from 1600 to present. 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

582. Regional Anthropology (3)*

Geography Courses

554. World Cities: Comparative Approaches to Urbanization (3)

596. Advanced Topics in Geography (1-3)*

History Courses

561A. Asia and the West (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)*

Political Science Courses

562. Government and Politics of Japan (3)

575. International Relations of the Pacific Rim (3)

Religious Studies Courses

580. A Major Figure (3)*

581. Major Theme (3)*

583. Major Tradition (3)*

Sociology Course

556. Topics in Comparative Societies (3)*

GRADUATE COURSES

Asian Studies Courses

600. Seminar in Interdisciplinary Methods (3)

Theory and practice of interdisciplinary studies. Bibliography, research tools and presentation of findings in Asian studies.

690. Seminar in Asian Studies (3)

Intensive study of an aspect of Asian studies. Maximum credit six units applicable to a master's degree.

797. Research (1-3) Cr/NC/SP

Research in one of the aspects of Asian studies. 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 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.

Anthropology Courses

600. Seminar (3)*

620. Seminar in Regional Anthropology (3)*

Economics Courses

720. Seminar in Development and Planning (3)*

750. Seminar in Economic History and Institutions (3)*

Finance Course

654. Seminar in International Business Finance (3)*

Geography Courses

701. Seminar in Development of Geographic Thought (3)*

720. Seminar in Regional Geography (3)*

740. Seminar in Human Geography (3)*

750. Seminar in Urban Geography (3)*

History Courses

601. Seminar in Historical Methods (3)**

650. Directed Readings 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 Course

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 Post-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

In the College of Sciences

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Faculty

Ronald J. Angione, Ph.D., Professor of Astronomy, Chair of
Department, Director of Mount Laguna Observatory

C. T. Daub, Jr., Ph.D., Professor of Astronomy
(Graduate Adviser)

Paul B. Etzel, Ph.D., Professor of Astronomy

Allen W. Shafter, Ph.D., Professor of Astronomy

Arthur Young, Ph.D., Professor of Astronomy

Thomas L. May, Ph.D., Associate Professor of Astronomy

Freddie D. Talbert, Ph.D., Associate Professor of Astronomy

Robert Leach, Ph.D., Senior Staff Scientist
(equivalent rank of Professor)

Adjunct Faculty

K.P. Cheng, Ph.D., Astronomy

Paul M. Hintzen, Ph.D., Astronomy

John M. Hood, Ph.D., Physics

William S. Kovach, Ph.D., Astronomy

Andrew T. Young, Ph.D., Astronomy

Associateships

Graduate teaching associateships 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 reflectors with apertures of 40, 24 and 16 inches. The 40-inch telescope is operated jointly with the University of Illinois. Auxiliary equipment for the telescopes includes photoelectric photometers, spectrographs, and CCD camera for direct imaging. A dormitory for observers and a shop-laboratory building complete the main research facilities at the observatory. Additionally, each telescope dome has a PC for data collection and on-line reduction. A central, general-purpose, Sun Sparc station computer provides on-line data bases as well as reduction and analysis capabilities. Associated with the observatory is the Awona Harrington Visitor Center which provides facilities for educational programs and for visiting astronomers.

The Department of Astronomy operates its own image processing facility with a main computer and printer/plotter peripherals. Many of the nearly 40 departmental PC's, as well as the six Sun Sparc stations, are connected to the main computer, as well as to the San Diego Super Computer Center.

Campus facilities also include a Clark 12-inch refractor, 12-inch and 16-inch reflectors, solar telescope, and a Spitz AP3 planetarium for use in introductory classes and public programs. In addition to the campus library, the department maintains its own library with computer access to data bases.

A main research interest in the department is the study of the structure and evolution of stars derived from the investigation of eclipsing and interacting binary stars. These studies make use of both photometry and spectroscopy at the observatory. Stellar evolution is further studied with photometry of star clusters. Information on the late stages of stellar evolution comes from both theoretical and observational studies of planetary nebulae. Galaxies are investigated through surface photometry using direct imaging. The department also has a strong CCD instrumentation program. 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 under-

graduate 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: 19111)

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 the 15-unit core course curriculum (Astronomy 620, 630, 640, 660, and 680).
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.
3. Complete Astronomy 799A (Thesis, 3 units) and pass a final oral examination on the thesis.
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 COURSE

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. 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 (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.

Visual, spectroscopic, and eclipsing binary stars. Review of observational techniques. Methods of orbital analysis with applications emphasizing determination of fundamental stellar properties, such as mass, radius, temperature, and luminosity. Implications for stellar evolution.

620. Galactic Structure (3)

Prerequisite: Astronomy 450.

Survey of basic observational data for determining structure of Milky Way Galaxy. Includes luminosity functions, stellar distributions, solar motion, stellar populations, kinematics and dynamics of general and peculiar stellar motions.

630. Stellar Atmospheres and Interiors (3)

Prerequisite: Astronomy 450.

Gas thermodynamics and equations of state. Production of stellar continuum radiation and spectral lines. Theories of radiative and convective energy transport. Interior structure and evolution of stars.

640. Interstellar Medium (3)

Prerequisites: Astronomy 450 and Mathematics 342A.

Atomic radiative and collisional processes. Gas, dust, grains, and dynamics of the interstellar medium. Emission and planetary nebulae. Active galactic nuclei.

660. Galaxies and Cosmology (3)

Prerequisite: Astronomy 450.

Morphology, photometric, and spectroscopic properties, dynamics, and evolution of normal galaxies. Current interpretations of peculiar galaxies and QSO's. The extragalactic distance scale. Observational cosmology.

680. Astronomical Techniques (3) I

Prerequisites: Astronomy 350 and 450.

Basic methods of data acquisition and analysis. Emphasis is given to CCD direct imaging, spectroscopy, and photometry. Direct experience with telescopes and instruments at Mount Laguna Observatory, as well as with the department computing and image processing facility.

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.

Biology

In the College of Sciences

OFFICE: Life Sciences 104
TELEPHONE: (619) 594-6767

Faculty

Sanford I. Bernstein, Ph.D., Professor of Biology, Chair of Department
Lawrence J. Alfred, Ph.D., Professor of Biology
Michael F. Allen, Ph.D., Professor of Biology
J. David Archibald, Ph.D., Professor of Biology
Frank T. Awbrey, Ph.D., Professor of Biology
Carol A. Barnett, Ph.D., Professor of Biology
Annalisa Berta, Ph.D., Professor of Biology
Richard L. Bizzoco, Ph.D., Professor of Biology
Michael J. Breindl, Ph.D., Professor of Biology (Graduate Adviser, Microbiology)
Lo-chai Chen, Ph.D., Professor of Biology
Boyd D. Collier, Ph.D., Professor of Biology
George W. Cox, Ph.D., Professor of Biology
Roger A. Davis, Ph.D., Professor of Biology
Deborah M. Dexter, Ph.D., Professor of Biology
Michael J. Dowler, Ph.D., Professor of Biology
Thomas A. Ebert, Ph.D., Professor of Biology
Kathleen M. Fisher, Ph.D., Professor of Biology
Richard F. Ford, Ph.D., Professor of Biology
Terrence G. Frey, Ph.D., Professor of Biology
Christopher C. Glembofski, Ph.D., Professor of Biology
Barbara B. Hemmingsen, Ph.D., Professor of Biology
Don Hunsaker, II, Ph.D., Professor of Biology
Stuart H. Hurlbert, Ph.D., Professor of Biology
Gerald G. Johnson, Ph.D., Professor of Biology
Kenneth D. Johnson, Ph.D., Professor of Biology, Graduate Coordinator, Biology

Neil Krekorian, Ph.D., Professor of Biology
Skaidrite Krisans, Ph.D., Professor of Biology
Leroy R. McClenaghan, Jr., Ph.D., Professor of Biology
Ronald E. Monroe, Ph.D., Professor of Biology
Walter C. Oechel, Ph.D., Professor of Biology
Paul J. Paolini, Jr., Ph.D., Professor of Biology, Associate Dean of the College of Sciences
Jacques Perrault, Ph.D., Professor of Biology
Charles F. Phleger, Ph.D., Professor of Biology
Robert S. Pozos, Ph.D., Professor of Biology
David L. Rayle, Ph.D., Professor of Biology
Roger A. Sabbadini, Ph.D., Professor of Biology
Michael G. Simpson, Ph.D., Professor of Biology
Constantine Tsoukas, Ph.D., Professor of Biology
Susan L. Williams, Ph.D., Professor of Biology
Joy B. Zedler, Ph.D., Professor of Biology
Paul H. Zedler, Ph.D., Professor of Biology
Judith W. Zyskind, Ph.D., Professor of Biology
Vernon L. Avila, Ph.D., Associate Professor of Biology
Carol Beuchat, Ph.D., Associate Professor of Biology
Wayne F. Daugherty, Jr., Ph.D., Associate Professor of Biology
William P. Diehl, Ph.D., Associate Professor of Biology
David G. Futch, Ph.D., Associate Professor of Biology
Zac Hanscom, III, Ph.D., Associate Professor of Biology
Greg L. Harris, Ph.D., Associate Professor of Biology
Paula M. Mabee, Ph.D., Associate Professor of Biology
Kathy S. Williams, Ph.D., Associate Professor of Biology
Kaius Helenurm, Ph.D., Assistant Professor of Biology
Kathleen L. McGuire, Ph.D., Assistant Professor of Biology
Anca Mara Segall, Ph.D., Assistant Professor of Biology

Associateships

Graduate teaching associateships and graduate nonteaching associateships 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.

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 University of California, San Diego, and the ecology group 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 hospital, 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 Chihuahu Valley, Fortuna Mountain, and Temecula (Riverside County).

Section I. Master's Degree Programs

The Master of Arts degree in biology, with its foreign language requirement, is considered to be essentially an academic degree that serves as a stepping stone to certain higher degree programs. The Master of Science degrees in biology and microbiology are also acceptable as preparation for more advanced degree programs. Studies for degrees in biology must be completed in one of the research programs listed 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 before he/she will be considered for recommendation to enter the masters program.

1. Meet the requirements deemed 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. Meet biology departmental expectations on the GRE General Test.
5. Have a score above the 60th percentile rank on the GRE Subject (Advanced) Test in Biology or Biochemistry.
6. Be considered as capable of graduate work in the biological sciences by two letters of reference submitted to the biology graduate coordinator.
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 solely on the basis of merit in relation to space and faculty availability.

Students who do not meet all of the above requirements for admission with classified graduate standing may be admitted with conditionally classified graduate standing 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.

Biology

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 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 30 units of upper division and graduate courses selected, with the approval of the graduate coordinator, from the biological sciences as listed below, or from closely related fields. At least 15 of the units selected must be in 600- and 700-numbered courses, including Biology 799A, Thesis or Project. A maximum of six units of the required 30 units may be selected from acceptable courses offered in the College of Education. A reading knowledge of scientific French, German, Russian, or Spanish, and a final oral examination in the field of the thesis and its implications in the broad fields of biology are also required.

Specific Requirements for the Master of Science Degree in 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 30 units of upper division and graduate courses selected, with the approval of the graduate coordinator, from the bio-

logical sciences as listed below, or from closely related fields. At least 15 of the units selected must be in 600- and 700-numbered courses, including Biology 799A, Thesis. A maximum of six units of the required 30 units may be selected from acceptable courses offered in the College of Education. A final oral examination in the field of the thesis and its implication in the broad fields of biology is also required.

The department expects students to complete all degree requirements within seven years. The graduate coordinator, in some circumstances, may permit a student to validate a course for recency only by repeating the outdated course or an equivalent course (see section of this Bulletin on "Degree Time Limitations").

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, K. Williams.

Microbiology (Major Code: 04111): A separate graduate degree is offered in microbiology. Program adviser, Breindl.

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

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, radiation biology, nerve and muscle physiology, and plant ecophysiology. Program adviser, Harris.

Plant Sciences (Major Code: 04021): The areas of emphasis for graduate study in the botany program include plant ecology, plant physiology, phycology, plant evolution, and plant systematics. Program adviser, P. Zedler.

Systematics, Evolutionary, and Organismal 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, Mabee.

In addition to the emphases 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 complete a graduate program of 30 units of upper division and graduate courses selected, 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 Biology 799A, Thesis; and at least four units of seminar. A maximum of six units of the required 30 units may be selected from acceptable courses offered in other related areas, including the 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. 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.

At SDSU, the major areas of research at the graduate level and the participating faculty members include:

Biochemical genetics and gene expression: G. Harris.

Cell and molecular immunology: K. McGuire,
C. Tsoukas.

Cloning and gene mapping: S. Bernstein, W. Stumph,
J. Zyskind.

DNA recombination and chromosome structure: A. Segall.

Membrane transport and energy transduction: A. Dahms, T.
Frey, R. Sabbadini.

Molecular biology of RNA viruses and bacteriophage:
M. Breindl, J. Perrault.

Molecular endocrinology: C. Glembotski.

Regulation of metabolic pathways: R. Davis, S. Krisans.

Regulation of plant growth and development:

K. Johnson, D. Rayle.

Substructure and function in motile cells: R. Bizzoco, P.
Paolini.

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, Department of Biology, requesting application materials. A complete application requires that the following information be provided:

The appropriate application form.

Three letters of recommendation (send directly to the doctoral program adviser, SDSU).

Transcripts of academic work already completed.

Results of the Graduate Record Examination scores (including advanced biology, biochemistry, chemistry or physics test score).

Statement of purpose.

Residency Requirements

After formal admission to the joint doctoral program, the student must spend at least one academic year in full-time residence at 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 adviser will establish an advising committee for the student. This committee will consist of three faculty members. In consultation with the student, the committee will develop the student's course of study and will establish the student's joint qualifying committee.

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

Qualifying Committee

The Qualifying Committee consists of five faculty members, at least two from UCSD (one of whom must be in the Biology Department). The dissertation adviser may be a member of the Qualifying Committee. The members of the Qualifying Committee will be selected by the Advising Committee in consultation with the student. In order to provide continuity between examinations, at least one member of the Qualifying Committee shall be a member of the SDSU Executive Committee. Final appointment of Qualifying Committee members will be made jointly by the Graduate Deans of SDSU and UCSD.

The Qualifying Committee will be responsible for carrying out the qualifying examination, and the Chair of this committee will report the outcome of the examination and any related academic recommendations to the Executive Committee. The Chair will also provide a written evaluation of the student's performance. The Chair of the Qualifying Committee is responsible for notifying the members of the time and place of the examination, and the student is responsible for obtaining all required documents necessary for the examination four weeks before the scheduled examination time.

Qualifying Examination

The examination will be administered in one session and consists of two parts.

First Part: Oral presentation of thesis research results and proposed thesis plan (duration is 40-50 minutes, similar to a formal seminar presentation, slides, etc.). The student should come prepared to defend the overall experimental design, including possible outcomes and interpretations, and be thoroughly familiar with the literature in his or her chosen field. A major portion of this examination will be devoted to background information so that a student can demonstrate the context in which the proposed research project lies. A succinctly written version of the proposed thesis plan (maximum 14 double spaced pages) should be provided to committee members at least two weeks before the presentation. Prior written approval by all SDSU Qualifying Committee members stating that the written thesis proposal is sufficiently developed must be obtained before the oral presentation takes place.

Second Part: In consultation with the members of the Qualifying Committee, the student will select two subject areas broadly related to the thesis research. Two members of the Qualifying Committee with expertise in these areas will serve as primary mentors. The student will carry out literature research in each of the topics and select three to four research papers in each area to be discussed during the examination. Each of the papers to be discussed must meet the approval of the two primary mentors. The student will be expected to answer questions on the selected papers, relevant background, and potentially related topics. A major goal of this portion of the examination is to test the student's ability to extract information from the literature, to critically and objectively analyze this information, and to formulate a thorough knowledge base of the subject area.

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 UCSD for advancement to candidacy. Upon payment of the candidacy fee to UCSD, and after approval by the graduate deans on both campuses, the student 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 five faculty members is nominated by the graduate advisers and appointed jointly by the Graduate Deans at SDSU and UCSD. 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 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. Requirements currently in force at UCSD and SDSU must be met for completing and filing the dissertation.

Award of the Degree

The Doctor of Philosophy degree in biology 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 1994-95, support package included tuition, a stipend, health coverage, and funds for research supplies. All students are required to obtain teaching experience, which is normally faculty duties obtained as a graduate teaching assistant.

Faculty

The following faculty members of the cooperating institutions participate in the joint doctoral program being available for direction of research and as members of joint doctoral committees.

San Diego State University:

Graduate Adviser: S. Krisans

Faculty: Adams (Chemistry), Bernstein, Bizzoco, Breindl, Dahms (Chemistry), Davis, Frey, C. Glembofski, Harris, K. Johnson, Krisans, McGuire, Paolini, Per-rault, Rayle, Sabbadini, Segall, Stumph (Chemistry), Tsoukas, Zyskind.

University of California, San Diego:

Graduate Adviser: S. Brody

Faculty: All UCSD Biology Faculty

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 ecology. The research interests of the participating faculty members cover a wide range of problems and represent the interdisciplinary nature of modern biology.

At SDSU, the research projects are underway concerning:

Coastal and marine ecology: Study of estuarine wetland functions, food webs, effects of natural and human disturbance, and interaction of native and exotic species. Population dynamics of invertebrates (esp. echinoderms). Community ecology of coral reefs, eelgrass beds, rocky shores, sandy beaches, the

Salton Sea and other saline lakes.

Physiological ecology: Effects of global change (elevated CO₂ and climate change) on the structure and functioning of terrestrial ecosystems, including local chaparral, deserts, Alaska's North Slope, and vegetation near CO₂-emitting springs. Comparative and ecological physiology of vertebrates.

Population ecology: Reproductive biology of marine plants (algae and seagrasses). Analysis of life history strategies in animal and plant populations. Responses of chaparral vegetation to fire. Study of insect population dynamics and insect-plant interactions in natural and disturbed habitats. Aquaculture of marine fish. Genetic variation in small mammals. Food choice and adequacy of diets of animals in captivity.

Restoration and conservation ecology: Application of ecological principles to conserve species, manage fire, restore disturbed habitats, and retain genetic diversity (esp. in marine plants). Development of methods for assessing, restoring and creating coastal wetland ecosystems. Evaluation of efforts to restore or create deserts, coastal sage scrub, vernal pool, and riparian ecosystems. Role of mycorrhizae and soil biology in restoring vegetation.

A complete list of SDSU faculty and their research interests can be obtained from the graduate adviser of the program.

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 bachelor's degree from an accredited college or university. Acceptance of a student into the joint program by each institution depends on meeting the standards of admission of the respective institutions and by available facilities for research and instruction.

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:

The appropriate application form.

Three letters of recommendation (send directly to Graduate Adviser, SDSU).

Transcripts of academic work already completed.

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

Upon arrival at SDSU the advising committee works with the student to develop a course of study, which involves coursework at both SDSU and UCD and core requirements at UCD (three quarters of Ecology 296, three Ecology 290 seminars, and Principles and Application of Ecological Theory [Ecology 200A, 200B]). Prior to taking the qualifying examination, students complete the course of study, including the three quarters at UCD, and develop a firm understanding of ecological principles and research methods.

There is a five-year limit for completion of the Ph.D. in Ecology following advancement to candidacy.

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 principles of ecology, research methods and three 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 original and significant research carried out under the guidance of a faculty member. 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 1994-95, the support included tuition, a stipend, and funds for research supplies. All students are required to obtain teaching experience, which is normally faculty duties obtained as a graduate teaching assistant.

Faculty

Graduate Advisers:

San Diego State University: M. Allen
University of California, Davis: T. Foin

SDSU Faculty: Allen, Beuchat, Chen, Collier, Cox, Dexter, Ebert, Ford, Hanscom, Hurlbert, Krekorian, McClenaghan, Oechel, Phleger, K. Williams; S. Williams.; J. Zedler; P. Zedler

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

UPPER DIVISION COURSES

507. Topics in Ecology (2-4)

Two or three lectures and 0 to 6 hours of laboratory.

Prerequisite: Biology 354 and as may be indicated in the Class Schedule.

Treatment of particular advanced aspects of ecology not covered in regular courses, including insect ecology, intertidal ecology, and ecology of the Colorado River Delta. See Class Schedule for specific content. Maximum credit six units. (Topics formerly offered under Biology 506 and 516.)

508. Coevolution (3)

Prerequisite: Biology 354.

Coevolution in interspecific interactions, like herbivory, predation, parasitism, competition, pollination, and mimicry.

510. Evolutionary Mechanisms (3)

Two lectures and three hours of laboratory.

Prerequisites: Biology 352 and 354.

Concepts in population genetics, quantitative genetics, adaptation, speciation, and macroevolution required to understand the mechanisms of evolution.

512. Evolution and Ecology of Marine Mammals (3)

Two lectures and three hours of laboratory.

Prerequisite: Biology 354.

Biology of marine mammals to include pinniped, cetacean and sirenian evolution, diet and foraging strategies, social organization, reproductive strategies, echolocation, diving physiology, and conservation.

513. Marine Microbiology (2)

Prerequisites: Biology 350 or an introductory course in microbiology and consent of instructor.

Microbiological population of estuary and ocean waters; interrelationships with other organisms and the physical and chemical environment.

514. Marine Plant Biology (4)

Three lectures and three hours of laboratory.

Prerequisite: Biology 201.

Biology of algae and seagrasses, including identification, life histories, evolution, morphology, physiology, and ecology.

515. Marine Invertebrate Biology (4)

Two lectures and six hours of laboratory.

Prerequisite: Biology 201.

Structure and function, ecology, behavior, physiology and phyletic relationships of marine invertebrate animals.

517. Marine Ecology (4)

Two lectures and six hours of laboratory.

Prerequisite: Biology 354 or 515.

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

519. Aquaculture (3)

Prerequisite: Biology 201.

Principles and practices of the farming of aquatic organisms.

520. Ichthyology (4)

Two lectures and six hours of laboratory.

Prerequisite: Biology 201.

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

521. Advanced General Microbiology (2)

Prerequisites: 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.

524. Ornithology (4)

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

Prerequisite: Biology 201.

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.

Prerequisite: Biology 201.

Evolution, systematics, distribution and ecology of mammals of the world.

527. Animal Behavior (4)

Three lectures and three hours of laboratory.

Prerequisites: Biology 215; Biology 201 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 201.

The structure, food relations, and classification of fungi.

530. Plant Systematics (4)

Two lectures and six hours of laboratory, field trips.

Prerequisite: Biology 201.

Plant description, identification, classification, and nomenclature with emphasis on evolutionary patterns, interdisciplinary data acquisition, and phylogenetic analysis.

533. Plant Structure and Function (3)

Two lectures and three hours of laboratory.

Prerequisite: Biology 201.

Relationships between plant structure and function. Morphology and anatomy of vascular plants considering specific function of plant organs. Approaches to solve plant morphological problems. Techniques of plant anatomy.

539. Restoration Ecology (3)

Two lectures and three hours of laboratory.

Prerequisite: Biology 354.

Ecological concepts pertaining to the restoration of disturbed ecosystems, including plant establishment, stability of man-made ecosystems, below-ground biota, mineral cycling, succession, and other organisms and processes on disturbed lands.

540. Conservation Ecology (3)

Two lectures and three hours of laboratory.

Prerequisite: Biology 354.

Human impacts on ecosystems, the resultant endangerment and extinction of plant and animal species, and strategies for the protection and recovery of threatened forms.

545. Limnology (4)

Three lectures and three hours of laboratory.

Prerequisite: Biology 354.

Biological, chemical, and physical considerations of inland waters.

549. Microbial Genetics and Physiology (3)

Prerequisites: Biology 350 and 352; Chemistry 361A.

Physiology of microbial growth, bacterial structure and function, genetics of bacteriophages and bacteria.

550. Prokaryotic and Eukaryotic Molecular Biology (4) I, II

Prerequisites: Biology 352 and Chemistry 361A, 361B. Recommended: Biology 356.

Gene structure, organization and regulation in prokaryotes and eukaryotes. Mechanisms of RNA and protein synthesis. Dynamic aspects of the genome.

551. Recombinant DNA (3) I, II

Prerequisites: Chemistry 361A; Biology 350, 352, 356, and 550.

Theory and practice of recombinant DNA techniques.

551L. Recombinant DNA Laboratory (2)

Six hours of laboratory.

Prerequisites: Biology 350 and 549 or 550.

A laboratory course in recombinant DNA techniques.

554. Molecular Virology (2)

Prerequisite: Biology 356. Recommended: Biology 550.

Molecular aspects of structure, genetics, and replication of viruses, virus-host interactions, pathogenesis of virus infections, diagnostic virology, and antiviral vaccines and drugs; emphasis on human pathogens.

560. Animal Physiology (3)

Prerequisites: Biology 201 and 202; Chemistry 361A; Physics 180B and 182B.

Physiology of vertebrate and invertebrate animals with emphasis on diversity of solutions to physiological problems and on functional integration of organ systems.

561. Radiation Biology (3)

Prerequisites: Physics 180B and 182B; Biology 100 or 201 and 202. 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 201 and 202; Chemistry 361A or 560A.

Activities of plants, including photosynthesis, ion transport, translocation, water relations, growth and development.

566. Plant Molecular Biology (2)

Prerequisites: Biology 352 and Chemistry 361A. Recommended: Biology 550 or 563.

Problems in plant growth, development, and adaptation from modern molecular biology perspective including techniques of plant biotechnology and applications of genetic engineering to agriculture.

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 567.

Molecular mechanisms of pharmaceutical agents. Emphasis on drugs that interact with nervous and endocrine systems.

570. Neurobiology (3)

Prerequisite: Biology 356 or 590 or Psychology 260.

Structure and function of the nervous system to include cellular and molecular mechanisms underlying neuronal excitability and synaptic function, nervous system development, cellular and systems analysis of sensory, motor and higher brain functions. Emphasis on experimental approaches.

575. Molecular Basis of Heart Disease (3)

Prerequisite: Biology 356 or 550.

Current literature on the molecular basis of disordered physiology leading to heart disease.

577. Embryology (4)

Two lectures and six hours of laboratory.

Prerequisites: Biology 201 and 202.

Studies in comparative gametogenesis, morphogenesis, and reproductive physiology.

582. Hematology (3)

Two lectures and three hours of laboratory.

Prerequisite: Biology 350.

Study of normal and pathological blood with chemical, physical and microscopic methods.

584. Medical Microbiology (2)

Prerequisites: Biology 350 and 356.

Discussion of major bacterial and viral pathogens; molecular mechanisms of pathogenesis, microbial toxins and antimicrobial agents; immune response to microbial infections; biochemical and molecular diagnostics. Not open to students with credit in Biology 589.

585. Cellular and Molecular Immunology (3)

Prerequisites: Biology 202 and Chemistry 361A. Recommended: Biology 352 and 356.

Cellular and molecular aspects of the immune response. Genetics of immunoglobulins, major histocompatibility complex, lymphocyte development and their manifestations on immune responsiveness, lymphokines immunopathologies including AIDS, and contemporary immunological techniques. Not open to students with credit in Biology 485.

586. Medical Entomology (4)

Three lectures and three hours of laboratory.

Prerequisite: Biology 201.

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

588. Parasitology (4)

Two lectures and six hours of laboratory.

Prerequisite: Biology 201.

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.

590. Physiology of Human Systems (4)

Three lectures and one hour of discussion.

Prerequisites: Physics 180B and 182B; Biology 201 and 202. 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.

592. Cell and Molecular Biology Laboratory (2)

Six hours of laboratory.

Prerequisites: Biology 350 and 356.

Laboratory course in advanced techniques in microbiology and cell and molecular biology. Not open to students with credit in Biology 589.

593. Scanning Electron Microscopy (2)

One lecture and three hours of laboratory.

Prerequisite: Biology 201.

Theory and use of a scanning electron microscope for biological research. Laboratory is project oriented.

595. Computers in Biomedical Research (3)

Prerequisite: Biology 356 or 590. Recommended: Computer Science 107.

Application of micro- and minicomputers to tasks encountered by biomedical scientists in research laboratories (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 and 696 applicable to a 30-unit master's degree. Additional units acceptable with the approval of the graduate adviser.

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 in biological sciences.

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.

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.

602. Experimental Design (4)

Two lectures and six hours of laboratory.

Prerequisite: One semester of statistics.

Principles, terminology, and practice of experimental design both in biology and natural and social sciences.

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.

645. Theory and Principles of Ecology (3)

Prerequisites: Admission to graduate program in biology and approval of ecology graduate adviser.

Major theoretical concepts in ecology, topics of current interest, and historical context of central ideas in ecology, with emphasis on use of primary literature.

647. Introduction to Ecological Research (2) Cr/NC

Six hours of fieldwork.

Prerequisite: Biology 354.

Introduction to ecological research programs at SDSU and development of essential skills for graduate research.

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.

688. 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.

694. Advanced Topics in Virology (1-4)

Prerequisites: Biology 550 and 554.

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.

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.

731. Advanced Topics in Physiological Ecology and Behavioral Ecology (2-4)

Prerequisites: Biology 354, 354L, 527, and consent of instructor.

Selected topics in physiological ecology and behavior. May be repeated with new content and consent of graduate adviser in ecology. Maximum credit six units applicable to a master's degree.

735. Seminar in Biogeography (2)

Prerequisite: Biology 354.

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

740. Phylogenetic Systematics (3)

Two lectures and three hours of laboratory.

Prerequisite: Biology 354.

Theory and methodology of phylogenetic systematics. Includes use of computer algorithms, survey of literature and preparation of a project in phylogenetic systematics. Not open to students with credit in Biology 740 (Seminar in Phylogenetic Systematics).

750. Molecular Biophysics (3)

Prerequisites: Biology 356 and Chemistry 410A.

Description and analysis of biological processes and systems in terms of properties of molecules and of basic principles.

766. Advanced Topics in Population and Community Ecology (2-4)

Prerequisites: Biology 354 and consent of instructor.

Selected topics in population and community ecology. May be repeated with new content and consent of the graduate adviser in ecology. Maximum credit six units applicable to a master's degree.

770. Seminar in Systematics and Evolution (2-3) Cr/NC

Prerequisite: Consent of instructor.

Selected topics in systematics and evolution. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

772. Seminar in Macroevolution (2)

Prerequisite: Biology 354.

Examination of evolutionary processes and patterns at and above the species level.

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 or Project 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 (1-6) 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

Jacques Perrault, Ph.D., Professor of Biology
(Molecular Biology Institute Director)

Judith W. Zyskind, Ph.D., Professor of Biology
(MBI Associate Director)

Michael F. Allen, Ph.D., Professor of Biology

Carol A. Barnett, Ph.D., Professor of Biology

Sanford I. Bernstein, Ph.D., Professor of Biology

Richard L. Bizzoco, Ph.D., Professor of Biology

Michael J. Breindl, Ph.D., Professor of Biology
(Graduate Adviser)

A. Stephen Dahms, Ph.D., Professor of Chemistry

Roger A. Davis, Ph.D., Professor of Biology

Terrence G. Frey, Ph.D., Professor of Biology

Christopher C. Glembotski, Ph.D., Professor of Biology

Barbara B. Hemmingsen, 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

Robert P. Metzger, Ph.D., Professor of Chemistry

Paul J. Paolini Jr., Ph.D., Professor of Biology

David L. Rayle, Ph.D., Professor of Biology

Roger A. Sabbadini, Ph.D., Professor of Biology
(Graduate Adviser)

William E. Stumph, Ph.D., Professor of Chemistry
(Graduate Adviser)

Constantine Tsoukas, Ph.D., Professor of Biology

Carol Beuchat, Ph.D., Associate Professor of Biology

Greg L. Harris, Ph.D., Associate Professor of Biology
(Graduate Adviser)

Joseph A. Adams, Ph.D., Assistant Professor of Chemistry

Kathleen L. McGuire, Ph.D., Assistant Professor of Biology

Anca Mara Segall, Ph.D., Assistant Professor of Biology
(Graduate Adviser)

Adjunct Faculty

Robert A. Bohrer, J.D., LL.M., Professor of Law, California Western
School of Law

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 and Chemistry and is designed to serve these departments in the coordination, support and enhancement of research and training in the molecular biological sciences.

Graduate teaching associateships in biology and chemistry are available to qualified students. Application blanks and additional information may be obtained from the graduate coordinator of biology.

Admission to Graduate Study

Candidates for admission may come from a variety of disciplines in the biological and physical sciences. Ultimately, the research programs of individuals wishing to pursue master's degree work in molecular biology will be carried out under the supervision of MBI members.

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 admission requirements before being recommended for admission.

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. Meet biology departmental expectations on the GRE General Test.
4. Have a score in the 60th percentile or better on the GRE Subject (Advanced) test in biology or biochemistry, cell biology, and molecular biology. Subject examinations in other natural science disciplines will be considered.
5. Supply two letters of reference that describe the applicant's potential for graduate work.

Students who do not meet all of the above requirements for admission 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

(Major Code: 04161)

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 500-level and above 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 or Project. The student must complete at least three units of Molecular Biology 601 and six units of Molecular Biology 610. With the approval of the graduate adviser of molecular biology, a student may substitute for Molecular Biology 610 another 600 or 700 numbered course. A final oral examination on the thesis will be administered by the thesis committee.

Courses Acceptable for the Emphasis in Molecular Biology

UPPER DIVISION COURSES

Biology

- 549. Microbial Genetics and Physiology (3)
- 550. Prokaryotic and Eukaryotic Molecular Biology (4)
- 551. Recombinant DNA (3)
- 551L. Recombinant DNA Laboratory (2)
- 554. Molecular Virology (2)
- 561. Radiation Biology (3)
- 563. Plant Physiology (3)
- 566. Plant Molecular Biology (2)
- 567. Molecular Endocrinology (3)
- 569. Molecular Pharmacology (3)
- 570. Neurobiology (3)
- 577. Embryology (4)
- 584. Medical Microbiology (2)
- 585. Cellular and Molecular Immunology (3)
- 590. Physiology of Human Systems (4)
- 592. Cell and Molecular Biology Laboratory (2)
- 593. Scanning Electron Microscopy (2)
- 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)

Chemistry

- 510. 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)
- 648. Seminar in Immunology (2-3)
- 694. Advanced Topics in Virology (1-4)
- 696. Advanced Topics in Biology (1-3)
- 750. Molecular Biophysics (3)
- 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)

Prerequisite: 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

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 and Cell Biology (1-4)

Prerequisite: Graduate standing in a life or physical science.
Intensive study in specific areas of molecular and cell biology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

Biostatistics and Biometry

In the College of Sciences and the College
of Health and Human Services

Faculty Committee for Biostatistics and Biometry

Boyd D. Collier, Ph.D., Professor of Biology
Amanda L. Golbeck, Ph.D., Professor of Mathematical Sciences
Kung-Jong Lui, Ph.D., Professor of Mathematical Sciences
Craig A. Molgaard, Ph.D., M.P.H., Professor of Public Health
Donald J. Slymen, Ph.D., Professor of Public Health
David W. Macky, Ph.D., Associate Professor of Mathematical
Sciences
Duane L. Steffey, Ph.D., Associate Professor of Mathematical
Sciences

General Information

San Diego State University provides preparation for biostatistically oriented careers by offering biostatistics related coursework, research opportunities and biostatistical consulting experience within regular degree programs in the Departments of Biology, Mathematical Sciences, and Graduate School of Public Health. A Master of Science degree in statistics with concentration in biostatistics may be earned in the Department of Mathematical Sciences; and a Master of Public Health degree with concentration in biometry may be earned in the Graduate School of Public Health. Degrees in general biostatistics or biometry are not offered by the University. However, a Master of Science degree in biostatistics or biometry may be earned as a special major (see the appropriate section in this bulletin).

Specific courses in biostatistics and biometry (listed below) are offered with the cooperation of faculty from the participating departments. Biostatistics and biometry courses that specialize in applications to biology are offered in the Department of Biology; similarly, courses that specialize in applications to public health are offered in the Graduate School of Public Health. Courses that cover a variety of areas of application (including biology and public health) are offered by the Department of Mathematical Sciences. The Department of Mathematical Sciences offers, in addition to these applied courses, some courses in statistics and biostatistics that are more mathematically oriented.

Courses

Biology Course

(Adviser: Collier, 594-6448)

597B. Multivariate Statistical Methods in Biology (3)

Mathematics Courses

(Adviser: Lui, 594-7239)

550. Probability (3)
551A. Mathematical Statistics (3)
551B. Mathematical Statistics (3)
553. Stochastic Processes (3)
554A. Computer Oriented Statistical Analysis (3)
554B. Advanced Computer Oriented Statistical Analysis (3)
555. Multivariate Statistical Methods in Biology (3)

670A. Advanced Mathematical Statistics (3)
670B. Advanced Mathematical Statistics (3)
671. Statistical Computing (3)
672. Nonparametric Statistics (3)
673. Sample Surveys (3)
674. Multivariate Analysis (3)
675. Linear Statistical Hypothesis Testing (3)
677. Design of Experiments (3)
678. Survival Analysis (3)
679. Discrete Data (3)
680A. Advanced Biostatistical Methods (3)
680B. Advanced Biostatistical Methods (3)

Public Health Courses

(Adviser: Slymen, 594-6439)

602. Biostatistics (3)
627. Advanced Statistical Methods in Public Health (3)
628. Applications of Multivariate Statistics in Public Health (3)

Business Administration

Accredited by the American Assembly of
Collegiate Schools of Business

OFFICE: Student Services 3428

TELEPHONE: (619) 594-5217

FAX: (619) 594-1863

EMAIL: sdsumba@mail.sdsu.edu

Associateships

Graduate teaching associateships and graduate nonteaching associateships in business administration are available to a limited number of qualified students. Application blanks and additional information may be secured from the departmental offices 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 College also offers a joint program with the College of Arts and Letters leading to both a Master of Business Administration and a Master of Arts in Latin American Studies. The College of Business Administration M.B.A. and M.S. programs are accredited by the American Assembly of Collegiate Schools of Business.

The major goal of the Master of Business Administration degree is to prepare students with diverse academic backgrounds for entry into general management positions in business and not-for-profit enterprises. The primary purpose of the Master of Science degree in Business Administration is to provide a foundation for technical and executive careers in the management of specific functional and professional areas.

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 students to concentrate their education in courses of specialized study in accounting.

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 field study 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.

All students considering graduate work in business are advised to seek further details from the Graduate School of Business in the College of Business Administration (619) 594-5217 prior to applying for admission.

Admission to Graduate Study

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 to the College's graduate programs is competitive, that is, a number of factors are taken into consideration in the admission decision, and only the top applicants are accepted. These factors include the applicant's previous academic performance, the quality of the previous universities attended, the field of undergraduate study, scores on the Graduate Management Admissions Test (GMAT), management experience and the written application essay. References which validate experience may also be considered. A 570 TOEFL score is normally required when English is not the student's principal language.

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 should be taken prior to April 1 and for spring admission, prior to July 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.

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

(Major Code: 05011)

The student must complete an approved program of studies including 49 units of graduate coursework with a maximum of six units of 500-level courses. Up to nine units of coursework may be accepted for transfer credit. Transfer credit will be accepted for graduate coursework completed at an accredited AACSB institution.

At least 40 of the total units required must be completed in residency at San Diego State University, and at least nine units of program courses must be completed after advancement to candidacy.

The college expects students entering the Master of Business Administration program to be proficient in several areas. These include proficiency in statistics, mathematical skills, basic economics and in the use of personal computers, including spreadsheets and word processing. The students are responsible for insuring that they possess these skills before beginning the program.

The requirements for the degree are as follows:

1. Complete the following core of nine courses. (19 units)

BA 650	Financial Accounting (2)
BA 651	Organizational Behavior (2)
BA 652	Statistical Analysis (2)
BA 653	Managerial Economics (2)
BA 654	Managerial Communication (1)
BA 655	Marketing (3)
BA 660	Managerial Accounting (2)
BA 662	Operations Management (2)
BA 665	Financial Management I (3)

A student who has earned 12 or more undergraduate units in a specific field (finance, management, etc.) may substitute an advanced course for a core course in the same field with permission from the Director of Graduate Business Programs.

2. Complete one course from each of the below listed themes (12 units)

Interpersonal Skills Theme

IDS 705	Communication Strategies (3)
MGT 720	Seminar in Behavioral Science for Management (3)
MGT 721	Seminar in Group Processes and Leadership (3)
MGT 741	Seminar in Organizational Power and Politics (3)

Environment Theme

FIN 604	Legal Environment for Executives (3)
FIN 655	Seminar in Financial Markets (3)
FIN 780	Seminar in Land Markets and Urban Development Issues (3)
MGT 626	Seminar in Policy Formulation (3)
MGT 701	Organizational Theory and Design (3)
MGT 722	Seminar in Business Ethics and Social Institutions (3)
MGT 740	Seminar in Business Management and the Natural Environment (3)
MGT 742	Seminar in Business and the Good Society (3)
MKTG 760	Seminar in Consumer Behavior (3)

Information and Technology Theme

ACCTG 690	Seminar in Accounting Information Systems (3)
IDS 609	Management Information Systems (3)
IDS 684	Small Computer Systems for Business (3)
MGT 731	Seminar in Strategic Management of Technology and Innovation (3)
MKTG 761	Product Innovation Management (3)
MKTG 767	Seminar in Business Marketing Management (3)

Globalization Theme

ACCTG 661	Seminar in International Accounting (3)
FIN 654	Seminar in International Business Finance (3)
IDS 744	Seminar in Total Quality Management and Productivity (3)
MGT 671	Seminar in Comparative Industrial Relations (3)
MGT 710	Seminar in World Business Environment (3)
MGT 723	Seminar in International Strategic Management (3)
MKTG 769	Seminar in International Marketing (3)

3. Complete 15 units of electives. Not more than six units outside the College of Business Administration and not more than a total of six units in courses 780, Field Studies in Business, 797, Research, and 798, Special Study, will be accepted toward the degree. Courses taken outside of the College of Business Administration should be related to the MBA program and must be approved by the Director of Graduate Programs.

4. Among themes and electives listed above, a student must complete at least one course in each of three of the departments in the College of Business Administration.

5. Complete a culminating experience course. (3 units)

BA 795	Integrative Business Analysis (3) Cr/NC/SP
BA 799A	Thesis (3) Cr/NC/SP

A student may choose to specialize by completing 12 units of non-core courses from one of the following specializations:

Entrepreneurship
Finance
Information Systems
International Business
Management
Management Science
Marketing
Production and Operations Management
Real Estate

Specialization courses may be either theme or elective courses.

Students admitted prior to Fall 1994 and who do not have an official program as of Fall 1994, will meet the graduation requirement of the Fall 1993-94 Graduate Bulletin. Those students may petition the Director, Graduate Business Programs to change to the Fall 1994 requirements. Students re-admitted Fall 1994 or after may petition to graduate under the requirements of the 1993-94 Graduate Bulletin.

Full and Half-Time Programs

Students enrolling in the M.B.A. program may be either full- or half-time students. Generally, in their first year, full-time students must take four courses at a time and half-time students must take two courses at a time. Students will be assigned to classes during their first year if they are full-time students and during the first two years if they are half-time students, based on a combination of personal and administrative factors. It is anticipated that half-time students will pursue their coursework in the evening and full-time students will take courses during the day.

Master of Science Degree in Business Administration

Admission to the Degree Curriculum

In addition to meeting the requirements for classified graduate standing in the University and admission to the College of Business Administration, as described above, and in Part Two of this bulletin, the student must have satisfactorily completed equivalents of the following courses:

BA 650	Financial Accounting (2)
BA 651	Organizational Behavior (2)
BA 652	Statistical Analysis (2)
BA 653	Managerial Economics (2)
BA 654	Managerial Communication (1)
BA 655	Marketing (3)
BA 660	Managerial Accounting (2)
BA 662	Operations Management (2)
BA 665	Financial Management I (3)

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 upon the recommendation of the College of Business Administration and the approval of the Dean of the Graduate Division and Research.

For admission to the taxation concentration (05022) the student must be a certified public accountant (CPA) or have a juris doctor (JD) degree from an accredited law school and have completed Accountancy 201 and 202.

Advancement to Candidacy

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

Students concurrently enrolled in deficiency coursework may be given permission to take the comprehensive examination in their concentration prior to actual completion of all coursework. However, comprehensive examinations will not be evaluated and results will not be reported to the Graduate Division and Research until all deficiency coursework has been successfully completed. This may delay graduation.

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 at least 30 approved units including at least 21 units in 600- and 700-numbered courses. This program cannot include Finance 604; Information and Decision Systems 609; Management 626; and Business Administration courses numbered 650-665, without specific permission of the Director, Graduate Business Programs. At least 24 units must be in business administration and economics. Not more than a total of six units in courses 797, Research, 798, Special Study, and Business Administration 780, Field Studies in Business, may be accepted for credit toward the degree.

Each of the concentrations in the Master of Science in Business Administration requires Plan A, Thesis; or Plan B, Directed Readings in Business Administration or a written comprehensive examination offered by the appropriate department. The program must be approved by the college and departmental adviser.

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.

Concentrations	Major Code
Entrepreneurship	(05997)
*Finance	(05041)
**Financial and Tax Planning	(05043)
Human Resource Management	(05151)
Information Systems	(07021)
International Business	(05131)
Management	(05061)
Marketing	(05091)
Production and Operations Management	(05064)
***Real Estate	(05111)
Taxation	(05022)
****Total Quality Management	(05072)

Special Provision for Specific Concentrations

***Finance.** Finance concentration students must take at least 15 units from among Finance 617, 651, 652, 653, 654, 655, 656, and 658.

****Financial and Tax Planning.** For this concentration an optional Plan B, Comprehensive Examination, is available. Here students may substitute a comprehensive examination and three units of additional coursework for the thesis requirement. This examination will be administered while students are registered in Finance 657.

Additionally, this concentration requires the following prerequisites, rather than the list shown under "Admission to the Degree Curriculum:"

ACCTG 201	Financial Accounting Fundamentals (3)
ECON 101	Principles of Economics (3)
ECON 102	Principles of Economics (3)
ECON 201	Statistical Methods (3) OR
MATH 119	Elementary Statistics for Business (3)
ECON 422	Business Cycles (3)
FIN 140	Legal Environment of Business (3)
FIN 323	Fundamentals of Finance (3)
MATH 120	Calculus for Business Analysis (3)

*****Real Estate.** This concentration requires the following prerequisites, rather than the list shown under "Admission to the Degree Curriculum:"

ACCTG 201	Financial Accounting Fundamentals (3)
ECON 101	Principles of Economics (3)
ECON 102	Principles of Economics (3)
ECON 201	Statistical Methods (3) OR
MATH 119	Elementary Statistics for Business (3)
FIN 140	Legal Environment for Business (3)
FIN 323	Fundamentals of Finance (3)
MKTG 370	Marketing (3)
MATH 120	Calculus for Business Analysis (3)

******Total Quality Management.** This concentration requires the following prerequisites, rather than the list shown under "Admission to the Degree Curriculum:"

ACCTG 201	Financial Accounting Fundamentals (3)
ACCTG 202	Managerial Accounting Fundamentals (3)
ECON 101	Principles of Economics (3)
ECON 102	Principles of Economics (3)
FIN 140	Legal Environment of Business (3)
FIN 323	Fundamentals of Finance (3)
IDS 301	Statistical Analysis for Business (3)
IDS 302	Introduction to Production and Operations Management (3)
IDS 609	Management Information Systems (3)
MGT 350	Management and Organizational Behavior (3)
MGT 405	International Business Strategy and Integration (3)
MKTG 370	Marketing (3)
MATH 120	Calculus for Business Analysis (3)

Master of Business Administration and Master of Arts in Latin American Studies Degrees

General Information

The College of Business Administration and the Center for Latin American Studies offer a three-year concurrent graduate program leading to a Master of Business Administration and a Master of Arts in Latin American Studies. The primary objective of the concurrent program is to offer preparation in the fields of business administration and Latin American studies for the purpose of providing the knowledge and skills necessary to promote and engage in business relationships within a Latin American historical, cultural, and linguistic milieu, in Latin America or in the United States.

For information, contact the Chair of the Latin American Studies Committee or the Associate Dean in the College of Business Administration.

Admission to Graduate Study

Since this program combines disparate disciplines, applicants are required to submit GMAT scores and should have substantial academic backgrounds in the humanities and social sciences. Applicants should also have a background in Spanish or Portuguese language and literature. It is expected that all students in the concurrent degree program will be full time, so that all requirements will be satisfied in an acceptable time period.

Specific Requirements for the MBA/MA Degree

(Major Code: 49061)

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 consisting of 70 units as outlined below.

- The college expects students entering the Master of Business Administration/MA in Latin American Studies program to be proficient in several areas. These include proficiency in statistics, mathematical skills, basic economics and in the use of personal computers, including spreadsheets and word processing. The students are responsible for insuring that they possess these skills before beginning the program.
- Complete the following core of nine courses (19 units):

BA 650	Financial Accounting (2)
BA 651	Organizational Behavior (2)
BA 652	Statistical Analysis (2)
BA 653	Managerial Economics (2)
BA 654	Managerial Communication (1)
BA 655	Marketing (3)
BA 660	Managerial Accounting (2)
BA 662	Operations Management (2)
BA 665	Financial Management I (3)

A student who has earned 12 or more undergraduate units in a specific field (finance, management, etc.) may substitute an advanced course for a core course in the same field with permission from the Director of Graduate Business Programs.

- Complete six units, one course from each of the themes listed below:

Interpersonal Skills Theme

IDS 705	Communication Strategies (3)
MGT 720	Seminar in Behavioral Science for Management (3)
MGT 721	Seminar in Group Processes and Leadership (3)
MGT 741	Seminar in Organization Power and Politics (3)

Environment Theme

FIN 604	Legal Environment for Executives (3)
FIN 655	Seminar in Financial Markets (3)
FIN 780	Seminar in Land Markets and Urban Development Issues (3)
MGT 626	Seminar in Policy Formulation (3)
MGT 701	Organizational Theory and Design (3)
MGT 722	Seminar in Business Ethics and Social Institutions (3)
MGT 740	Seminar in Business Management and the Natural Environment (3)
MGT 742	Seminar in Business and the Good Society (3)
MKTG 760	Seminar in Consumer Behavior (3)

- Complete 15 units in Business Administration to include:

FIN 654	Seminar in International Business Finance (3)
MGT 710	Seminar in World Business Environment (3)

MGT 723	Seminar in International Strategic Management (3)
MGT 731	Strategic Management of Technology and Innovation (3)
MKTG 769	Seminar in International Marketing (3)

- Complete 24 units in courses of Latin American content, including the following required courses:

LATAM 696	Interdisciplinary Seminar (3)
LATAM 798	Special Study (3) Cr/NC/SP
HIST 640	Directed Readings in Latin American History (3)*
POL S 661	Seminar in the Political Systems of the Developing Nations (3)*
POL S 667	Seminar in Latin American Political Systems (3)*

The remaining nine units will be selected from the following list of courses, with at least one course from the California Western School of Law courses highly recommended:

Latin American Studies Courses

560.	Latin America After World War II (3)
798.	Special Study (3) Cr/NC/SP

Economics Course

565.	North American Mexico Economic Relations (3)
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Geography Courses

654.	Topics in Comparative Urbanization (3)**
720.	Seminar in Regional Geography (3)**

History Courses

551A-551B.	Mexico (3-3)
552.	Brazil (3)
554.	The Andean Republics of South America (3)
555.	Modernization and Urbanization in Latin America (3)
556.	Guerrilla Movements in Latin America (3)
558.	Latin America in World Affairs (3)
559.	Central America (3)
640.	Directed Reading in Latin American History (3)
795.	Area Studies in History (3) Cr/NC**

Political Science Courses

566.	Political Change in Latin America (3)
567.	Political Systems of Latin America (3)
568.	The Mexican Political System (3)
655.	Seminar in General Comparative Political Systems (3)**
675.	Seminar in International Relations (3)**
795.	Problem Analysis (3)**

California Western School of Law Courses****

498.	Mexican Law
610.	Immigration Law
625.	International Business Transactions
636.	International Organizations
643.	Private International Law
644.	Public International Law
703.	Latin American Law

* Repeatable with new content and approval of advisory committee.

** Acceptable when of relevant content.

***These courses are not required. Students must apply to enroll under the provisions of the affiliation agreement with the California Western School of Law.

- In addition, the student must complete MGT 797 (Research) and BA 799A (Thesis). The thesis in Business Administration will treat a Latin American related topic and will be supervised by a business faculty with international business expertise and at least one faculty member from the Latin American

studies program.

If a student after entering the concurrent MBA/MA program returns to a single degree program, all the requirements for the single degree program must be met.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. In addition, 1) the student will be required to complete Spanish 302 (or its equivalent), or Portuguese 401 (or its equivalent), and pass an oral and written examination administered by the Department of Spanish and Portuguese Languages and Literatures; 2) all core courses in business and Latin American studies must be completed prior to advancement with a minimum grade point average of 3.0 and no grade less than a B- in any core course; 3) have been recommended for advancement by the combined advisory committee; 4) have a thesis proposal approved by the combined faculty advisory committee.

Upon advancement to candidacy, the student will enroll in Management 797 (Research) and BA 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 MBA and MA degrees.

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.

650. Financial Accounting (2)

Prerequisite: Classified graduate standing.

Understanding of accounting procedures and judgments underlying corporate financial statements; ability to read and analyze these statements; make inferences from them about financial health, likelihood of success, and other important attributes of various business entities. Not open to students with credit in Accountancy 600.

651. Organizational Behavior (2)

Prerequisite: Classified graduate standing.

Human behavior at individual, interpersonal, and group levels including effect on the structure of the organization on behavior. Not open to students with credit in Management 611.

652. Statistical Analysis (2)

Prerequisites: Classified graduate standing and basic statistics.

Understanding and applications of statistics for problem solving and managerial decision making. Not open to students with credit in Information and Decision Systems 602.

653. Managerial Economics (2)

Prerequisite: Classified graduate standing.

Application of microeconomic theory to business decision making; optimal resource allocation, market structure and pricing from a business viewpoint. Not open to students with credit in Finance 616.

654. Managerial Communication (1)

Prerequisite: Classified graduate standing.

Integration of communication theory with business strategies through effective language.

655. Marketing (3)

Role and function of marketing in the organization and society. Planning, implementation, and evaluation of marketing strategies and programs. Not open to students with credit in Marketing 370. (Formerly numbered Marketing 605.)

660. Managerial Accounting (2)

Prerequisite: Classified graduate standing.

Design and use of cost systems to establish and enhance an organization's competitive advantage in a global environment. Decision making, planning, control and business ethics in managerial decision making. Not open to students with credit in Accountancy 610.

662. Operations Management (2)

Prerequisite: Classified graduate standing.

Decision making techniques for operations management in service, production, government, and non-profit organizations. Quantitative techniques for establishing the management decision criteria, constraints, and alternatives. Not open to students with credit in Information and Decision Systems 612.

665. Financial Management I (3)

Prerequisite: Business Administration 652.

Role of finance in firm, financial planning and control, management of working capital, time value of money, valuation, risk analysis, basic capital budgeting, long-term financing, international aspects of financial decisions. (Formerly numbered Finance 615.)

780. Field Studies in Business (1-3) Cr/NC

Prerequisite: Completion of MBA core.

Application of business concepts to real world organizations. Students work under supervision of a faculty member to perform a project utilizing theories and principles from previous business coursework. Maximum credit six units.

795. Integrative Business Analysis (3) Cr/NC/SP

Prerequisite: Advancement to candidacy.

Strategic case analysis of business problems and preparation for comprehensive examination for students in M.B.A. program under Plan B. Problem definition analysis and prioritization of solution mechanisms.

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.

Accountancy

In the College of Business Administration

OFFICE: Student Services 2411
TELEPHONE: (619) 594-5310

Faculty

O. Ray Whittington, Ph.D., Professor of Accountancy, Director of School
Allan R. Bailey, Ph.D., Professor of Accountancy, Dean of the College of Business Administration
Andrew H. Barnett, D.B.A., Professor of Accountancy
David H. Butler, Ph.D., Professor of Accountancy
Robert J. Capettini, Ph.D., The Price Waterhouse Alumni Professor of Accountancy
Chee W. Chow, Ph.D., Professor of Accountancy, The Vern E. Odmark Chair in Accountancy
Gary M. Grudnitski, Ph.D., Professor of Accountancy
Kevin M. Lightner, Ph.D., Professor of Accountancy
Robert F. Meigs, Ph.D., Professor of Accountancy
Nathan A. Oestreich, Ph.D., Professor of Accountancy
Richard A. Samuelson, Ph.D., Professor of Accountancy (Graduate Adviser)
Howard R. Toole, Ph.D., Professor of Accountancy (Graduate Adviser)
Gerald E. Whittenburg, Ph.D., Professor of Accountancy (Graduate Adviser)
James E. Williamson, Ph.D., Professor of Accountancy
Carol O. Houston, Ph.D., Associate Professor of Accountancy
Gun-Ho Joh, Ph.D., Associate Professor of Accountancy
Sharon M. Lightner, Ph.D., Associate Professor of Accountancy
Carol F. Venable, Ph.D., Associate Professor of Accountancy

The Vern E. Odmark Chair in Accountancy

Established in recognition of Dr. Vern E. Odmark for his 25 years of teaching at SDSU, basic support is provided by contributions from friends, alumni, and corporations, including many major national accounting firms. The chair acknowledges the University's objective of continuing the high standards of teaching excellence and professionalism that characterized Odmark's career.

Dr. Chee W. Chow has held the position since its creation in 1984. He is widely recognized throughout the country for the breadth of his research and his technical thoroughness.

The Price Waterhouse Alumni Professor of Accountancy

The Price Waterhouse Alumni Professor was established in 1993 to recognize innovative excellence in the teaching of accounting. The professorship is designed to enhance the School of Accountancy's ability to attract and retain top-quality accounting educators and scholars.

The professorship is funded by a combination of contributions from the Price Waterhouse Foundation, the local San Diego office, and SDSU alumni and friends of the School on staff with Price Waterhouse both locally and nationwide.

Dr. Robert Capettini holds the position. He was heavily involved in creating the new, broad-based, integrated accounting curriculum which was introduced in the fall of 1993.

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 baccalaureate degree. The program allows students to focus their accounting studies in an area of specialization within the field of accounting and to gain a greater breadth in their knowledge of business and accounting. In order to provide the opportunity for specializing one's accounting knowledge, the M.S. program provides three areas of specialization: corporate accounting, professional accounting, and taxation. Each area consists of a series of selected courses which students take upon the recommendation of their adviser. Specialization within the M.S. degree is intended to give students the necessary academic background and research experience 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 courses equivalent to the core courses in the MBA curriculum as described above and any other course deficiencies as required by a graduate adviser in the School of Accountancy.

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 adviser may request satisfactory completion of additional prerequisite courses.

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

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 at least 30 approved units including at least 21 units in 600- and 700-numbered courses. Of the 30 units, at least 15 units must be in accountancy courses at San Diego State University which must include at least 12 units in accountancy courses numbered 650 and above. Under Plan A, Accountancy 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.

Accountancy 625, Financial Reporting and Analysis; and Accountancy 626, Audit/Systems, 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

501. Advanced Accounting Problems (4) I, II

Prerequisites: Minimum grade of C in Accountancy 322; credit or concurrent registration in Accountancy 421. **Proof of completion of prerequisite required:** Copy of transcript.

Problems involved in partnerships, consignments, consolidations, receiverships, foreign exchange, fund accounting, and other specialized areas.

502. Advanced Managerial Accounting (3)

Prerequisite: Minimum grade of C in Accountancy 322; credit or concurrent registration in Accountancy 421. **Proof of completion of prerequisite required:** Copy of transcript.

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.

504. Federal Taxation of Business Enterprises (4) I, II, S

Prerequisite: Credit or concurrent registration in Accountancy 421 or credit in Accountancy 404.

Taxation of corporations, partnerships, estates, and trusts. Gift and estate tax.

508. Accounting for Not-For-Profit Organizations (3)

Prerequisite: Minimum grade of C in Accountancy 322. **Proof of completion of prerequisite required:** Copy of transcript.

Principles of fund accounting useful in state and local governmental units, hospitals, colleges, and universities. Comparisons with commercial accounting emphasized. Includes study of budgetary accounting, appropriations, encumbrances, internal checks and auditing procedures.

596. Contemporary Topics in Accounting (1-3)

Prerequisites: Minimum grade of C in Accountancy 322, credit or concurrent registration in Accountancy 421. **Proof of completion of prerequisite required:** Copy of transcript.

Contemporary topics in modern accounting. 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 master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

624. Tax for Managers (3)

Prerequisite: Business Administration 650.

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.

625. Financial Reporting and Analysis (3)

Prerequisite: Accountancy 321.

Preparation and use of financial statement information related fixed assets, liabilities and owner's equity. Accounting research. Analytical problem solving involving financial reporting and taxation. (Formerly numbered Accountancy 620.)

626. Audit/Systems (4)

Prerequisites: Accountancy 650 and 660.

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.

650. Tax Research and Planning (3)

Prerequisite: Accountancy 321 or 404.

Tax research with emphasis on solving tax planning problems. Introduction to statutory, administrative, and judicial sources of tax law.

651. Seminar in Corporate Tax (3)

Prerequisite: Credit or concurrent registration in Accountancy 650.

Corporate tax problems involving distributions, liquidations, reorganizations, redemptions, personal holding companies, accumulated earnings tax, and thin capitalization.

652. Seminar in Federal Estate and Gift Tax (3)

Prerequisite: Credit or concurrent registration in Accountancy 650.

Estate and gift tax problems. Income taxation of trust and estates.

653. Seminar in Tax Practice (3)

Prerequisite: Credit or concurrent registration in Accountancy 650.

Tax practice procedures as they affect the practitioners' dealing with the IRS; statute of limitations, ethical problems, penalties, interest, tax fraud.

654. Seminar in Partnership Taxation (3) I, II

Prerequisite: Credit or concurrent registration in Accountancy 650.

Partnership tax problems involving partnership formation, operations, distributions and liquidations.

659. Seminar in Taxation Topics (3)

Prerequisite: Credit or concurrent registration in Accountancy 650.

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.

660. Seminar in Accounting Theory (3)

Prerequisite: Accountancy 625.

Application of theories and concepts underlying financial accounting to specific cases. Research of authoritative pronouncements and financial data bases. Social and political environment of financial reporting by business enterprises.

661. Seminar in International Accounting (3)

Prerequisite: Business Administration 650.

Theories, practices, and concepts which underlie development of standards of financial reporting for enterprises engaged in international trade and business.

663. Financial Statement Analysis (3)

Prerequisite: Business Administration 650.

Illustrative cases and problems to analyze methods for communicating information about financing and operating activities of corporate firms, and techniques for evaluating the information.

670. Seminar in Auditing (3)

Prerequisite: Accountancy 322 or 626.

Selected conceptual issues in auditing.

671. Seminar in Compilation and Review Services (3)

Prerequisite: Accountancy 322 or 626.

Applications cases on engagements to compile or review financial statements of nonpublic entities under accounting and review services standards.

680. Seminar in Managerial Accounting (3)

Prerequisite: Business Administration 660.

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

690. Seminar in Accounting Information Systems (3)

Prerequisite: Business Administration 662.

Design of accounting systems. Current trends as discussed in the literature. Computerized procedures for internal and external reporting.

694. Seminar in Public Accounting Consulting (3)

Prerequisite: Business Administration 660.

Study through cases of the analytical approach and process

applied by public accounting consultants to businesses. Current and proposed form of organization, finances, operations, systems, and controls.

696. 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.

790. Directed Readings in Accountancy (3) Cr/NC

Prerequisite: Advancement to candidacy.

Preparation for the comprehensive examination for the M.S. program or the M.B.A. program under Plan B.

797. Research (3) Cr/NC/SP

Prerequisite: Advancement to candidacy.

Research in the area of accountancy. 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.

Finance

In the College of Business Administration

OFFICE: Student Services 3356
TELEPHONE: (619) 594-5323

Faculty

Nikhil P. Varaiya, Ph.D., Professor of Finance, Chair of Department
Lawrence J. Gitman, Ph.D., Professor of Finance
Kamal M. Haddad, Ph.D., Professor of Finance
Robert C. Hutchins, D.B.A., Professor of Finance
Edward Omberg, Ph.D., Professor of Finance
Mehdi Salehizadeh, Ph.D., Professor of Finance (Graduate Adviser, International Business)
James L. Short, Ph.D., Professor of Finance (Graduate Adviser, Real Estate)
William E. Sterk, Ph.D., Professor of Finance (Graduate Adviser)
Pieter A. Vandenberg, D.B.A., Professor of Finance
Thomas M.D. Warschauer, Ph.D., Professor of Finance (Graduate Adviser, Financial and Tax Planning)
Russell L. Block, J.D., Associate Professor of Finance
John C. Bost, J.D., Associate Professor of Finance
Antony C. Cherin, Ph.D., Associate Professor of Finance
Andrew Q. Do, Ph.D., Associate Professor of Finance (Graduate Adviser, Real Estate)
David P. Ely, Ph.D., Associate Professor of Finance (Graduate Adviser)
Arthur L. Houston, Jr., Ph.D., Associate Professor of Finance
Prasad Padmanabhan, Ph.D., Associate Professor of Finance (IVC)
Kanwal S. Sachdeva, D.B.A., Associate Professor of Finance
Moon H. Song, Ph.D., Associate Professor of Finance (Graduate Adviser)
Robert W. Wilbur, Ph.D., Associate Professor of Finance, Associate Dean and Director, Undergraduate Program, College of Business Administration

Courses Acceptable on Master's Degree Programs in Business Administration

UPPER DIVISION COURSES

(Not Acceptable toward the Master of Business Administration Degree)

521. Individual Insurance Management (4) II

Prerequisites: Undergraduate: Completion of lower division requirements for the major. Graduate: Completion of prerequisite core.

Economic, legal, social and ethical considerations of individual, business and group insurance including life, health, property, liability and social insurance. Risk exposure and policy analysis. Employee benefit and pension planning including regulation and taxation issues. Not open to students with credit in Finance 525.

589. Personal Financial Planning (3) I

Prerequisite: Finance 323.

Financial planning process including data gathering, cash flow and debt considerations, goal programming (including retirement and education funding), integration, plan formulation, and implementation. Practice management considerations including establishment of ethical and legal, client and professional relationships. Not open to students with credit in Finance 525.

GRADUATE COURSES

604. Legal Environment for Executives (3)

Legal environment of business, government regulation, social and ethical considerations in the administration of justice, substantive law of contracts, property, agency, and business organizations.

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.

617. Financial Management II (3)

Prerequisite: Business Administration 665.

Develops topics to include asset pricing, capital budgeting techniques, dividend policy and financing decisions, applications of options and futures, term structure of interest rates, regulation of financial markets, leasing decisions, corporate control. Not open to students with credit in Finance 650.

641. Financing the Emerging Enterprise (3)

Prerequisite: Business Administration 665.

Financial considerations in emerging and growing enterprises to include internal financial management, external funding sources, and dealing with venture capitalists. Emphasis on integration of theory, computer analysis, and human judgment in financial decision making.

651. Seminar in Investments (3)

Prerequisite: Business Administration 665.

Characteristics of financial markets and instruments. Contemporary as well as traditional approaches to problems of pricing individual securities; portfolio selection and analysis; techniques of analysis; measurement of risk; return, and investment values.

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

Prerequisite: An upper division or graduate course in investments.

Security valuation, alternative instruments, portfolio theory, active and passive management techniques, asset allocation, performance measurement, use of derivative instruments in portfolio management, debt portfolio management techniques, ethical standards.

653. Case Studies in Financial Management (3)

Prerequisite: Business Administration 665.

Applies theory of finance to practice of financial decision-making. Includes valuation, mergers, and restructurings. Integrates theory and managerial judgment in a decision-making context. Case study format.

654. Seminar in International Business Finance (3)

Prerequisite: Business Administration 665.

International financial instruments, markets, and institutions; international trade and capital flows; foreign exchange risks and their management; direct and portfolio investment; implications for conduct of global business.

655. Seminar in Financial Markets (3)

Prerequisite: Business Administration 665.

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: Business Administration 665.

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. Financial Counseling (3) Cr/NC

Prerequisites: Advancement to candidacy and Finance 651.

Decision-making process and theory of individual financial needs. Planning and implementation of financial strategies that aid in meeting family goals. Counseling. Ethics. Preparation of financial plans using cases and individuals.

658. Seminar in Options and Futures (3)

Prerequisite: Business Administration 665.

Applications of options and futures in corporate finance and investments. Analytical and numerical methods of option pricing. Compound options and options in dividend paying assets. Options with stochastic exercise prices and options to exchange one risky asset for another.

659. Decision Making in the World Economy (3)

Prerequisite: Classified graduate standing.

Application of macroeconomic theory to business decision making, study of economic environment and government macroeconomic policy from a business viewpoint.

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.

705. Seminar in Estate Planning (3)

Prerequisite: Business Administration 665.

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 Land Markets and Urban Development Issues (3)

Prerequisite: Graduate standing.

Land use and policy issues affecting the spatial environments for enterprise decisions. Legal and institutional framework for basic land market functions and operations. Housing market demand and supply determinants. Development issues and models of urban land use.

783. Seminar in Real Estate Investment and Development (3)

Prerequisite: Graduate standing.

Analysis of real estate investment and development decisions by corporations, individuals and financial institutions. Market and feasibility analysis, taxation, financing and risk evaluation, portfolio considerations.

784. Seminar in Real Estate Finance and Valuation (3)

Prerequisite: Graduate standing.

Application of valuation theory to real property and related mortgage instruments in a market context. Market definition, data collection and analysis. Value determinants and new valuation technologies. Special valuation and financing issues and cases.

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.

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

In the College of Business Administration

OFFICE: Student Services 2411

TELEPHONE: (619) 594-5316

FAX: (619) 594-3675

Faculty

John M. Penrose, Ph.D., Professor of Information and Decision Systems, Chair of Department
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. Flatley, Ph.D., Professor of Information and Decision Systems
Richard A. Hatch, Ph.D., Professor of Information and Decision Systems
Alexis Koster, Ph.D., Professor of Information and Decision Systems (Graduate Adviser)
James R. Lackritz, Ph.D., Professor of Information and Decision Systems
Ronald J. Norman, Ph.D., Professor of Information and Decision Systems
Feraidoon Raafat, Ph.D., Professor of Information and Decision Systems (Graduate Adviser)
Robert J. Schlesinger, Ph.D., Professor of Information and Decision 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
Theophilus Addo, Ph.D., Associate Professor of Information and Decision Systems
Annette C. Easton, Ph.D., Associate Professor of Information and Decision Systems
George K. Easton, Ph.D., Associate Professor of Information and Decision Systems
William R. Feeney, Ph.D., Associate Professor of Information and Decision Systems (Graduate Adviser)
Carolena L. Lyons-Lawrence, Ph.D., Associate Professor of Information and Decision Systems
Yeong-Ling Yang, Ph.D., Associate Professor of Information and Decision Systems

Courses Acceptable on Master's Degree Programs in Business Administration

UPPER DIVISION COURSE

515. Advanced Programming for Business (3)

Prerequisite: Information and Decision Systems 315 or knowledge of one computer programming language.

Advanced programming for business applications in widely used programming languages. Advanced concepts of data structures used in business programming, control structures, and program structures. Selection of programming languages for particular purposes. Not open to students with credit in Information and Decisions Systems 383 or 384. (Formerly numbered Information and Decision Systems 415.)

GRADUATE COURSES

609. Management Information Systems (3)

Role of information in organizational management. Typical management information subsystems. Design and management of management information systems.

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 for 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.

687. Data Communications and Distributed Data Processing (3)

Prerequisite: Information and Decision Systems 680.
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 relationships to business decision making. Managing the computer center and information center.

691. Decision Support Systems (3)

Prerequisite: Credit or concurrent registration in Information and Decision Systems 688.
Design, implementation, and integration of computerized decision support systems into business management. Problem representation, modeling, and simulation.

695. Information Systems Development I (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.

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 596 and 696 applicable to a 30-unit master's degree.

697. Information Systems Development II (3)

Prerequisite: Information and Decision Systems 695.

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.

700. Artificial Intelligence Applications for Business (3)

Prerequisite: Information and Decision Systems 609.

Applications of artificial intelligence techniques to business. Strategies for representing knowledge. Knowledge engineering, knowledge base and inference. Use of consultation paradigms, languages, tools, and artificial intelligence environment. Developing expert systems for business.

705. Communication Strategies (3)

Prerequisite: Business Administration 654.

Development of advanced written, oral, and interpersonal communication strategies for the business environment.

740. Quantitative Methods for Managerial Decision Making (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.

741. Seminar in Systems Assessment and Deployment for Total Quality Management (3)

Prerequisite: Business Administration 662.

Use of systematic approaches in development of total quality management. Failure analysis, system reliability, Taguchi systems and robust design, quality function deployment, process evaluation, benchmarking, and Baldrige assessment.

742. Seminar in Computer Simulation for Business (3)

Prerequisites: Information and Decision Systems 609 and Business Administration 662.

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

743. Japanese Industrial and Production Systems (3)

Prerequisite: Economics 603.

Japanese industrial and production systems addressed holistically to include industrial grouping-Keiretsu system, industrial practices, new product development, production system, quality control and Kanban system, automated production technology, distribution system, integration of production and distribution, and competitive strategies.

744. Seminar in Total Quality Management and Productivity (3)

Prerequisite: Business Administration 662.

Philosophy and technology of total quality management as applied in business and industry. Quality and productivity applications of total quality control (TQC), statistical process control (SPC), and just-in-time (JIT) systems in industrial problems. Cases and examples from the United States, Japan, and other industrialized countries.

748. Seminar in Advanced Data Analysis (3)

Prerequisite: Business Administration 652.

Applications of various statistical techniques and design of experiments for business. Advanced ANOVA and Taguchi designs, multiple regression modeling methodologies, and multivariate techniques, such as factor analysis, judgement analysis, multiple discriminant analysis, multivariate analysis of variance, and canonical correlation.

749. Seminar in Applied Behavioral Measurement (3)

Prerequisite: Business Administration 652.

Measurement procedures useful in analyzing such areas as teamwork, leadership, job satisfaction, attitudes, motivation, total quality management, and customer satisfaction. Development and use of technologies including Likert, Thurstone, Guttman, paired-comparison, forced-choice, semantic-differential, C-E diagrams, and review of existing instruments used in business-related settings.

750. Project Management (3)

Prerequisite: Business Administration 662.

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.

752. Seminar in Materials Requirement Planning (3)

Prerequisite: Business Administration 662.

Product structure, master scheduling and materials requirement planning (MRP).

753. Global Manufacturing and Service Operations (3)

Prerequisite: Business Administration 662.

Operations management issues related to manufacturing and service delivery in a global context.

754. Seminar in Production and Operations Management (3)

Prerequisite: Business Administration 662.

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.

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.

797. Research (3) Cr/NC/SP

Prerequisite: Advancement to candidacy.

Research in the area of information and decision systems. 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.

Management

In the College of Business Administration

OFFICE: Student Services 3356
TELEPHONE: (619) 594-5306

Faculty

Kenneth E. Marino, Ph.D., Professor of Management, Chair of Department
James A. Belasco, Ph.D., Professor of Management
Mark C. Butler, Ph.D., Professor of Management (Graduate Adviser)
Michael L. Hergert, Ph.D., Professor of Management, Associate Dean and Director, Graduate Program, College of Business Administration
Alex F. De Noble, Ph.D., Professor of Management
Jaisingh V. Ghorpade, Ph.D., Professor of Management (Graduate Adviser)
David R. Hampton, Ph.D., Professor of Management
Mary B. Teagarden, Ph.D., Professor of Management (Graduate Adviser)
Penny L. Wright, Ph.D., Professor of Management
Sanford B. Ehrlich, Ph.D., Associate Professor of Management
Lawrence C. Rhyne, Ph.D., Associate Professor of Management
Craig P. Dunn, Ph.D., Assistant Professor of Management

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 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

626. Seminar in Policy Formulation (3)

Prerequisite: Business Administration 651.

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.

669. Human Resource Management (3)

Prerequisites: Business Administration 651.

Design of organizational systems for accomplishing work through individuals and groups. Strategic, legal, and ethical considerations in staffing, appraising, developing, and rewarding people at work. Not open to students with credit in Management 611.

670. Seminar in Staffing and Development Systems (3)

Prerequisite: Management 669.

Strategic and ethical considerations in staffing and human resource development. Design and operation of staffing and development systems. Review of practice, law, and other environmental forces influencing staffing and development activities.

671. Seminar in Comparative Industrial Relations (3)

Prerequisite: Business Administration 651.

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. Human Resource Appraisal and Reward Systems (3)

Prerequisite: Management 669.

Strategic and ethical considerations in appraising and rewarding people at work. Design and operation of appraisal and reward systems. Review of practice, laws, ethics, and other environmental forces influencing appraisal and reward activities.

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.

701. Organizational Theory and Design (3)

Prerequisite: Business Administration 651.

Managerial perspectives on organization in domestic and multinational arenas. Emphasis on organizational environments, strategy, goals, control, culture, structure, and technology. (Formerly numbered Management 601.)

710. Seminar in World Business Environment (3)

Prerequisite: Business Administration 651.

Nature, dimensions and motives of international business. Impact of environmental factors. Nature of multinational corporation, importance of national and multilateral controls and policies for international business management.

720. Seminar in Behavioral Sciences for Management (3)

Prerequisite: Business Administration 651.

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

721. Seminar in Group Processes and Leadership (3)

Prerequisite: Business Administration 651.

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)

Prerequisite: Business Administration 651.

Ethical and social aspects of current issues in business and society. Changing role of stakeholders including consumers, shareholders, and employees. Assessment of operation, functioning and regulation

of the market system.

723. Seminar in International Strategic Management (3)

Prerequisite: Completion of MBA core or MS prerequisites.

Strategic decision making in managing international enterprises. 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. Entrepreneurship (3)

Prerequisite: Business Administration 651.

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

727. Seminar in Organizational Change and Development (3)

Prerequisite: Business Administration 651.

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

729. Seminar in Organizational Issues (3)

Prerequisite: Business Administration 651.

Issues in organizations in modern society: organization design, environmental interface, and political processes. See Class Schedule for specific content.

731. Seminar in Strategic Management of Technology and Innovation (3)

Prerequisite: Completion of MBA core or MS prerequisites.

Assessment of technological competencies and formulation of entry strategies for high-technology markets. Managing project teams and high-technology professionals.

740. Seminar in Business Management and the Natural Environment (3)

Prerequisite: Graduate standing.

Environmental issues relating to business management. Topics include social and ethical approaches to the environment, environmental crises, and environmental movement. Cases and projects help students develop a philosophy integrating business and environmental concerns.

741. Seminar in Organization Power and Politics (3)

Prerequisite: Business Administration 651.

Management of power and politics in organizations as they relate to resource allocation, decisions, personnel evaluation, and strategy and policy issues.

742. Seminar in Business and the Good Society (3)

Prerequisite: Graduate standing.

Role of the firm in creating the “good society” through in-depth study of social and philosophical principles underlying business enterprise. Assumptions underlying capitalist economic thought are surfaced, and relationship between “market failure” and “government regulation” examined.

743. Seminar in Business Plan Development (3)

Prerequisite: Business Administration 651.

Principles and techniques for developing a business plan.

790. Directed Readings in Management (3) Cr/NC

Prerequisite: Advancement to candidacy.

Preparation for the comprehensive examination for those students in the MBA program under Plan B.

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.

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

In the College of Business Administration

OFFICE: Student Services 3356
TELEPHONE: (619) 594-5317

Faculty

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
Kathleen A. Krentler, D.B.A., Professor of Marketing (Graduate Adviser)
Massoud M. Saghafi, Ph.D., Professor of Marketing
Donald Sciglimpaglia, D.B.A., Professor of Marketing
Ronald W. Stampfl, Ph.D., Professor of Marketing
Pradeep K. Tyagi, Ph.D., Professor of Marketing (Graduate Adviser)
Dinoo T. Vanier, Ph.D., Professor of Marketing
Thomas R. Wotruba, Ph.D., Professor of Marketing

Courses Acceptable on Master's Degree Programs in Business Administration

GRADUATE COURSES

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.)

701. Seminar in Marketing Planning and Programs (3)

Prerequisite: Business Administration 655.

Analysis and planning of marketing programs. Emphasis on quantitative assessment, market measurement and forecasting, budgeting, organization and development of marketing strategy. Integration of marketing programs concerning product plans, pricing, promotion and distribution.

760. Seminar in Consumer Behavior (3)

Prerequisite: Business Administration 655.

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

761. Product Innovation Management (3)

Prerequisite: Business Administration 655.

New product development and issues related to overall management of product innovation in context of entrepreneurial opportunity, start-up ventures and existing organizations. Focus on planning, design, and implementation of marketing strategy.

762. Seminar in Advertising Management (3)

Prerequisite: Business Administration 655.

Advertising and sales promotion in relation to the planning and implementation of marketing strategy.

763. Seminar in Sales Management (3)

Prerequisite: Business Administration 655.

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

766. Seminar in Marketing Research (3)

Prerequisites: Business Administration 655 and Information and Decision Systems 602.

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

767. Seminar in Business Marketing Management (3)

Prerequisite: Business Administration 655.

Management of marketing decisions particular to organizational customers and prospects. Emphasizes marketing to private, commercial, institutional, and governmental customers in both domestic and global markets.

769. Seminar in International Marketing (3)

Prerequisite: Business Administration 655.

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

779. Advanced Marketing Strategy (3)

Prerequisites: Business Administration 655 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.

790. Directed Readings in Marketing (3) Cr/NC

Prerequisite: Advancement to candidacy.

Preparation for the comprehensive examination for those students in the MBA program under Plan B.

797. 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.

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.

OFFICE: Chemistry/Geology 303
TELEPHONE: (619) 594-5595

Chemistry

In the College of Sciences

Faculty

Stephen B. W. Roeder, Ph.D., Professor of Chemistry and Physics,
Chair of Department
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 (Graduate Adviser)
Vincent J. Landis, Ph.D., Professor of Chemistry
Herbert G. Lebherz, Ph.D., Professor of Chemistry
Robert P. Metzger, Ph.D., Professor of Chemistry
Clay M. Sharts, Ph.D., Professor of Chemistry
William E. Stumph, Ph.D., Professor of Chemistry
William G. Tong, 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
Joseph A. Adams, Ph.D., Assistant Professor of Chemistry
David P. Pullman, Ph.D., Assistant Professor of Chemistry
Diane K. Smith, Ph.D., Assistant Professor of Chemistry
Patrick J. Walsh, Ph.D., Assistant Professor of Chemistry

Associateships

Graduate teaching associateships and graduate nonteaching associateships in chemistry are available to a limited number of qualified students. Application blanks and additional information may be secured from the graduate adviser in the Department of Chemistry.

General Information

The Department of Chemistry in the College of Sciences offers graduate study leading to the Master of Arts, the Master of Science and the Doctor of Philosophy degrees in chemistry. The Ph.D. degree is offered jointly with the Department of Chemistry at the University of California at San Diego. Thesis research in all graduate programs is offered in the five traditional areas of chemistry, i.e., analytical chemistry, biochemistry, inorganic chemistry, organic chemistry, and physical chemistry.

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), 200 (FT), and 500 (FT) MHz nuclear magnetic resonance spectrometers; CW and FT infrared spectrometers; ultraviolet-visible spectrometric instruments for both atomic and molecular emission and absorption studies; electrochemical instrumentation for potentiometric, voltametric and coulometric measurements; radiochemical 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 year 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. 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 may be requested to present a seminar on the 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. Chemistry 711*, 791, 792 and 799A are required. A student must pass a final oral examination on his/her thesis.

* Chemistry 762 may be substituted for Chemistry 711, with approval of the graduate adviser, by students whose thesis project is in the area of biochemistry.

Section II. Doctoral Program

(Major Code: 19051)

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 expected to present the equivalent of one year of physics and of mathematics at least through integral calculus. Students should be prepared to take placement examinations which will be administered by a joint committee and will cover the fields of inorganic, organic and physical chemistry.

On admission to the program, the student is guided by Requirements for the Doctoral Degree Program given in Part Two of this bulletin. Students will normally spend their first year in the program completing their year of residency at the University of California, San Diego. It is desirable for the student to complete the qualifying examination by the end of the fifth semester and to be advanced to candidacy.

Faculty

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: M. Thiemans

Committee Members: Kyte, Siegel, Sinha, Trogler

San Diego State University:

Graduate Adviser: Edward J. Grubbs

Committee Members: Bennett, Chatfield, Cobble, Coffey, Cole, Dahms, Grubbs, Leberherz, Pullman, Roeder, Sharts, Smith, Stumph, Tong

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

UPPER DIVISION COURSES

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-520B. Inorganic Chemistry (3-3) I, II

Prerequisite: Credit or concurrent registration in Chemistry 410B. Chemistry 520A is prerequisite to 520B.

Nature of chemical bond and 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 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 410A. Recommended: Chemistry 417 and 457.

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) I

Prerequisites: Chemistry 431 and credit or concurrent registration in Chemistry 410B; concurrent registration in Chemistry 457 for undergraduate students only.

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.

Expanded treatment of instrumental methods for separation and quantification not covered in Chemistry 550. Non-instrumental separations, quantitative organic microanalysis, sampling theory and techniques, reaction rate applications and interpretation of experimental data.

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.

567. Biochemistry Laboratory (3)

One lecture and six hours of laboratory.

Prerequisite: 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.

571. Environmental Chemistry (3)

Prerequisites: Chemistry 231 and 251; consent of instructor for all other majors.

Fundamentals of chemistry applied to environmental problems. Chemistry of ecosystems; analysis of natural constituents and pollutants; sampling methods; transport of contaminants; regulations and public policy.

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

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.

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.

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.

752. Mass Spectrometry (3)

Prerequisites: Chemistry 410B and 550.

Theory and practice in analysis of volatile and involatile organic and inorganic compounds, basic design principles, theory of ionization processes; interpretation of mass spectra.

753. Analytical Spectroscopy (3)

Prerequisite: Chemistry 550.

Theory and application of atomic and molecular absorption, emission and fluorescence methods. Modern optical instrumentation and methods of analysis. Nonlinear laser spectroscopic methods in chemical analysis.

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 eucaryotic 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)

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

797. Research (1-3) Cr/NC/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 in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

897. Doctoral Research (1-3) Cr/NC/SP

Prerequisite: Admission to the doctoral program.

Independent investigation in the general field of the dissertation.

899. 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.

City Planning

Refer to the section on Public Administration and Urban Studies.

Child and Family Development

OFFICE: Professional Studies and Fine Arts 431
TELEPHONE: (619) 594-5380
FAX: (619) 594-6974

In the College of Professional Studies and Fine Arts

Faculty

- *Francine Deutsch, Ph.D., Professor of Child and Family Development, Chair of Department
- *Carolyn K. Balkwell, Ph.D., Professor of Child and Family Development (Graduate Adviser)
- Helen Warren Ross, Ph.D., Professor of Child and Family Development

Faculty Committee for Child and Family Development

- *Patricia T. Cegelka, Ed.D., Professor of Special Education
- Shoshana A. Grossbard-Shechtman, Ph.D., Professor of Economics
- *Charles F. Hohm, Ph.D., Professor of Sociology
- Melbourne F. Hovell, Ph.D., Professor of Public Health
- Kenji Ima, Ph.D., Professor of Sociology
- *Kathleen B. Jones, Ph.D., Professor of Women's Studies
- Eleanor W. Lynch, Ph.D., Professor of Special Education
- *Louis M. Rea, Ph.D., Professor of Public Administration and Urban Studies
- Judy S. Reilly, Ph.D., Professor of Psychology
- *E. Percil Stanford, Ph.D., Professor of Social Work, Director of the University Center on Aging
- *James L. Wood, Ph.D., Professor of Sociology
- Maria E. Zuniga, Ph.D., Professor of Social Work
- Shelly E. Chandler, Ph.D., Associate Professor of Sociology
- Belinda D. Karge, Ph.D., Associate Professor of Special Education
- Joseph M. Price, Ph.D., Associate Professor of Psychology
- Adelaida R. Del Castillo, M.A., Assistant Professor of Mexican American Studies
- Vanessa L. Malcarne, Ph.D., Assistant Professor of Psychology

* Serves on the Faculty Governing Board which makes recommendations on admissions, curriculum, and thesis committee membership.

For information regarding graduate associateships, coursework, and research experience leading to a Master of Science degree in child development, contact the adviser, Dr. Carolyn K. Balkwell.

General Information

The Department of Child and Family Development, in the College of Professional Studies and Fine Arts, offers interdisciplinary graduate study leading to the Master of Science degree in child development. Graduate teaching associateships and graduate associateships in child development may be available to a limited number of qualified students.

Master of Science Degree in Child Development

The Master of Science degree in child development is only one of two child development programs available in the CSU. With 106 community college child development programs, following the mandate of the Ryan Act, in California and 13 undergraduate programs within the CSU system, the M.S. program in child development plays a major role in training professionals for the State and region.¹ The Department of Child and Family Development plays a leadership role in integration of curricula for community colleges and the CSU.²

Child development is an interdisciplinary area of study. The Master of Science degree, administered by the Department of Child and Family Development, draws on the expertise of an outstanding multidisciplinary faculty who are committed to the study of children within the context of diverse families and communities and who are from the following areas: Economics, Gerontology, Mexican American Studies, Psychology, Public Administration and Urban Studies, Public Health, Special Education, Social Work, Sociology, and Women's Studies. Emphasis in the program is placed on the central issue of "Child and Family Development Interventions" and offered through 13 courses from eight different departments.

Research interests and areas of expertise of the faculty include: abuse prevention, child and family advocacy, AIDS, attachment/bonding, children's literature, cross-cultural studies, curriculum development and evaluation, demography, economic development, families of divorce, full-inclusion programs for early interventions, intergenerational relationships, marital adjustment, multiethnic families, parent-child relationships, parent training programs, peer relationships, political interventions, public policy, cross-cultural studies, stress management and coping strategies, and train the trainers models for service delivery to children and families.

Opportunities exist to participate in an ongoing multicultural project studying images of grandparents and the elderly in children's books from different cultures. To date languages include Arabic, French, Hebrew, English, Russian, and Spanish. If you are interested in this project please contact Dr. Shulamit Ritblatt.

In addition, the Interdisciplinary Training Program on Early Intervention offers students field practice with transdisciplinary teams in hospitals, schools, and agency settings. Other field experience programs offer students supervised work in community agencies and children's programs. The Child Study Center focuses on undergraduate and graduate training and research by operating a Campus Children's Center in collaboration with SDSU's Associated Students and San Diego City Schools. All children's programs are mainstreamed and a wide range of special needs and at-risk populations are served by a full inclusion program.

¹ Legislative linkages include Social Security Title IVA (Title XX) Title 5 and Title 22.

² In collaboration with the Grossmont-Cuyamaca District strategies for competency-based curricula across all levels of child development programs throughout the State are being designed.

Graduates with competencies in either the Specialization of Child Development Interventions or the Specialization of Family Development Interventions qualify for administrator, coordinator, or service provider positions in preschools, day care centers, schools, hospitals, hospice centers, clinics, residential institutions, counseling centers, mental health centers, public welfare agencies, family service agencies, family planning clinics, community programs, business and industry, and government agencies. Graduates also qualify as community college instructors and can continue their education for the doctoral degree in human development or a related field.

Admission to Graduate Study

Students will be admitted to the graduate program in child development only after careful consideration of their qualification by the Child Development Faculty Governing Board. 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 child development must meet the following requirements:

1. A bachelor's degree in child development or related fields or consent of the Child Development Faculty Governing Board.
2. Satisfy the prerequisites of courses in the program of study. If students' undergraduate preparation is deemed insufficient, students will be required to complete specified courses in addition to the minimum of 30 units required for the master's degree in child development.
3. A grade point average of 3.0 in the last 60 semester units attempted.
4. Completion of the GRE General Test with no less than a score of 500 on the verbal section and no less than a score of 500 on the quantitative section. An applicant must take the GRE General Test by the end of the first semester of residence in the department. Continuation in the program may be contingent upon fulfilling this condition.

To be considered for admission to the graduate program in child development, an applicant must submit the following for review by the Child Development Faculty Governing Board which is in addition to the common admissions form:

1. Applicant's letter of intent which includes reason for seeking the degree and career goals.
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, experiences, abilities, and career goals as they apply to the applicant's desire for a graduate degree in child development.
4. Completion of a telephone or in person interview conducted by one or more members of the Child Development Faculty Governing Board.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Two of this bulletin, have identified a thesis research adviser, taken CFD 790 with a grade of B or better, and have had their research proposals approved by their committees.

Specific Requirements for the Master of Science Degree in Child Development

(Major Code: 08231)

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 a graduate program of at least 30 units including at least 21 units from courses listed as acceptable to master's degree programs in child development. At least 18 units must be in 600- and 700-numbered courses.

All students must complete:

1. A core sequence of four courses composed of Child and Family Development 670, 671, 790 and Psychology 670A or Public Health 602.
2. A 15-unit specialization, chosen from the list below and approved by the adviser.
3. Child and Family Development 799A, Thesis.

Specializations*

Child Development Interventions: Child and Family Development 570, 590, and nine units selected from Child and Family Development 537, 577, 697; Public Administration 570, 660, 670; Special Education 528; Social Work 781; Women's Studies 605.**

Family Development Interventions: Child and Family Development 536, 634, and nine units selected from Child and Family Development 578, 697; Gerontology 520, 696; Sociology 517, 527, 528.

* 596 may be substituted as appropriate; 798 special study available.

**Early Intervention Specialist Certificate is being revised and may be completed in conjunction with this specialization. See Department of Communicative Disorders for details.

Courses Acceptable on Master's Degree Program in Child Development

UPPER DIVISION COURSES

536. Family Study (3) II

Prerequisites: Child and Family Development 335 and Sociology 101.

Integration of family theories and research findings. Family attitudes and practices in different cultures, social classes, and ethnic groups. Emphasis on individual and social attitudes toward families. (Formerly numbered Family Studies and Consumer Sciences 536.)

537. Child Abuse (3) II

Prerequisites: Child and Family Development 270 and 371 for majors; completion of the General Education requirement in Explorations for non-majors; consent of instructor for graduate students.

Multidisciplinary approach to child abuse including study of child maltreatment and mistreatment, child neglect, and sexual abuse. (Formerly numbered Family Studies and Consumer Sciences 537.)

570. Infant/Toddler Development (3) I

Prerequisites: Child and Family Development 270 or Psychology 230. Recommended: Biology 350 and Psychology 260. **Proof of completion of prerequisite required:** Copy of transcript.

Physiological, psychological, social and cultural development of the human organism from birth through three years of age. (Formerly numbered Family Studies and Consumer Sciences 570.)

577. Advanced Administration of Child Development Programs (3) II

Prerequisite: Child and Family Development 477. **Proof of completion of prerequisite required:** Copy of transcript.

Problem analysis and development of successful organizational strategies for child development program delivery. Leadership, effective communication, social and ethical issues from a multicultural perspective. (Formerly numbered Family Studies and Consumer Sciences 577.)

578. Parent-Child Relationships Across the Life Span (3) I

Prerequisites: Child and Family Development 335 and 370.

Multidisciplinary approach to the parent-child relationship as it continues and changes throughout the life of the dyad, including study of normative and nonnormative life events. (Formerly numbered Family Studies and Consumer Sciences 578.)

590. Developmental Dysfunctions (3) I

Prerequisites: Child and Family Development 270 or Psychology 230, and twelve upper division units in child and family development for majors; completion of General Education requirement in Explorations for non-majors; consent of instructor for graduate students. **Proof of completion of prerequisites required:** Copy of transcript.

Adaptive and maladaptive processes throughout the life span with emphasis on emotional, psychological, and physical disorders. Etiology, development, and adjustment. (Formerly numbered Family Studies and Consumer Sciences 590.)

596. Advanced Studies in Child and Family Development (1-6)

Prerequisite: Nine upper division units in child and family development.

Advanced study of selected topics. 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 nine units of 596. No more than six units of 596 may be applied to either the bachelor's or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

597. Child and Family Development Field Experiences (1) I, II

Prerequisites: Twelve units in the child development major and concurrent registration in Child and Family Development 597L. **Proof of completion of prerequisites required:** Copy of transcript.

Developmental theories and techniques in child development. (Formerly numbered Family Studies and Consumer Sciences 597.)

597L. Child and Family Development Field Experiences Laboratory (2) Cr/NC I, II

Prerequisites: Twelve units in the child development major and concurrent registration in Child and Family Development 597. **Proof of completion of prerequisites required:** Copy of transcript.

Directed experiences in the practical application of developmental theories and techniques in various community agencies. (Formerly numbered Family Studies and Consumer Sciences 597L.)

GRADUATE COURSES

634. Seminar in Family Processes (3)

Prerequisite: Child and Family Development 335.

Analysis of selected research in family structure, development, and crisis. Not open to students with credit in Family Studies and Consumer Sciences 631 and 637.

670. Seminar: Child Development and Guidance (3)

Prerequisite: Six upper division units in child and family development.

Emphasis on personality theories and on research and clinical findings relevant to systematic study of human development and the guidance of children. (Formerly numbered Family Studies and Consumer Sciences 670.)

671. Seminar in Advanced Readings in Human Development (3)

Prerequisite: Six upper division units in child and family development.

Analysis of selected research in human development. (Formerly numbered Family Studies and Consumer Sciences 671.)

697. Advanced Field Experiences (3) Cr/NC

Prerequisite: Child and Family Development 670 or 671.

Advanced application of human developmental theories and techniques in various community settings. (Formerly numbered Family Studies and Consumer Sciences 697.)

790. Research Methods (3)

Prerequisite: Approval of graduate program adviser.

Analysis of research in the area of child and family development; criteria and procedures for conducting research. (Formerly numbered Family Studies and Consumer Sciences 790.)

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

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.

Communication

In the College of Professional Studies and Fine Arts

OFFICE: Professional Studies and Fine Arts 222

TELEPHONE: (619) 594-5450

FAX: (619) 594-6246

Faculty

Barbara W. Hartung, Ph.D., Professor of Communication, Executive Assistant to the President, Interim Director, School of Communication

Janis F. Andersen, Ed.D., Professor of Communication, Associate Dean, Graduate Division and Research

Peter A. Andersen, Ph.D., Professor of Communication
Hayes L. Anderson, Ph.D., Professor of Communication, Associate Dean, College of Professional Studies and Fine Arts

Wayne A. Beach, Ph.D., Professor of Communication

Glen M. Broom, Ph.D., Professor of Communication

James K. Buckalew, Ph.D., Professor of Communication

David M. Dozier, Ph.D., Professor of Communication, Graduate Director, School of Communication

Susan A. Hellweg, Ph.D., Professor of Communication

Joseph S. Johnson, Ph.D., Professor of Communication

Myron W. Lustig, Ph.D., Professor of Communication

Michael R. Real, Ph.D., Professor of Communication, (Graduate Adviser to Television, Film, and New Media Production, Specializations in Critical-Cultural Studies, Telecommunications and Media Management)

Larry A. Samovar, Ph.D., Professor of Communication

Brian H. Spitzberg, Ph.D., Professor of Communication

Al R. Weitzel, Ph.D., Professor of Communication

K. Tim Wulfemeyer, Ed.D., Professor of Communication

Carroll Parrott Blue, M.F.A., Associate Professor of Communication

Joel J. Davis, Ph.D., Associate Professor of Communication

(Graduate Adviser to Specializations in Advertising and Public Relations, New Media Studies, News and Information Studies)

George N. Dionisopoulos, Ph.D., Associate Professor of Communication

Gregory C. Durbin, M.F.A., Associate Professor of Communication

Patricia J. Geist, Ph.D., Associate Professor of Communication
(Graduate Adviser to Specializations in Interaction Studies, Intercultural and International Studies)

Martha M. Lauzen, Ph.D., Associate Professor of Communication

Donald R. Martin, Ph.D., Associate Professor of Communication

Thomas C. Meador, M.A., Associate Professor of Communication

Barbara Mueller, Ph.D., Associate Professor of Communication

Gregory R. Miller, Ph.D., Assistant Professor of Communication

Joseph E. Spevak, Ph.D., Assistant Professor of Communication

John M. Eger, J.D., The Lionel Van Deerlin Professor of Communication and Public Policy

Jonathan Freedman, Adjunct Professor in Communication

Jack Ofield, Filmmaker in Residence in Communication

Associateships

Graduate students are employed in the School of Communication in teaching, research, and other areas. Graduate teaching associateships in communication are available to a limited number of qualified students. A limited number of graduate assistantships also are available in the School of Communication for those with academic or professional experience in various research and creative areas. Contact the Graduate Director or any of the graduate advisers for further information.

Call (619) 594-5450 for an application.

General Information

The School of Communication offers graduate study leading to the Master of Arts degree in communication or the Master of Arts degree in television, film, and new media production. The Master of Arts degree in communication prepares students either for additional graduate work leading to a doctoral degree or for various careers in industry. The Master of Arts degree in television, film, and new media production prepares students for careers in creative areas of media design and production.

The School of Communication houses the Production Center for Documentary and Drama, which is integral to the technical and artistic training of senior students in film, video and the interface between these technologies, and in documentary production. In the Center, students participate in full-scale location and studio production and are mentored by the Filmmaker in Residence in the creation of their required course film and video projects.

Master of Arts Degree in Communication

The Master of Arts degree in communication provides advanced studies in seven areas of specialization, including advertising and public relations, critical-cultural studies, interaction studies, intercultural and international studies, new media studies, news and information studies, and telecommunications and media management. Each specialization prepares students for one of three career paths: 1) Rigorous theoretical and methodological studies prepare students for additional graduate work at the doctoral level. 2) Studies in specific content areas prepares students for leadership positions in key communication industries and professional areas. 3) Combining studies in communication with selected courses in the College of Education prepare students for teaching careers at the community college level. Placement of communication graduates in doctoral programs is excellent; speech communication professors recently rated this program as one of the top five master's programs in the nation. Other graduates occupy leadership positions in advertising, human resource development, media and telecommunications management, new media, organizational communication, organizational training, public relations, and telecommunications policy.

Research interests of faculty and students include conversation analysis, interpersonal communication, rhetorical criticism, relational communication, group communication, organizational communication, social influence processes, communication message and program strategies, instructional processes, media organizations and professionals, audience uses of media, media history, media ethics, new media and technologies, media criticism, media management, political communication, communication regulation and policy, international communication and intercultural communication.

Graduate students in the School of Communication have access to computer equipment to support research endeavors. Master's degree students are encouraged to work with faculty on research projects and to develop their own research programs. In addition, the School of Communication operates a large color television studio, a film pro-

duction center, and a radio complex as instructional and research facilities. The School collaborates with other departments in the College of Professional Studies and Fine Arts to operate the Multimedia Center.

Admission to Graduate Study.

Students will be admitted for the fall and spring semester. For fall admission, applications must be received by March 1. For spring admission, applications must be received by November 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, students applying for admission to the Master of Arts degree in communication are evaluated according to the following criteria:

1. Undergraduate major or minor in advertising, communication, film, journalism, radio-television, speech communication, public relations, or a related communication discipline. Those lacking adequate undergraduate preparation may be admitted conditionally to the program and are required to take one or more proficiency courses identified for each specialization, as determined by the graduate adviser for that specialization. Proficiency courses do not count toward the 30 units of a student's graduate program.
2. Minimum grade point average of 3.4 in the last 60 semester units attempted or an overall undergraduate grade point average of 2.8 with a 3.0 in the last 60 semester units attempted.
3. Acceptable Graduate Record Examination (GRE) scores on the verbal and quantitative sections of the test.
4. Three letters of recommendation from academic references that speak to the student's ability to succeed in graduate studies. Students applying to the specializations in advertising and public relations, news and information, and telecommunications and media management may substitute up to two professional references for academic references.
5. A personal Statement of Purpose composed by the applicant that: 1) identifies the degree specialization that provides the best fit with the applicant's objectives, 2) describes the applicant's undergraduate and/or professional preparation for graduate studies in the program and specialization, and 3) articulates the personal and/or career objectives that graduate studies in communication will help the applicant pursue.

All documents required for admission, including letters of recommendation and Statement of Purpose, are submitted directly to Graduate Admissions, San Diego State University, San Diego, CA 92182-7455.

Advancement to Candidacy

In addition to meeting the general requirements for advancement to candidacy described in Part Two of this bulletin, students seeking the Master of Arts degree in communication must complete Communication 600A and 600B with a B grade or better prior to advancement.

Specific Requirements for the Master of Arts Degree

(Major Code: 06011)

In addition to meeting the requirements for the Master of Arts degree as described in Part Two of this bulletin and the requirements for one of the following seven communication specializations, the student must complete a minimum of 30 units in courses acceptable on master's degree programs. At least 18 units of the total program must be in courses numbered 600-799. In addition to courses in the School of Communication, students may take six units of graduate coursework in other departments and schools of the University, depending on their communication specialization and with prior approval of their graduate adviser.

Specialization in Advertising and Public Relations

This specialization offers systematic training for individuals who seek advanced knowledge of advertising and public relations theory for application to careers in advertising, public relations, or allied field or who plan to continue studies of advertising or public relations at the doctoral level.

Proficiency Requirements. Undergraduate degree in journalism, advertising, public relations, or related field. Students lacking an undergraduate background in advertising or public relations are required to select 12 units from Communication 460, 461, 480, 481; Journalism 220.

Graduate Courses. Students may select Plan A, thesis, by completing Communication 799A (3 units) or, if Plan B is selected, the student must complete three units of 600-700 level coursework in the School of Communication and pass the Comprehensive Examination in Communication. With approval of the graduate adviser, at least nine units from Communication 540, 560, 565, 580, 585, 777, 780, 785; and 12 units from Communication 630, 640, 696, 708, 725, 770, 775, 792; Sociology 527, 531, 537, 556, 557, 602, 603, 700, 740, 760, 797, or from other graduate courses outside the School of Communication. No more than six units may be taken outside the School of Communication.

Specialization in Critical-Cultural Studies

This specialization offers a wide-ranging examination of criticism, culture, and communication, drawing from international developments in critical studies and cultural studies as incisive intellectual activities. Rhetorical criticism, film theory, postmodernism, and related but diverse sources prepare students for scholarly or applied careers in communication.

Proficiency Requirements. At least three undergraduate courses in media history and criticism and/or rhetorical theory and criticism.

Graduate Courses. Student may select Plan A, thesis, by completing Communication 799A (3 units) or, if Plan B is selected, the student must complete three units of 600-700 level coursework in the School of Communication and pass the Comprehensive Examination in Communication. Requirements include Communication 640 and at least six units selected from Communication 545, 590, 630, 740, 745, and at least six additional units from Communication 545, 590, 630, 700, 701, 707, 708, 740, 745, 747, 755, 760, 764, 766, 775, 792. With

approval of the graduate adviser, six units of electives selected from Communication 500-599; Anthropology 580, 582, 603; Television, Film, and New Media 615, 660; Women's Studies 515, 590, 603, 604; or other graduate courses outside the School of Communication. No more than six units may be taken outside the School of Communication.

Specialization in Interaction Studies

This specialization recognizes interaction as the original and fundamental communication process, as well as the predominant means through which social life is practically accomplished. Systematic attention is given to the organization of interaction across diverse social relationships, activities, and contexts.

Proficiency Requirements. Students lacking an undergraduate background in communication are required to select 12 units from Communication 371, 406, 415, 445, 530, 535, 579, 583, 584, 592.

Graduate Courses. Students may select Plan A, thesis, by completing Communication 799A (3 units) or, if Plan B is selected, the student must complete three units of 600-700 level coursework in the School of Communication and pass the Comprehensive Examination in Communication. With approval of the graduate adviser, a minimum of nine units selected from Communication 630, 706, 715, 730, 735, 750, 775, 791, 792, 798; and 12 units of electives in Communication courses at the 500-700 level not listed as specialization courses above; or Anthropology 580, 603, 604; Linguistics 525, 551, 651; Philosophy 531; Psychology 745; and may include up to six units of graduate coursework outside the School of Communication.

Specialization in Intercultural and International Studies

This specialization recognizes the growing need for international and intercultural understanding in a world made smaller by increased travel and improved communication technologies. The globalization of communication enterprises increases the need for improved international understanding as well as increased professional competence in dealing with enterprises that transcend national borders.

Proficiency Requirements. No additional proficiency requirements.

Graduate Courses. Students may select Plan A, thesis, by completing Communication 799A (3 units) or, if Plan B is selected, the student must complete three units of 600-700 level coursework in the School of Communication and pass the Comprehensive Examination in Communication. With approval of the graduate adviser, a minimum of nine units selected from Communication 591, 715, 730, 770, 775; and three units selected from the following methods courses: Communication 620, 630, 640; and nine elective units of graduate courses selected from the School of Communication; or Anthropology 580, 582, 583, 600, 603, 604, 620, 621; Women's Studies 530, 580, 605; or courses in other departments relevant to intercultural and international studies. No more than six units may be taken outside the School of Communication.

Specialization in New Media Studies

This specialization involves advanced studies of emerging communication technologies and their impact on the communication industries and professions, as well as society as a whole. Such studies help students pursue careers involving new media in communication industries and in education.

Proficiency Requirements. No additional proficiency requirements.

Graduate Courses. Students may select Plan A, thesis, by completing Communication 799A (3 units) or, if Plan B is selected, the student must complete three units of 600-700 level coursework in the School of Communication and pass the Comprehensive Examination

in Communication. With approval of the graduate adviser, a minimum of nine units, of which six must be at the 600-700 level selected from Communication 505, 540, 555, 575, 591, 596, 700, 705, 740, 760, 762, 764. Six units from the following research courses: Communication 610, 620, 630, 640, 725; Sociology 602, 603, 760; and six units of electives from communication courses numbered 500-799; Computer Science 520, 524, 530, 532; Educational Technology 540, 541, 544, 553, 572, 640, 653, 685; Information and Decision Systems 609, 688, 705; or Sociology 527, 531, 537, 556, 557, 602, 603, 700, 740, 760, 797. No more than six units may be taken outside the School of Communication.

Specialization in News and Information Studies

This specialization involves advanced studies of journalistic practices in print and electronic media, including ethics, history, law, and the impact of journalistic practices on society as a whole. Such studies serve those pursuing careers in journalism who seek a broader and deeper understanding of the profession and its impact on society and those planning to continue studies at the doctoral level

Proficiency Requirements. Undergraduate coursework (three courses) in writing for the media, principles of journalism, and information gathering and reporting.

Graduate Courses. Students may select Plan A, thesis, by completing Communication 799A (3 units) or, if Plan B is selected, the student must complete three units of 600-700 level coursework in the School of Communication and pass the Comprehensive Examination in Communication. With approval of the graduate adviser, a minimum of nine units, of which six must be at the 600-700 level selected from Communication 500, 502, 503, 696, 701, 705, 708, 725, 770, 775; and 12 units of electives in Communication at the 500-700 level; Sociology 527, 531, 537, 556, 557, 602, 603, 700, 740, 760, 797; or other graduate courses outside the School of Communication. No more than six units may be taken outside the School of Communication.

Specialization in Telecommunications and Media Management

This specialization involves advanced study of management principles and practices to enhance conceptual understandings and to improve entrepreneurial and organizational skills.

Proficiency Requirements. No additional proficiency requirements.

Graduate Courses. Students may select Plan A, thesis, by completing Communication 799A for 3 units or, if Plan B is selected, the student must complete three units of 600-700 level coursework in the School of Communication and pass the Comprehensive Examination in Communication. With approval of the graduate adviser, a minimum of nine units from Communication 700, 705, 762, 764; and 12 units of electives from graduate courses in the School of Communication or graduate courses in other departments appropriate to studies in this specialization. No more than six units may be taken outside the School of Communication.

Master of Arts Degree in Television, Film, and New Media Production

The School of Communication, in the College of Professional Studies and Fine Arts, offers graduate study leading to the Master of Arts degree in television, film, and new media production. This degree is especially useful for those pursuing careers in film, television, radio, new media, or related production activities where sophisticated and disciplined ability to conceive, initiate and complete original media messages is required. Graduates of this program occupy leadership positions in the film and telecommunications industries. This degree requires advanced study in the history and criticism of broadcasting and film; scriptwriting; financing, preproduction, and postproduction; advanced audio, video, and film production; broadcast and film performance; international broadcasting and cinema; educational and instructional media; and development of production expertise in a wide range of emerging communication technologies. The Master of Arts degree in television, film, and new media production emphasizes advanced media design and production. Admission to this degree program normally requires undergraduate preparation or equivalent professional experience, documented through submission of a portfolio of previous creative activity. 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 School of Communication operates a large color television studio and a radio complex as teaching facilities. KPBS-TV and KPBS-FM, public broadcasting stations for San Diego, are located on campus and encourage student involvement. San Diego State University operates a closed-circuit instructional television service for the entire campus, a student-operated radio station (KCR), computer facilities, the International Center for Communications, and the Multimedia Center

Admission to Graduate Study

Students will be admitted to the graduate program only in the fall semester and applications must be received by the School of Communication by 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, students applying for admission to the Master of Arts degree in television, film, and new media production are evaluated according to the following criteria:

1. Undergraduate major or minor in radio and television, film, or a related communication discipline. Those lacking adequate undergraduate preparation or equivalent professional experience for the program will be required to complete one or more lower division and upper division courses as determined by the graduate adviser. Such courses do not apply toward the 30 graduate units required for the degree.
2. Minimum overall undergraduate grade point average of 2.8 and 3.0 in the last 60 semester units attempted.
3. Acceptable Graduate Record Examination (GRE) scores on the verbal and quantitative sections of the test.
4. Three letters of recommendation. At least one letter from an academic reference and at least one letter from a professor or professional acquainted with the applicant's creative activities.
5. A personal Statement of Purpose, composed by the applicant that discusses the applicant's background, interests, and abilities as they apply to the desire for an advanced degree in telecommunications at San Diego State University.
6. Applicants must be prepared to submit a portfolio of previous creative activity.

Admission to the program is competitive and satisfying these requirements does not guarantee admission. The decision to admit is based on consideration of the entire application file; promising applicants in unusual circumstances are encouraged to apply.

Students accepted for graduate study in the Master of Arts degree in television, film, and new media production are initially admitted with conditional graduate standing (classified). Full classified standing is awarded only after the student has completed Television, Film, and New Media 600 with a grade of B or better. In addition, all students must meet the requirements for classified standing described in Part Two of this bulletin.

Advancement to Candidacy

In addition to meeting the general requirements for advancement to candidacy described in Part Two of this bulletin, students seeking the Master of Arts in television, film, and new media production must complete Television, Film, and New Media 600 and 702 with a grade of B or better prior to advancement.

Specific Requirements for the Master of Arts Degree

(Major Code: 06031)

Candidates for the Master of Arts degree in television, film, and new media production must complete 30 units of coursework and to include the following:

1. Communication 799A (Plan A, the thesis option, is required of all students in the program), Television, Film, and New Media 600 (required for classified graduate standing), and 702.
2. With approval of the graduate adviser, 21 additional graduate units in Television, Film, and New Media, Communication, and other departments, of which nine units must be at the 600-700 level.
3. No more than nine units of electives outside the School of Communication.

Courses Acceptable on Master's Degree Programs in Communication and Television, Film, and New Media Production

Communication

(Unless otherwise noted, all Speech Communication courses are now listed as Communication courses.)

UPPER DIVISION COURSES

500. Current Problems in Mass Communication (3)

Prerequisites: Communication 440, 460, or 480 or Journalism 300; and at least 12 units of upper division coursework in communication.

Problems and topics in mass communication. Ethics, social responsibility, professionalism, multi-cultural issues, international media systems and audiences, global markets, and technology. (Formerly numbered Journalism 500.)

501. Management of Telecommunications Systems (3) II

Prerequisite: Communication 375 or 440. **Proof of completion of prerequisite required:** Copy of transcript.

Organization and administration of telecommunications systems, with emphasis on structure, policy environment, and principal institutions affecting telecommunications industries. (Formerly numbered Telecommunications and Film 501.)

502. Law of Mass Communication (3)

Prerequisites: Communication 100 or 200 or Political Science 102, and upper division standing.

Libel, invasion of privacy, censorship, contempt of court, pornography. Constitutional guarantees affecting print and broadcast media. Government restrictions. (Formerly numbered Journalism 502.)

503. Instructional Communication (3)

Prerequisites: Communication 105 and 160. **Proof of completion of prerequisites required:** Copy of transcript.

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.

504. History of Mass Communication (3)

Prerequisites: Communication 100 or 200 or History 110A or 110B, and upper division standing.

American journalism from colonial times to the present, with special attention to twentieth century trends and developments, including the emergent concept of social responsibility. (Formerly numbered Journalism 503.)

505. Government and Telecommunications (3) II

Prerequisite: Twelve upper division units in communication.

Responsibilities of broadcasters and telecommunication organizations as prescribed by law, government policies and regulations, and significant court decisions. (Formerly numbered Telecommunications and Film 505.)

506. Advertising and Society (3)

Prerequisites: Communication 300 and 350.

Theoretical and philosophical analysis of advertising in modern society.

528. Diffusion of Innovations (3)

Prerequisite: Completion of preparation for the major in communication or admission to the graduate program.

Interpersonal and mass communication processes underlying the diffusion of new ideas, practices, and technologies.

530. Conversational Interaction (3)

Prerequisite: Completion of preparation for the major in communication or admission to the graduate program.

Sequential organization of naturally occurring conversational practices. Reliance on recordings and transcriptions for detailed examinations of interactants' methods for achieving social actions and organizing interactional occasions.

535. Theories of Human Communication (3) I

Prerequisites: Communication 105 and 160. **Proof of completion of prerequisites required:** Copy of transcript.

Theoretical approaches to the study of human communication; relationship of meaning, message, and behavior in the communication process; special issues in communication theory.

540. Media Management Research (3)

Two lectures and two hours of activity.

Prerequisite: Communication 489.

Applying research in cable, film, radio, television and telecommunications management. Designs, methodologies, analyses, and applications of audience, programing, and advertising research. (Formerly numbered Telecommunications and Film 400.)

541. Advanced Creative Production (3)

One lecture and four hours of activity.

Prerequisites: Communication 461 or 481; and consent of instructor.

Design and production of print and electronic advertising and public relations messages. Creative strategy and evaluation. Print, film and video techniques. Maximum credit six units.

545. Communication and Rhetorical Movements (3)

Prerequisite: Completion of preparation for the major in communication or admission to the graduate program.

Historical perspective of role of communication in social change in rhetorical movements and social change.

555. New Media Production (3)

Two lectures and three hours of activity.

Prerequisite: Upper division standing or admission to the graduate program.

Development of audio visual/communication products in new media formats. Multi-media laboratory use to be arranged.

556. Technology and Mediated Interaction (3)

Prerequisite: Completion of preparation for the major in communication or admission to the graduate program.

Interactional features and social consequences of diverse mediated involvements: e-mail, FAX, telephone/cellular/mobile teleconferencing and virtual reality. Interactions with objects, machines, and computers.

560. Advertising Research (3)

Two lectures and two hours of activity.

Prerequisites: Communication 461 and 489.

Systematic application of quantitative and qualitative research to planning, design and management of advertising campaigns. Cases, practices, and problems in application of research to consumer and market analysis, positioning, creative selection, media planning and campaign evaluation. (Formerly numbered Journalism 465.)

565. Advertising Campaigns (3) II

Prerequisite: Communication 560.

Planning and creation of advertising campaigns including situation analysis and strategy, advertising and marketing objectives, consumer analysis and target audience selection, creative development, media strategy and tactics, sales promotion and campaign evaluation. (Formerly numbered Journalism 466.)

571. Intercultural Communication Theory (3)

Prerequisite: Completion of preparation for the major in communication or admission to the graduate program.

Theories of cross-cultural and intercultural communication, including ethnic identity, communication competence, and cultural values.

575. Technological Trends in Telecommunication (3)

Prerequisite: Communication 375.

Developments and trends in telecommunication and related technology, with implications for the future. Practical experience with on-line computer activities. (Formerly numbered Telecommunications and Film 575.)

579. Issues in Intercultural and International Communication (3)

Prerequisite: Completion of preparation for the major in communication or admission to the graduate program.

Issues, concepts, and trends in international and intercultural communication. May be repeated with new content. See Class Schedule for specific content. Maximum credit nine units.

580. Communication and Politics (3)

Prerequisites: Communication 105 and 160. **Proof of completion of prerequisites required:** Copy of transcript.

Contemporary political communication events and processes, with a focus on speeches, debates, and campaigns.

581. Public Relations Research (3)

Two lectures and two hours of activity.

Prerequisite: Communication 489.

Qualitative and quantitative methods used in evaluation research to plan, track, and evaluate public relations programs. Computerized statistical analysis.

583. Medical Interaction (3)

Prerequisites: Communication 300 and 350.

Theoretical and applied approaches to health communication including interactional patterns among doctors, nurses, patients, family members, therapists, counselors, clients. Not open to students with credit in Speech Communication 584.

584. Legal Interaction (3)

Prerequisites: Communication 300 and 350.

Interactional patterns among judges, lawyers, witnesses, juries, and related legal personnel. Implications for understanding constraints on exchange within institutional interaction and social justice as a practical accomplishment.

585. Professional Practices in Public Relations (3) II

Prerequisites: Communication 481 and 489.

Advanced cases in public relations management. Theory and practice of issues management, integration of the public relations function in strategic management in a variety of corporate, governmental, non-profit, social and cultural organizations. (Formerly numbered Journalism 585.)

589. Ethical Issues in Communication (3)

Prerequisites: Communication 105 and 160. **Proof of completion of prerequisites required:** Copy of transcript.

Classical and modern ethical concepts and issues in communication.

590. Quantitative Methods in Communication (3) I

Prerequisites: Communication 105 and 160. **Proof of completion of prerequisites required:** Copy of transcript.

Philosophy of social science, research design, and statistical applications to communication problems.

591. International Telecommunications (3) I

Prerequisite: Twelve upper division units in School of Communication or admission to the graduate program.

Comparative study of economic, social, and political determinants of broadcasting and telecommunication systems around the world. (Formerly numbered Telecommunications and Film 590.)

592. Persuasion (3)

Prerequisite: Communication 103. Open to majors and nonmajors.

Key variables and theories in the persuasion process: persuasive sources, messages, receiver variables, propaganda, brainwashing, and cognitive, behavioral, and social theories of persuasion. Not applicable to the M.A. degree in communication.

594. Communication Colloquium Series (3)

Prerequisite: Restricted to upper division and graduate students in School of Communication.

In-depth study in specialized areas of communication. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units.

596. Selected Topics (1-4)

Prerequisite: Senior standing or above.

Specialized study in selected topics. 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.

Journalism

UPPER DIVISION COURSES

529. Investigative Reporting (3)

One lecture and four hours of activity.

Prerequisites: Journalism 420 with minimum grade of C (2.0); upper division standing; passing score on journalism grammar, spelling, and punctuation test or passing of Extended Studies course "Grammar for Journalists." Limited to journalism majors and minors.

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. Management of News Organizations (3)

Prerequisites: 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.

550. News Production (3)

One lecture and four hours of activity.

Prerequisite: Journalism 420 with minimum grade of C (2.0); and passing score on journalism grammar, spelling, and punctuation test or passing of Extended Studies course "Grammar for Journalists." Limited to journalism majors and minors and graduate students in communication, major code: 06021.

News production principles and techniques. Field and laboratory practice. Not open to students with credit in Journalism 443 or 475.

Television, Film, and New Media

(Unless otherwise noted, all Telecommunications and Film courses are now listed as Television, Film, and New Media courses.)

UPPER DIVISION COURSES

522. Film and Television Cinematography (3) I

Two lectures and three hours of laboratory.

Prerequisites: Television, Film, and New Media 260, 261, and 320.

Proof of completion of prerequisites required: Copy of transcript.

Advanced theory and practice of cinematography for film and television production. Practicum in cinematography problems related to control of light and image for television and film, including use of specialized equipment, film and videotape stock, location and studio shooting, and complex blocking problems.

550. Art Direction for Television and Film (3) II

One lecture and four hours of activity.

Prerequisites: Television, Film, and New Media 250, 260 or 261 or 325, and consent of instructor. **Proof of completion of prerequisites required:** Copy of transcript.

Aesthetic, technical, and administrative aspects of design for television and film. Experience in scenic design, construction, decoration, lighting, and special effects. Practical experience in University sponsored productions.

551. Production Design for Television and Film (3)

Prerequisites: Television, Film, and New Media 250 and credit or concurrent registration in Television, Film, and New Media 401.

Theory and analysis of production design concepts for television and film. Determination of stylistic and technical requirements for fictional and nonfictional productions.

560. Advanced Film and Video: Field Production (3)

One lecture and more than six hours of laboratory.

Prerequisites: Television, Film, and New Media 260, 261, and 410 with grade of B (3.0) or better in each and consent of instructor. **Proof of completion of prerequisites required:** Copy of transcript.

Practicum in direction and production of dramatic and nondramatic film and video. Cameras, lighting, design, sound techniques, experience in University sponsored productions. (Formerly numbered Telecommunications and Film 560A-560B.)

561. Advanced Film and Video: Studio Production (3)

One lecture and more than six hours of laboratory.

Prerequisites: Television, Film, and New Media 260, 261, and 410 with grade of B (3.0) or better in each and consent of instructor.

Program development, presentational techniques, and individual projects in producing and directing. Practical experience in University sponsored productions. (Formerly numbered Telecommunications and Film 580A-580B and 580.)

562. Documentary and Propaganda Film/Television (3)

Prerequisite: Television, Film, and New Media 160.

Analysis through viewing of persuasive concepts, techniques, and forms in international and documentary film and television programs.

565. Animated Film Techniques (3) II

Two lectures and more than three hours of activity.

Screening of representative examples and production of a filmograph or animated motion picture. Practical experience in University sponsored productions.

Communication

GRADUATE COURSES

600A. Seminar: Introduction to Communication Graduate Studies (3)

Prerequisite: Classified or conditionally classified graduate standing in the School of Communication.

Contemporary and emergent communication theory. Extensive writing from exercises in bibliographical techniques, database searches, reference works, scholarly journals, and research proposal. Recommended for first semester of graduate work. (Formerly numbered Speech Communication 700.)

600B. Seminar: Communication Research Methods (3)

Prerequisite: Classified or conditionally classified graduate standing in the School of Communication.

Methods and tools of inquiry in communication research. Survey/experimental methods; naturalistic methods; critical studies. Recommended for first semester of graduate work; prerequisite for advancement to candidacy. (Formerly numbered Journalism 600B.)

610. Seminar: Advanced Communication Theory (3)

Prerequisites: Communication 535 and 600A.

Advanced methods of theory construction, explication, and evaluation in communication, including alternatives to traditional communication science. (Formerly numbered Speech Communication 735.)

620. Seminar: Quantitative Methods in Communication Research (3)

Prerequisites: Communication 540, 560, and 581 or Communication 590, 600A, and 600B.

Advanced applications of survey methodology; evaluation of experimental and quasi-experimental procedures; methods of statistical inference and research design; application of computer statistical package. (Formerly numbered Speech Communication 790.)

630. Seminar: Naturalistic Methods in Communication Research (1-3)

Prerequisites: Communication 600A and 600B.

Observation and analysis of communicative activities in naturally occurring social contexts. Techniques for discovering and substantiating patterns of everyday conduct. (Formerly numbered Speech Communication 793.)

640. Seminar: Critical and Rhetorical Methods in Communication (3)

Prerequisites: Communication 600A and credit or concurrent registration in Communication 600B.

Methodologies for textual, rhetorical, semiotic, narrative, and reception research. Use of case studies, focus groups, and interpretive methods.

696. Special Topics (1-3)

Prerequisite: Graduate standing.

Intensive study in specific areas of 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: Telecommunication Management (3)

Prerequisites: Communication 501, 600A, and 600B.

Planning, organizing, and staffing in communications and media enterprises. Managing creative processes. Examining technologies and competitive environments. (Formerly numbered Telecommunications and Film 700.)

701. Seminar: Mass Communication Problems (3)

Prerequisites: Communication 600A and 600B.

Reading, investigation, and research concerning current topics in problems of mass media. (Formerly numbered Journalism 700.)

705. Seminar: Communication Policy and Regulation (3)

Prerequisites: Communication 600A and 600B.

Legal concepts, issues, restrictions, and guarantees as applied to radio, television, motion pictures, advertising, and printed media; relationship of local, state, and federal government to telecommunication media. (Formerly numbered Telecommunications and Film 705.)

706. Seminar: Organizational Communication (3)

Prerequisites: Communication 600A and 600B.

Functions, forms, and consequences of communicating in organizations in a changing work world. Topics such as culture groups, networks, leadership, conflict, and decision making.

707. Seminar: Mass Communication and Public Opinion (3)

Prerequisites: Communication 600A and 600B.

Analysis of media shaping, public opinion, images and stereotypes. Methods and effects of pressure groups. Propaganda, creation, and perpetuation of images and stereotypes. (Formerly numbered Journalism 707.)

708. Seminar: Mass Communication and Society (3)

Prerequisites: Communication 600A and 600B.

Rights, responsibilities, and characteristics of mass media and mass communication practitioners. Characteristics and responsibilities of audiences and society. (Formerly numbered Journalism 708.)

715. Seminar: Nonverbal Communication (3)

Prerequisites: Communication 600A and 600B.

Nonverbal human behavior, including body movements, gesture, gaze, touch, and integration of vocal and nonvocal activities in human interaction.

720. Seminar: Interaction and Gender (3)

Prerequisites: Communication 600A and 600B.

Theory and research on communication and gender. Gender as ongoing interactional, achievement; gender displays, and gender myths across diverse relationships, institutions, media, and society. (Formerly numbered Speech Communication 726.)

725. Major Projects in Mass Communication (1-6)

Prerequisites: Communication 600A and 600B.

Design and execution of an in-depth project in one of these areas: advertising campaign, series of detailed expository articles or news stories, or model public relations campaign. May be repeated with new content. Maximum credit six units applicable to a master's degree. (Formerly numbered Journalism 740.)

730. Seminar: Conversational Interaction (3)

Prerequisites: Communication 600A and 600B.

Sequential organization of naturally occurring conversational practices. Reliance on recordings and transcriptions for detailed examinations of interactants' methods for achieving social actions and organizing interactional occasions.

735. Seminar: Relational Communication (3)

Prerequisites: Communication 600A and 600B.

Contemporary theory and research addressing interpersonal verbal and nonverbal communication in intimate and non-intimate relationships. (Formerly numbered Speech Communication 745.)

740. Seminar: Rhetorical Theory (3)

Prerequisites: Communication 600A and 600B.

Leading figures in rhetorical theory from Plato to contemporary

theorists. Application of theory to public address. (Formerly numbered Speech Communication 750.)

745. Seminar: Rhetorical Criticism (3)

Prerequisites: Communication 600A and 600B.

Methods of assessing rhetorical events. (Formerly numbered Speech Communication 751.)

747. Seminar in Argumentation (3)

Prerequisites: Communication 600A and 600B.

Process and theory of argumentation including argument fields, spheres, and evaluation of contexts such as conversation, history, public policy-making.

750. Seminar: Communication Competence (3)

Prerequisites: Communication 600A and 600B.

Theory, history, assessment, and intervention approaches associated with appropriate and effective interpersonal interaction. (Formerly numbered Speech Communication 755.)

755. Seminar: Public Address (3)

Prerequisites: Communication 600A and 600B.

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. (Formerly numbered Speech Communication 780.)

760. Seminar: Development of Telecommunication Systems (3)

Prerequisites: Communication 600A and 600B.

Development of telecommunications and broadcasting in their social, legislative, and economic settings. (Formerly numbered Telecommunications and Film 620.)

762. Seminar: Public Telecommunication (3)

Prerequisites: Communication 600A and 600B.

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. (Formerly numbered Telecommunications and Film 670.)

764. Seminar: Telecommunication Technology and Policy (3)

Prerequisites: Communication 600A and 600B.

Contemporary trends in telecommunication and information technology, implications of trends for public policy and affected businesses. Interaction between technology, implications of trends for public policy and affected businesses. Interaction between technology and regulation. (Formerly numbered Telecommunications and Film 675.)

766. Seminar: Telecommunication Issues and Trends (3)

Prerequisites: Communication 600A and 600B.

Issues and trends important to coming decade, resulting from rapid evolution of telecommunications and related technologies, and their applications in society. (Formerly numbered Telecommunications and Film 750.)

770. Seminar: International Journalism (3)

Prerequisites: Communication 600A and 600B.

In-depth exploration of foreign press and cross-cultural communication; place of the press in national development and international stability; national images and world opinion; censorship, propaganda and other barriers to international understanding. (Formerly numbered Journalism 705.)

775. Seminar: Intercultural Communication (3) I, II

Prerequisites: Communication 571, 600A, and 600B.

Analysis of cultural influences on human communication acts. Emphasis on cultural values, perception, social organizations, lan-

guage, and nonverbal codes.

777. Seminar: Theories of Advertising and Public Relations (3)

Prerequisites: Communication 600A and 600B.

Theories of systems, organizations, and communication effects as applied to professional practices in advertising and public relations. (Formerly numbered Journalism 600A.)

780. Seminar: Public Relations Research (3)

Prerequisites: Communication 581, 600A, and 600B.

Analysis and critique of contemporary public relations programs and theory. Development of a comprehensive public relations project involving original research. (Formerly numbered Journalism 782.)

785. Seminar: Advertising Research (3)

Prerequisites: Communication 560, 600A, and 600B.

Advanced topics in theory, design, and utilization of advertising research.

791. Seminar: Group Interaction (3)

Prerequisites: Communication 600A and 600B.

Theory and research of how groups emerge, develop and interactively achieve roles, tasks, relationships, leadership, and decision making across diverse settings.

792. Seminar: Persuasion (3) I, II

Prerequisites: Communication 600A and 600B.

Contemporary theories and models of persuasion, methods of assessing persuasive effect, and analysis of research literature.

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

Contract required. Arranged with graduate coordinator in area of study. 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 or Project 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.

Television, Film, and New Media

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 Television and Film (3)

Prerequisite: Admission to creative specialization.

Non-dramatic and dramatic structures as they apply to non-fiction and fiction television programs and films. Writing full length script or scenario. Maximum credit six units applicable to a master's degree.

615. Seminar in Criticism of Electronic Media and Cinema (3)

Prerequisite: The equivalent of an undergraduate major in television, film, and new media production.

Standards for objective appraisal of the ethical and artistic aspects of radio, television and film programs.

660. Seminar in Dramatic and Documentary Forms in Television and Film (3)

Prerequisite: Admission to creative specialization.

Techniques and stylistic contributions of major directors as seen in their television and film productions.

665. Seminar in Documentary Filmmaking (3)

Prerequisites: Television, Film, and New Media 560, 562, and admission to creative specialization.

Documentary production, emphasizing conceptual and technical understanding, intellectual, artistic and emotional aspects of screen authorship, historical, and contemporary uses and practical experience in production of documentaries. Maximum credit six units applicable to a master's degree.

702. Seminar in Media Message Design (3)

Prerequisite: Television, Film, and New Media 600.

Selection, organization, and creative techniques of message design elements in the telecommunications and film media. Methods and approaches to planning creative projects. Development of proposals for projects as well as grant applications.

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 or Project 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 student must be registered in this course when the completed thesis or project is granted final approval.

Communicative Disorders

OFFICE: Communications Clinic 118
TELEPHONE: (619) 594-6774
FAX: (619) 594-7109

In the College of Health and Human Services

Faculty

Steven J. Kramer, Ph.D., Professor of Communicative Disorders,
Chair of Department
Elizabeth J. Allen, Ph.D., Professor of Communicative Disorders,
Graduate Coordinator
Li-Rong Lilly Cheng, Ph.D., Professor of Communicative Disorders,
Assistant Dean for Student Affairs, College of Health and Human
Services
Kathe M. Christensen, Ph.D., Professor of Communicative
Disorders
Alan C. Nichols, Ph.D., Professor of Communicative Disorders
Donna J. Thal, Ph.D., Professor of Communicative Disorders
Edmund L. Thile, Ph.D., Professor of Communicative Disorders
Vera Gutierrez-Clellen, Ph.D., Associate Professor of
Communicative Disorders
Lewis P. Shapiro, Ph.D., Associate Professor of Communicative
Disorders
Beverly B. Wulfeck, Ph.D., Associate Professor of Communicative
Disorders
Kristin K. Tjaden, 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, 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 communicative sciences, speech-language pathology, audiology, and education of the deaf. The Department of Communicative Disorders is committed to preparing speech-language-hearing professionals to meet the challenges of a racially, ethnically, and linguistically diverse society.

The programs utilize the facilities of the Communications Clinic, which includes observation rooms, departmental reference collection, and speech and hearing science laboratories. In the laboratories, students use personal computers, microprocessor based diagnostic audiometers, spectral signal analyzer, acoustic immittance equipment, hearing aid analyzer, digital spectrograph, Visipitch, phonic mirror, state-of-the-art ENG and evoked potential equipment, miniphonators, audiometric response simulators, laryngoscopic manikin, and audio and video recording equipment with ongoing new acquisitions.

In addition, the department utilizes an off-campus multidisciplinary diagnostic and rehabilitation center. Students and faculty participate in providing direct delivery of clinical services to clients, jointly participate in central intake activities (a multidisciplinary assessment program) and the assistive devices assessment program, which evaluates, selects and trains multihandicapped individuals to help them communicate more effectively. 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.

Section I. Master's Degree Programs

Admission to Graduate Study

Students will be admitted to the graduate programs only in the Fall Semester. Applications to the university must be submitted by February 15 for the master's degree programs in speech-language pathology, audiology, education of the deaf, and communicative sciences. Additional departmental instructions can be obtained by writing directly to the department for the application information packet.

All students must satisfy the general admission and examination requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin. In addition, the applicant must satisfy the following requirements before being considered for admission to classified graduate standing by the department's Admissions Review Committee.

1. Have a minimum grade point average of 3.2 (on a 4.0 scale) during the last 60 semester units of undergraduate college/university coursework.
2. Submit scores on the GRE General Test (verbal and quantitative portions only).
3. Have three letters of recommendation sent from persons who are knowledgeable about the candidates potential for graduate study. Specific forms are included in the Application Information packet.
4. Submit an Applicant Essay as described in the Application Information packet.

Once the above requirements have been satisfied, the applicant's file is considered complete and eligible for review by the department's Admissions Review Committee. Admission to the graduate programs is guided by careful consideration of all the above materials by a designated Admissions Review Committee. Eligible applications are reviewed as a group after April 1. All applicants whose files are not complete by April 1 will not be eligible for admission to classified graduate standing. The number of new admissions is restricted and is determined by space availability; therefore, admission is based on consideration of all application materials and the relative merits of individual applicants among all eligible applicants.

In some cases, candidates who have not completed the above requirements may request, in writing, to be considered for admission to conditionally classified standing. Conditionally classified standing is subject to space availability after consideration of those who meet requirements for classified graduate standing. Students admitted to conditionally classified graduate standing may petition for change of classification to classified graduate standing after satisfying the above requirements and after completion of nine units of 500- or 600-level coursework with a 3.0 grade point average in those courses.

Students who receive special permission to enroll in department courses through the College of Extended Studies or who enter with postbaccalaureate unclassified standing are not admitted to the department and are not assured of consideration for admission to advanced degree curricula, master's degree, credentials, or certificate programs offered by the department. Admission to the university or enrollment in classes does not guarantee acceptance to the department.

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 pass a written comprehensive examination (which may be repeated only twice). 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. Students are required to complete coursework in all of the following areas:
- Voice Disorders
 - Fluency Disorders
 - Articulation/Phonology Disorders
 - Adult Language Disorders
 - Child Language Disorders

The coursework may be taken during undergraduate or graduate preparation.

Undergraduate Preparation. Communicative Disorders 106, 205, 320, 321, 322, 340, 340L, 500, 501, 511, 512, 513, 517, 539; Physics 201; Psychology 270.

Graduate Program. Research component: Communicative Disorders 600; Plan A (Communicative Disorders 799A) or Plan B (comprehensive examination). Speech Science component: Communicative Disorders 601 or 654. Speech-Language Pathology Component: 21 to 24 units of electives selected from at least three of the following areas with the approval of a faculty adviser:

- Speech: Communicative Disorders 505 or 605, 606, 607.
- Language: Communicative Disorders 602, 613, 614, 675.
- Physiologically Based Disorders: Communicative Disorders 603, 604, 608.
- Multicultural/Multilingual Speech-Language Disorders: Communicative Disorders 568, 671, 672, 673.

- General: Communicative Disorders 580, 630, 670, 696, 797, 798.

Students electing to pursue the Certificate of Clinical Competence (ASHA) and/or the Clinical Rehabilitative Services Credential should complete, in addition to the required courses listed above, the required clinic courses or clinic hours.

- 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.

Undergraduate Preparation. Undergraduate preparation to include courses equivalent to the following offered at San Diego State University: Communicative Disorders 106, 110, 205, 320, 321, 322, 340, 340L, 500, 511, 512, 513, 517, 542; Physics 201; Psychology 260, 270.

Graduate Program. Required courses: 24 units to include Communicative Disorders 600, 610, 611, 640, 644, 647, and 648*; Plan A (Communicative Disorders 799) or Plan B (comprehensive examination).

Electives (6 to 9 units) selected from Communicative Disorders 500, 600 and 700 level courses selected with consent of the student's adviser.

Students electing to pursue the Certificate of Clinical Competence (ASHA) and/or the Clinical Rehabilitative Services Credential should complete in addition to the above courses the required clinic courses or clinic hours.

*Additional prerequisites required.

- C. Concentration in Education of the Deaf. This concentration has a clinical/educational focus and may be used to satisfy some of the academic preparation for certification by the Council on Education of the Deaf and for a credential from the State of California.

Undergraduate Preparation. Communicative Disorders 106, 110, 205, 320, 321, 340, 340L, 350, 357, 358; Physics 201; Psychology 101, 260, 270.

Graduate Program. Required courses: 17 units to include Communicative Disorders 568, 600, 613 or 675, 657, 658, 659 and Plan A (Communicative Disorders 799A), or Plan B (comprehensive examination).

Electives courses: 10 to 13 units selected from Communicative Disorders 513, 562, 655, 797, 798, Special Education 525, 645; 528 or 643. Students pursuing a Specialization in Deafness are advised to select up to six units from the recommended Special Education classes. (Note: 300 hours of practicum are required for CED national certification.)

Competency in communication with deaf persons must be demonstrated, including oral and manual modes.

- D. Concentration in Communicative Sciences. This concentration has research and theoretical foci 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; Physics 201; Psychology 260, 270.

Graduate Program. Required courses (12 units minimum) to include Communicative Disorders 600, 601, 640, 654, Plan A (Communicative Disorders 799A-3 units) or Plan B (comprehensive examination).

Electives (15 to 18 units) selected from 500, 600 and 700 level courses with consent of the student's adviser. Recommended options include Communicative Disorders 602, 603, 604, 605, 606, 607, 610, 644, 647, 648, 657, 798; up to six units of appropriate 500, 600 and 700 numbered courses from engineering, linguistics, physics, psychology, or other departments may be included in the fifteen units of electives with the approval of the department's graduate committee.

Section II. Doctoral Program

The cooperating faculties of San Diego State University and the University of California, San Diego, offer a joint doctoral program in language and communicative disorders. The program's focus is the interdisciplinary study of language and communicative disorders. A major emphasis of the program is to apply techniques developed in cognitive science and neuroscience to the study of language and language disorders. The program involves study and research in normal and abnormal language (including sign languages), and in the neural bases of language use and language loss.

Participating faculty have research interests in a wide range of issues in the processes of language development, language and aging, multilingualism, language disorders, assessment, and intervention. Graduates of the program will be qualified to serve as faculty in university programs in a variety of disciplines, and to provide leadership in research and health services.

The doctoral program faculty at SDSU are members of the Department of Communicative Disorders, Department of Linguistics, and the Department of Psychology. The doctoral program faculty at UCSD are also an interdisciplinary group from the Department of Cognitive Science, Department of Communications, Department of Linguistics, Department of Neurosciences, and the Department of Psychology. The program is coordinated by the Doctoral Program Directors at each campus, in conjunction with an Executive Committee comprised of three faculty from each campus appointed by the Graduate Deans from each campus.

The program is innovative in that many of the requirements are designed to function as a model of professional preparation specifically incorporating activities in which a successful teacher and researcher must engage after obtaining the Ph.D. Students will be required to participate in interdisciplinary research throughout the program, learn about the nature and ethics of research, prepare grant proposals, write manuscripts, and will gain experience in oral presentations and teaching. Graduates from the program will be well-prepared for the rigors of an academic/research career.

Faculty

The following faculty participate in the doctoral program in language and communicative disorders and are available as advisers, for direction of research, and as members of dissertation committees.

San Diego State University: Cheng (Communicative Disorders), Choi (Linguistics), Christensen (Communicative Disorders), Fenson (Psychology), Gutierrez-Clellen (Communicative Disorders), Reilly (Psychology), Shapiro (Communicative Disorders), Thal (Communicative Disorders), Wulfeck (Communicative Disorders).

University of California, San Diego: Bates (Psychology, Cognitive Science), Bellugi (Salk Institute, Psychology), Elman (Cognitive Science), Goldberg (Linguistics), Kritchevsky (Neurosciences), Kutas (Cognitive Science), Movellan (Cognitive Science), Padden (Com-

munications), Swinney (Psychology).

Admission to Doctoral Study

The doctoral program in language and communicative disorders draws from a variety of disciplines including communicative disorders, psychology, cognitive science, linguistics, engineering, and other related sciences. Students should have adequate preparation in mathematics, statistics, and biological sciences. Backgrounds in neurosciences and/or language sciences, or language disorders is helpful, but not required for admission.

Applicants for admission to the doctoral program must meet the general requirements for admission to both universities, as specified in the current SDSU and UCSD catalogs. Applicants must meet the special requirements of this program which include (a) an acceptable baccalaureate or master's degree or equivalent from a regionally accredited institution; (b) a GPA of at least 3.25 on a 4.0 scale in the last 60 semester (or 90 quarter) credits of upper division and/or graduate courses (c) good standing in the last institution attended; (d) suitable scores on both the quantitative and verbal sections of the Graduate Record Examination; (e) submission of appropriate application form and supporting materials as outlined below.

Applicant files are reviewed as a group by an admissions committee, comprised of doctoral program faculty from each campus. Other doctoral faculty may review applicant files and make recommendations to the admissions committee. Assuming that the above requirements are met, decisions will also be guided by an evaluation of the adequacy of the applicant's preparation in view of their stated needs and objectives. Given the limited number of spaces available (4 to 6 new admissions each year are anticipated, subject to available facilities), the admissions committee will select the best qualified applicants to fill the available spaces. No minimum set of qualifications will guarantee an applicant admission to the doctoral program. The admissions committee will make recommendations for admission to the Graduate Deans from each campus.

Application. Students seeking admission to the doctoral program should write directly to the Doctoral Program Coordinators (Mail Code 1518), San Diego State University, 5500 Campanile Drive, San Diego, CA 92182, in order to obtain an information packet explaining the application process and materials. A complete application requires the following:

- Appropriate application form.
- Applicant's statement of interest.
- Transcripts of academic work completed.
- Results of the Graduate Record Examination
- Three letters of recommendation.

Students will be admitted to the doctoral program only in the fall semester/quarter. Applications must be received by January 20 to be considered for the doctoral program beginning in the following fall semester/quarter. All other supporting materials must be received by February 1.

Specific Requirements for the Doctor of Philosophy Degree

Faculty Adviser. Upon admission to the program, the Executive Committee will assign each student a faculty adviser. The faculty adviser will help the student select a program of study during the first year. The faculty adviser, in conjunction with the doctoral program coordinators, will help the student select a first laboratory rotation. Once the student has selected a major area of study (see below) the student will be reassigned an appropriate adviser.

Residency Requirements. Students will be required to complete credits equivalent to one year's full-time enrollment at each campus. The definition of residence must be in accord with the regulations of SDSU and UCSD. Students may be enrolled in courses at both institutions during any given semester/quarter.

Language Requirement. Students are required to have some experience in the acquisition of a second language. This may be satisfied through informal learning, immersion, or two or more years of formal coursework in a second language. Any recognized natural language will be acceptable to fulfill this requirement (including American Sign Language or other sign languages). Artificial languages, e.g., computer languages, will not satisfy this requirement. For students selecting the multilingualism concentration, proficiency must be demonstrated in English and at least one other language.

Major Area of Concentration. By the end of the first year, all students select a major field of emphasis by choosing one of three concentrations: Adult Language, Child Language, or Multilingualism. All students will be required to take some courses in each of the three concentrations.

The *Adult Language* concentration is intended to provide intensive education in communicative disorders in adults. Students in this concentration will also develop expertise in the study of language processing in normal adults.

The *Child Language* concentration is intended to provide specialized education in childhood (birth to adolescence) communicative disorders. Students in this concentration will also achieve competence in developmental psycholinguistics emphasizing language acquisition in normally-developing children.

The *Multilingualism* concentration is intended to provide education in cross-linguistic, ethnographic, and other comparative studies of communicative disorders in children and/or adults, including those associated with bilingualism and second language acquisition (including acquisition of sign language in deaf individuals).

Course Requirements. The program for each student will consist of a common core of courses designed to provide the basic tools for research and a foundation knowledge in the important issues in language and communicative disorders, together with specific electives appropriate to the student's chosen concentration.

The *Tools* requirement consists of two courses in statistics/research design, a course in neuroanatomy and physiology, a course in language structure and theory, and a professional survival skills course. Specific courses which can be used to satisfy this requirement are listed below.

The *Foundations* requirement consists of three courses on normal language and three courses on disorders of language. Specific courses which can be used to satisfy this requirement are listed below.

The *Electives* requirement consists of at least five courses, with a minimum of three courses related to the chosen concentration. These electives must be chosen from a broad list of approved options from anthropology, cognitive science, communicative disorders, computer science, linguistics, neurosciences, and psychology. Consult with adviser for approved elective courses. Other electives may be taken to

satisfy this requirement with permission of the adviser. The five required electives must be approved by the student's adviser and the Doctoral Program Coordinators. Students may select additional electives with approval of the adviser.

Laboratory Rotations. In order to obtain experience in different research methodologies, each student will be required to complete three laboratory rotations, each lasting a minimum of one semester or quarter. During each rotation, students will enroll in the associated laboratory course. The laboratory rotations must be approved by the student's adviser and the doctoral program faculty member who supervised that laboratory.

Projects. All students will be required to complete two research projects during their first two years of the program (first and second year projects). These projects are usually connected with the laboratory rotations and approved by the doctoral program faculty working in the laboratory. These projects will involve experiment design, data collection, analyses, preparation of a potentially publishable manuscript, and an oral presentation of the research findings at one of the laboratory seminars. Students will be encouraged to submit their projects for presentation at professional meetings and to submit them to an appropriate journal.

Methods Minor. All students will be required to develop basic expertise in experimental design and statistics, and all students will become familiar with standard techniques for behavioral assessment, e.g., intelligence testing, standardized tests of language ability, analyses of free speech, design and implementation of experimental measures of language and other related cognitive behaviors. In addition, by the end of the third year, all students will declare a methods minor from one of three options: behavioral dynamics, neural imaging, or neural modeling. It is expected that the student will gain experience in the chosen minor through at least one laboratory rotation and enrollment in applicable courses selected with adviser recommendation.

The *Behavioral Dynamics* minor is intended for students who want to specialize in computer-controlled methods for the study of language and cognitive processing in real-time.

The *Neural Imaging* minor is intended for students who want to complement behavioral studies with neuro-anatomical and neuro-physiological techniques, including event-related brain potentials and functional magnetic resonance imaging.

The *Neural Modeling* minor is intended for students who are interested in the simulation of normal and abnormal language and cognition in artificial neural networks. Students who elect this minor will be required to take Cognitive Science 201F or Computer Science and Engineering 258A as an elective.

Qualifying Examination. After successful completion of the first and second year projects, the student is eligible to take the qualifying examination. The qualifying examination consists of a *written component* which is to be in the form of a scholarly review of one or more issue related to the student's chosen area of research, and an oral component which is to be in the form of a short-notice didactic lecture. Students will be encouraged to write their integrative paper in a form and quality which may be submitted to an appropriate journal. For the *oral component*, the student will select three areas of research that are broadly related to their research interests. After developing expertise in all three areas, the student will submit a list of six topics (two from each area) on which they are prepared to give a lecture. The qualifying committee will choose three topics from the submitted list of six topics and inform the student of the topics 48 hours prior to a scheduled presentation. The student will select one of the three topics given to them by the qualifying committee and present a 50 minute lecture to the qualifying committee and an invited audience, and then answer questions on the topic following the lecture.

Teaching. Two semesters or three quarters of teaching experience are required of all students. This can be satisfied through assignment as a Teaching Associate or other instructional activity approved by the student's adviser and the doctoral program coordinators. Students are eligible for teaching assignments after passing the qualifying examination.

Dissertation Committee. Prior to developing a dissertation proposal, the student must have a dissertation committee. The committee members are recommended by the doctoral program coordinators with consent of the executive committee, and then appointed by the Graduate Deans of both campuses. The dissertation committee will consist of at least five members, including four from the doctoral program faculty groups (with at least two members from each campus) and one faculty member from outside the doctoral program faculty groups.

Dissertation Proposal. The dissertation proposal will take the form of an NIH or NSF grant proposal. For model 1 dissertation (see below), the proposal will be based on completed research which become pilot studies for the grant proposal. The student may be encouraged to submit the grant proposal to support their future research, e.g. post doctoral studies, or a First Investigator Award. For model 2 dissertation, the proposal will become the basis for the dissertation research to be completed. The dissertation proposal must be approved by the student's dissertation committee.

Advancement of Candidacy. A student will be recommended for advancement to candidacy after completing all requirements as described above, including the qualifying examination and the dissertation proposal. Students eligible for advancement to candidacy are recommended to the Graduate Deans of both institutions. When approved by both institutions, students will be notified by the Graduate Division at UCSD.

Dissertation. After advancement to candidacy, the remaining requirement will be the satisfactory completion of a dissertation. The dissertation may take one of the following two forms:

Model 1 dissertation. Students who have maintained continuity through their second year project, qualifying examination, and dissertation proposal, and who have successfully generated publishable research which has been submitted to respected journals, may use a minimum of three such interconnected manuscripts as their dissertation. The dissertation will contain an introduction and review of the literature which conceptually links the submitted studies, the studies themselves (exactly as they have been prepared for publication), and a conclusion which pulls the results together in a broader theoretical framework.

Model 2 dissertation. Students may choose to carry out a more traditional dissertation involving the appropriate written presentation of original research carried out by the student under the guidance of the student's dissertation committee chair.

Dissertation Defense. The dissertation defense will be the same for both dissertation models and will consist of an oral presentation of the dissertation material to the doctoral committee and a publicly invited audience.

Award of the Degree. The Doctor of Philosophy degree in language and communicative disorders 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. Funding for graduate students cannot be guaranteed, although every effort will be made to provide students with some form of support through faculty grants, graduate teaching/research assistantship, or scholarships. The program endeavors to provide financial support that will enable all students to devote full-time to study and research training. Financial support will be awarded con-

sistent with the policies of the Graduate Divisions at each campus. Tuition and fees will be determined in accord with extant policies at the campus in which the student is matriculated in a given year.

Credentials

The Department of Communicative Disorders offers academic and practica 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 may 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 level.

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 of the CH credential. Students preparing to serve as school audiologists must follow the C-RS credential program. Students desiring preparation as itinerant language, speech and hearing specialists must pursue the CR-S credential program. Students desiring preparation as classroom teachers of severe language handicapped (or Aphasic) (Special Class Authorization) (SCA) pupils may pursue the CR-S or CH credential.

A master's degree will be required of all candidates graduating with a credential.

Students are required to have the Certificate of Clearance prior to beginning the school experience. Credential candidates should apply for the Certificate of Clearance and fingerprinting several months prior to submitting an application to the Department for school practicum placement.

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
- Severe Oral Language (including aphasia) (Special Class Authorization) (SCA)
- Speech and Hearing

The Specialist Credential for the Communication Handicapped specifies a sequence of communicative disorders courses plus a sequence of education courses.

Admission Requirements

1. Formal application to the Department of Communicative Disorders.
2. Interview with a faculty member in the Department of Communicative Disorders.
3. Admission to the program for the Single Subject Credential (Secondary) or Multiple Subject Credential (Elementary).

- or -

A basic teaching credential.

Students should consult with appropriate advisers in the Col-

- lege of Education for specific requirements.
- Students applying to the program at the postbaccalaureate level must satisfy the admission requirements of the department for classified graduate standing.
 - Completion of Special Education 500 and 501.

Program

Persons interested in the Special Education Specialist Credential shall:

- Concurrently or prior to completion of the specialist credential, complete the single subject credential (preliminary or clear) or the multiple subject credential (preliminary or clear). Students may choose to:
 - Major in Liberal Studies (offered by the College of Education) in conjunction with specified communicative disorders courses.
 - Pursue a departmental major; complete specified prerequisites for the College of Education; pass the National Teacher Examination prior to entering the College of Education professional education sequence.
- Complete a minimum of one year of study, including:
 - The Special Education generic coursework: Special Education 500, 501.
 - Courses outside of the Department of Communicative Disorders, including: Psychology 101, 260; Physics 201.
 - Advanced work in the area of specialization in the Department of Communicative Disorders, including:
 - Communication Handicapped Specialization generic coursework Communicative Disorders 106, 159, 205, 320, 321, 322, 340, 340L, 500, 511, 512, 513, 568 or 671 or 673 and 953*.
 - Additional coursework required for the specific area of emphasis within the Credential (Severe Oral Language, Deaf, Deaf-Blind, Speech and Hearing) selected by the student in conjunction with adviser.
- A minimum of 30 postbaccalaureate semester units which must include the courses for a master's degree, is required of all candidates.

*Additional prerequisites required for this course.

Clinical or Rehabilitative Services Credential

(Credential Code: 00900)

Clinical or 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 minimum of 30 postbaccalaureate semester units which must include the courses for a master's degree, is required of all candidates. The following generic courses in Communicative Disorders are required: Communicative Disorders 106, 110, 205, 320, 321, 322, 340, 340L, 500, 511, 517, 525, 526, 541, 546, 630, and 671 or 673. Courses from other departments include Psychology 101 or Sociology 101; Psychology 260 or Biology 150; Psychology 230; Child and Family Development 271[#] or 697[#]; Physics 201; and Special Education 500.

The Advanced Specialization Program in Language, Speech and Hearing (LSH) requires the following additional courses: Communicative Disorders 501, 505, 512, 513, 614, 618, 619 or 676, 626, 929 and 933. 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 655, 929, and 933 (SLH class placement). Courses in other departments include Teacher Education 637, 638, 910A, 930A; 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 159, 512, 513, 542, 545, 550, 600*, 610, 611, 644, 647, 648, 656*, 657, 929, and 933 (audiology class placement).

Prerequisites not required for students in this credential.

* Consent of instructor.

+ See Department Credential Coordinator for options.

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 Speech-Language Pathology (CCC-Sp) or to the Certificate of Clinical Competence in Audiology (CCC-A) given by the American Speech-Language-Hearing Association (ASHA). The certificate requires 60 units of coursework, 30 units of which must be completed at the graduate level; 300 clock hours of supervised clinical experience, 150 hours of which must be completed at the graduate level; a clinical fellowship year; and a national examination. The academic and practica requirements must meet certain specifications. Consult an adviser in the area in which certification is desired for specific information.

Preparation Leading to the Professional Certificate from the Council on Education of the Deaf

Students may complete the academic and practica requirements leading to the Professional Certificate given by the Council on Education of the Deaf. The Professional Certificate requires a specific pattern of courses and teaching experiences. Consult an adviser in the Program for Education of the Deaf for more information.

Preparation Leading to State Licensure in Speech Pathology or Audiology

Students may complete the academic and clinical practicum requirements leading to California State Licensure in Speech Pathology or in Audiology, a legal requirement for all individuals professionally employed in non-public school settings. The Speech Pathology and Audiology Examining Committee which operates within the California State Board of Medical Quality Assurance requires evidence of completion of 24 semester hours of coursework in the area (Speech Pathology or Audiology) in which the license is to be granted, 275 clock hours of clinical experience, nine months of full-time experience (Required Professional Experience), and a national examination. Most Licensure and ASHA Certification requirements may be fulfilled concurrently. Consult an adviser in the area in which licensure is desired for specific information.

Liability Insurance

Students enrolled in Communicative Disorders 340L, 341, 525, 526, 545, 546, 556, 626, 627, 645, 646, 656, 933 are required to purchase professional liability insurance.

Early Intervention Certificate

The Early Intervention Certificate is designed to prepare persons to work with infants, toddlers, preschoolers, and their families from a culturally appropriate framework. The certificate program is appropriate for graduate students in Communicative Disorders, Social Work, or Special Education, to prepare for roles as speech-language pathologists, audiologists, educators of the deaf, infant specialists, parent/family educators, or early intervention program developers/advocates in a diverse society. For application or further information, contact the Coordinator of the Early Intervention Certificate in the Department of Communicative Disorders.

Admission Requirements

To be a candidate for the certificate, the student must be enrolled in one of the graduate degree programs in one of the participating departments or schools. To be considered for the certificate program and to be eligible for a certificate of completion, the student must first apply directly to the Coordinator of the Early Intervention Certificate in the Department of Communicative Disorders. Applicants will be reviewed by a designated Early Intervention Certificate Adviser from each participating department or school. The number of persons admitted to the program is limited. Application to the certificate program is open to all qualified graduate students. Ethnic and bilingual students are encouraged to apply.

Certificate Requirements

The certificate program requires interdepartmental didactic coursework as well as coursework in the student's department or school that will enhance their ability to work effectively with 0-5 year old children from linguistically and culturally diverse backgrounds. The specific program of study must be approved by the student's Early Intervention Certificate Adviser and Graduate Adviser. The certificate program requires the completion of 13 units, including the 10 units of coursework listed below and an additional three units of 600- or 700-level field/clinic practicum courses in the student's respective department or school.

CDIS 650 Interdisciplinary Field Education Seminar (1)

CFD 570 Infant/Toddler Development (3)

SPED 528 Early Intervention for Infants and Young Children with Handicaps and Their Families (3)

SWORK 781 Seminar on Assessment of Multicultural Families (3)

For the field/clinic experiences, the student must obtain a minimum of 75 hours of approved field/clinic practica (up to 25 can be directed observation hours) in multicultural settings serving 0-5 year old children and their families. The field/clinic practicum assignments are coordinated through the student's department or school and may be used to satisfy the normally required field/clinic practica of the discipline.

Students may apply up to six units of the didactic coursework and three units of field/clinic practica toward a master's degree and/or credential with the approval of their respective department/school Graduate Adviser. To receive the certificate, students must earn a grade point average of 3.0 for certificate coursework and submit evidence of completion of all certificate requirements to the Early Intervention Certificate Coordinator in the Department of Communicative Disorders.

Professional Services Bilingual/Multicultural Certificate

The Professional Services Bilingual/Multicultural Certificate in Communicative Disorders is designed primarily for persons who plan to work with bilingual populations with communicative disorders.

To be a candidate for the certificate, the student must be actively seeking or have completed a credential or degree program in communicative disorders since the certificate is coordinated with these endeavors. Candidates seeking admission to the certificate program must present acceptable GRE scores and schedule an interview with the departmental certificate coordinator to ascertain specific requirements and units. They must demonstrate a proficiency in two languages (English and one other) and satisfy admission requirements of the University and the department as listed in the Graduate Bulletin. The certificate is limited to those languages for which there is an available clinical population. Consult the certificate coordinator for approved languages.

The certificate program requires completion of 13 units including nine units of substantive coursework and four units of graduate practicum with the targeted bilingual/multicultural population. The certificate is competency based and up to three units of specific requirements may be waived upon demonstration of competency. Course requirements include Communicative Disorders 671 or 673, and three units selected from Communicative Disorders 568, 672, or 798 in a target language other than Spanish or English.

With the approval of the department, a student may apply no more than three units of coursework from the certificate program toward a master's degree.

Courses Acceptable on Master's and Doctoral Degree Programs in the Department of Communicative Disorders

UPPER DIVISION COURSES

500. Language Structure (3)

Prerequisites: Communicative Disorders 106 and 320; Linguistics 101 or 420.

Design features of language as they relate to communication behavior. Focus on role of language structure in disordered communication.

501. Voice Disorders: Children (3)

Two lectures and three hours of laboratory.

Prerequisite: Communicative Disorders 321.

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.

505. Remediation for Fluency Disorders in School-Aged Children (3)

Prerequisite: Communicative Disorders 322.

Theoretical and phenomenological understanding of stuttering as a communicative disorder; explanations for learning of dysfluent behaviors; applied techniques in rehabilitation for school-aged children with dysfluent speech.

511. Pediatric Aural Rehabilitation (3)

Prerequisites: Communicative Disorders 320 and 340. Recommended: Communicative Disorders 357, 500 and 513.

Theoretical, methodological, and technical issues related to facilitating receptive and expressive communication in individuals who are deaf or hard-of-hearing. Emphasizes multidisciplinary case management of children.

512. Articulation Disorders and Methods (3)

Prerequisites: Communicative Disorders 320, 321, and 340.

Significant theories and research in prevention and remediation of articulatory disorders. Includes emphases on speech habilitation of hearing impaired, cognitive and motor processing.

513. Language Disorders and Methods (3) I, II

Prerequisites: Communicative Disorders 320, 321, 340, 500.

Theories and research in language acquisition and language disorders. Assessment of, and intervention with, language impaired children, including hearing impaired individuals.

517. Diagnostic Methods in Speech-Language Pathology (3)

Prerequisites: Grade of C or better in Communicative Disorders 512, 513.

Principles and procedures in assessing communication disorders in children and adults. Includes case histories, testing, materials, interviewing, clinical reporting and practice with selected assessment tools. Twelve hours of observation of diagnostic practicum required.

521. Screening Evaluations in Speech-Language Pathology (1)

Three hours of laboratory screening per week.

Prerequisites: Communicative Disorders 501, 505, and 517.

Screening evaluations of speech and language of children and adults.

525. Introductory Clinical Practice (1)

Eight hours of orientation; thereafter two hours of practicum and one hour of staffing per week.

Prerequisites: Grade point average of 2.75 or better in Communi-

cative Disorders 320, 321, 340, 500, 512, 513.

Orientation to the clinic, supervised observation, and practicum with representative speech and language problems.

526. Clinical Practice in Speech-Language Pathology (1-2) I, II, S

Two hours of practicum and one hour of staffing.

Prerequisites: Consent of department; Communicative Disorders 110; and grade of C or better in Communicative Disorders 512, 513, 517 and 525. Communicative Disorders 513 not required of audiology students.

Supervised practice with representative speech and language problems. Up to two units may be taken concurrently; maximum credit two units. One unit represents 26 hours of direct clinical practice. Qualified transfer students must enroll in at least one unit of 526 prior to 626.

539. Neuropathologies of Speech, Hearing and Language (3)

Prerequisites: Communicative Disorders 321 and 340.

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.

540. Hearing Conservation and Audiometry for School Nurses (3)

Prerequisite: Registered nurse.

Builds on registered nurse's knowledge of anatomy, physiology, and medical-surgical treatment of disease as it relates to auditory mechanism. Designed to give background in hearing screening (pure tone and impedance) and awareness of ramifications of hearing loss in children necessary for referral and follow-up. Fulfills three-unit requirement for the School Nurse Credential and may be used toward the six-unit State Audiometric Certificate requirement. Not open to students with credit in Communicative Disorders 205, 340, 341.

541. Hearing Screening of Children (1) Cr/NC I, II

Three hours of laboratory screening per week.

Prerequisites: Communicative Disorders 340 and 340L.

Field experiences in audiometric and impedance screening of children to obtain contact hours in screening required by American Speech-Language-Hearing Association, California License, and Clinical-Rehabilitative Services credential. (Formerly numbered Communicative Disorders 341.)

542. Audiometry: Application (3)

Prerequisite: Communicative Disorders 340L.

Pure tone and speech audiometry; masking; impedance audiometry; tests for nonorganic and for sensorineural hearing loss; reporting test results; audiometer calibration.

545. Clinical Practice in Audiologic Assessment (1-3) I, II, S

Three hours of laboratory.

Prerequisite: Grade of C or better in Communicative Disorders 542.

Supervised practicum with pure tone, speech, immittance, and special audiologic testing. One unit represents two hours of clinical contact and one hour of staffing per week. Maximum credit three units.

546. Clinical Practice with Aural Rehabilitation (1) I, II, S

Three hours of laboratory.

Prerequisites: Grade of C or better in Communicative Disorders 511, 512, 513, and a minimum of two units in Communicative Disorders 525, 526, and/or 545.

Supervised practicum in aural rehabilitation. One unit represents two hours of clinical contact and one hour of staffing per week.

550. Education of Deaf Children and Youth (3) II

Prerequisite: Communicative Disorders 350.

Educational programs, services and resources for hearing impaired; historical background, philosophy, sociological and psychological problems.

556. Clinical Practice with the Deaf (1) I, II, S

Three hours of laboratory.

Prerequisites: Communicative Disorders 159, 357; credit in two of the following and concurrent registration in the third: Communicative Disorders 511, 513, 562. 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.

562. Oral Communication for Deaf and Hard-of-Hearing Children (3)

Prerequisite: Communicative Disorders 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.

568. Multicultural Perspectives in Communication with Deaf Individuals (3)

Prerequisite: Demonstrate intermediate competence in American Sign Language, spoken Spanish or spoken Mandarin.

Review and analysis of research in multicultural lifespan communication processes in deaf individuals. Emphasis on communication needs in health care, public school, and informal social settings.

580. Communication Problems of the Aging (3)

Prerequisites: Twelve upper division units in an appropriate major.

Normal communication processes and aging, including memory and cognition for speech and language, and physiological changes; speech and language pathologies; hearing problems and rehabilitation, including hearing aids, psychosocial aspects of communication, including 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

Prerequisite: Twelve units in 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 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 COURSES

600. Research and Bibliography (3)

Prerequisites: Undergraduate major or equivalent in communicative disorders or communicative sciences; Psychology 270; and concurrent enrollment in SPSS workshop or other comparable computer workshop.

Bibliographic techniques. Methods and exposition of research in the fields of speech pathology, audiology, deaf education and speech and hearing sciences. Recommended for the first semester of graduate work, and prerequisite to advancement to candidacy.

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.

602. Adult Language Disorders (3)

Prerequisite: Communicative Disorders 539. Recommended: Communicative Disorders 500 and 513.

Research in diagnosis and therapy for adults with disorders of symbolization and syntax.

603. Seminar in Neurophysiological Communication Disorders (3)

Prerequisite: Communicative Disorders 539.

Research in diagnosis and theories of treatment for persons with speech and language disorders associated with cerebral palsy and other neurophysiological disorders.

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.

Differential diagnosis of stuttering. Individual and group therapy for children and adults with dysfluency problems.

606. Seminar in Voice Pathology (3)

Prerequisites: Communicative Disorders 321 and 501. Concurrent registration in Communicative Disorders 626.

Study of voice problems of structural and functional etiologies. Differential diagnosis of vocal anomalies. Theories and therapy for vocal problems.

607. Phonological Disorders (3)

Prerequisites: Communicative Disorders 512, 517, 526. Recommended: Concurrent registration in Communicative Disorders 626.

Applications of phonological principles and procedures for evaluation and remediation of unintelligible speech patterns in children.

608. Motor Speech Disorders (3)

Prerequisite: Communicative Disorders 539.

Dysarthria and apraxia of speech. Techniques of differential diagnosis and treatment of these motor speech disorders.

610. Hearing Amplification (3) I

Prerequisites: Communicative Disorders 340 and 542.

Hearing aid components, functions, trouble shooting and client orientation. Hearing aid evaluations, fittings, and electroacoustical hearing aid analysis.

611. Adult Aural Rehabilitation (3)

Prerequisite: Credit or concurrent registration in Communicative Disorders 600.

Theoretical, methodological, and technological issues related to aural rehabilitation. Emphasizes adults case management.

613. Child Language Disorders (3)

Prerequisites: Communicative Disorders 517, 525 or 526, and 600.

Major theories of language development with focus on early language development, development of evaluation and procedures, and cross-cultural phenomena in assessment and intervention.

614. School Age Children 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.

618. Diagnostic Practicum in Speech-Language Pathology (3)

Six hours of supervision.

Prerequisites: Communicative Disorders 517, 525, and consent of instructor.

Supervised clinical practice in diagnostic methods.

619. Diagnostic Practicum in Communicative Disorders: Multidisciplinary Assessment (1)

Six hours of supervision.

Prerequisites: Grade of C or better in Communicative Disorders 517. Credit or concurrent registration in Communicative Disorders 526.

Participation in central intake process of SDSU Interdisciplinary Center for Health and Human Services, including diagnostic team assessments and staffings.

626. Advanced Clinical Practice in Speech-Language Pathology (1-3)

Three hours of supervision per unit.

Prerequisites: Communicative Disorders 340, 526, and departmental approval.

Supervised work with representative advanced speech and language disabilities. Twenty-six hours of practicum required per unit. Up to three units may be taken concurrently.

627. Advanced Field Clinical Practice in Speech-Language-Pathology and Audiology (1-3) Cr/NC

Three hours of laboratory per unit.

Prerequisite: Communicative Disorders 626.

Supervised practice with speech-language-hearing problems in off-campus settings. One unit represents 26 hours of direct clinical practice. Up to three units may be taken concurrently.

630. Family Communication Dynamics (3)

Prerequisites: Communicative Disorders 322 and 526.

Communication environment in the home. Parent-child interaction in relation to origin and alleviation of functional and organic speech disorders.

640. Seminar in Psychoacoustics (3)

Prerequisites: Communicative Disorders 542 and credit or concurrent registration in Communicative Disorders 600.

Psychophysical concepts underlying clinical audiology. Relationship of audiologic test results to the conditions under which they were obtained.

644. Medical Audiology (3)

Prerequisites: Communicative Disorders 542 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 Audiologic Assessment (1-2) Cr/NC

Prerequisite: Communicative Disorders 545.

Supervised practicum with pure tone, speech, immittance, and special audiologic testing. One unit represents two hours of clinical contact and one hour of staffing per week.

646. Advanced Clinical Practice in Aural Rehabilitation (1) Cr/NC

Three hours of laboratory.

Prerequisites: A minimum of two units in Communicative Disorders 525, 526, 545, 626 and/or 645. Recommended: Credit or concurrent registration in Communicative Disorders 512, 513, and 610.

Supervised practicum with representative cases requiring advanced preparation in aural rehabilitation.

647. Auditory Evoked Potentials and Electronystagmography (3)

Prerequisite: Credit or concurrent registration in Communicative Disorders 600.

Theoretical and practical aspects of auditory evoked potentials, e.g., ABR, MLR, late potentials, and electronystagmography (ENG).

647L. Applications of Electrophysiologic Techniques (1)

Three hours of laboratory.

Prerequisite: Communicative Disorders 647.

Supervised experience in performing electrophysiologic tests, e.g., auditory evoked potentials and ENG. Emphasis on equipment operation, test procedures, and interpretation of responses. Applies material covered in Communicative Disorders 647.

648. Pediatric Audiology (3)

Prerequisite: Credit or concurrent registration in Communicative Disorders 600.

Auditory assessment techniques for infants and young children. Embryology of auditory system; development of auditory behavior.

650. Interdisciplinary Field Education Seminar (1) Cr/NC

Prerequisites: Admission to the Early Intervention Certificate program and enrolled in field practica.

Discussion of various problems and skills associated with provision of services for 0-5 years old. Emphasis on how to work with a culturally and linguistically diverse caseload.

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.

655. Curriculum for the Communicatively Handicapped (3)

Prerequisites: Communicative Disorders 512 and 513; Communicative Disorders 526 or 556.

Application of cognitive processing theory to development and evaluation of curriculum, materials, and procedures; selection of learning modalities and appropriate modification of curriculum.

656. Advanced Clinical Practice with the Deaf (1) Cr/NC

Three hours of laboratory.

Prerequisite: Communicative Disorders 556.

Supervised clinic practicum at an advanced level with representative deaf cases. Maximum two units per semester; maximum credit four units.

657. Assessment of Learners Who are Deaf or Hard-of-Hearing (3)

Prerequisite: Communicative Disorders 556.

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 Deafness (3)

Prerequisites: Communicative Disorders 550 and 556.

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.

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.

670. Seminar in Professional Issues in Communicative Disorders (3)

Prerequisite: Credit or concurrent registration in Communicative Disorders 600.

Ethical and legal issues, practice standards, employment and business consideration (including hearing aid dispensing), supervision, and private practice.

671. Assessing the Bilingual Child with Communicative Disorders (3)

Prerequisite: Communicative Disorders 500.

Assessment procedures applicable for bilingual child with communicative disorders. Consideration of available instruments, appropriateness for target populations and validity of adaptations.

672. Seminar in Remediation of Communicative Disorders in the Bilingual Population (3)

Prerequisite: Communicative Disorders 671.

Intervention strategies and procedures for bilingual individuals with communicative disorders. Selection criteria, factors influencing planning, program models and specific procedures for different ethnic groups and types of communicative disorders.

673. Seminar in Communicative Disorders in Bilingual Spanish-English Children (3)

Prerequisites: Communicative Disorders 500 and demonstrated Spanish language competence.

Normal and atypical Spanish language development applied to assessment and treatment of communication disorders in bilingual and monolingual Spanish children. Alternative assessment and intervention methods.

675. Augmentative Communication (3)

Prerequisites: Communicative Disorders 500 and 526 or 546.

Alternative and augmentative approaches, strategies and technology for individuals with severe communication impairments. Assessment and intervention. Project required.

676. Assistive Device Assessment Program for Communicatively Handicapped (2)

Prerequisite: Communicative Disorders 618.

Assessment of communication skills of disabled individuals, environmental needs and appropriateness of augmentative communication aids. Remediation recommendations. Maximum credit four units.

696. Selected Topics in Communicative Disorders and Sciences (1-3)

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 696 applicable to a 30-unit master's degree.

790. Seminar in Foundations of Language Science (3)

Prerequisites: Graduate standing in communicative disorders or language and communicative disorders (Ph.D. program), linguistics or psychology, and consent of instructor.

Current issues, theory, and research concerning language representation and processing. Emphasis on bringing evidence from linguistics, cognitive psychology, philosophy, psycholinguistics, neuropsychology, and speech-language pathology to bear on theories of human language processing.

792. Seminar in Disorders of Language and Cognition/Adult (3)

Prerequisites: Graduate standing in communicative disorders language and communicative disorders (Ph.D. program), linguistics or psychology; Communicative Disorders 790; and consent of instructor.

Current topics in cognitive sciences, psychology, psycholinguistics, communicative disorders, and neuropsychology, as they relate to theories of language and cognitive breakdown in aphasia and other neurological deficits in adults.

793. Seminar in Disorders of Language and Cognition/Children (3)

Prerequisites: Graduate standing in communicative disorders or language and communicative disorders (Ph.D. program), linguistics or psychology, and consent of instructor.

Language impairment in children, including primary versus secondary language impairment, modular versus processing explanations, relationships between language and cognition, as well as disassociations of development across different populations.

797. Research (1-3) Cr/NC/SP

Prerequisites: Communicative Disorders 600 and consent of

supervisor, to be arranged with department chair.

Research in speech-language pathology, deaf education or audiology. Maximum credit three units applicable to a master's degree.

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

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 or Project 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.

929. Orientation to Public School Practicum (1)

Prerequisites: Communicative Disorders 517. Minimum of 100 hours of supervised clinical practicum and departmental approval. Concurrent registration in Communicative Disorders 933 or 953.

Goals, materials and procedures for organizing and administering speech, language and hearing programs in the school.

933. Clinical Practice in Public Schools (4 or 5) Cr/NC

Prerequisites: Communicative Disorders 614 (not audiology students). Credit or concurrent registration in Communicative Disorders

929; four units of practica; postbaccalaureate standing; California Basic Education Skills Test; Certificate of Clearance; departmental approval prior to admission.

Clinical practice in elementary or secondary schools or community colleges in speech-language pathology or audiology. Applies only toward the Clinical-Rehabilitative Services Credential (C-RS) or for the Certificate of Clinical Competency in Speech-Language Pathology (ASHA). Enroll in Communicative Disorders 933A for the Language, Speech and Hearing Credential (LSH). Candidates seeking the Special Class Authorization or Severe Language Handicap (SLH) Credential must enroll in both sections Communicative Disorders 933A and 933B, sequentially or concurrently.

A. Clinical Practice in the Public Schools: Language, Speech and Hearing, 4 units (120 clock hours).

B. Clinical Practice in the Public Schools: Severe Language Handicaps, 5 units (150 clock hours).

953. Directed Internship: Communication Handicapped (1-4) Cr/NC

Prerequisites: Two units of Communicative Disorders 556 and one unit of Communicative Disorders 656 or Communicative Disorders 929 and four units of Communicative Disorders 526, 546, 626, 646. Basic teaching credential. Prior to admission applicants must receive departmental approval. Application to take course should be made during preceding semester.

Teaching in public school with exceptional individuals. Applies toward the Special Education Specialist Credential for the Communication Handicapped (Deaf, Deaf-Blind, Speech and Hearing or Severe Oral Language) and Certificate of Clinical Competence in Speech-Language Pathology or Professional Certificate from the Council on Education of the Deaf. Applicants should consult with coordinator of Speech-Language Pathology or coordinator of Education of Hearing Impaired for specific hour requirements.

Computer Science

In the Department of Mathematical Sciences
In the College of Sciences

OFFICE: Business Administration/Mathematics 203
TELEPHONE: (619) 594-6191

Faculty

John D. Elwin, Ph.D., Professor of Mathematical Sciences, Chair of Department

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

John L. Carroll, 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

Mahmoud Tarokh, Ph.D., Professor of Mathematical Sciences

Marko I. Vuskovic, Ph.D., Professor of Mathematical Sciences

Carl F. Eckberg, Ph.D., Associate Professor of Mathematical Sciences (M.S. Computer Science Graduate Adviser)

Kris Stewart, Ph.D., Associate Professor of Mathematical Sciences

Vernor S. Vinge, Ph.D., Associate Professor of Mathematical Sciences

Roger E. Whitney, Ph.D., Associate Professor of Mathematical Sciences

Associateships

Graduate teaching associateships in computer science are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the Department of Mathematical Sciences.

General Information

The Department of Mathematical Sciences, in the College of Sciences, offers graduate study leading to the Master of Science degree in computer science. The areas in which courses are offered include software, systems, architecture, artificial intelligence, and computer science theory.

Master's level research projects are available in the following areas of computer science: distributed systems, multiprocessing, operating systems, graphics, neural networks, formal languages, numerical methods, robotics, signal processing, and computational complexity. Specialized laboratories exist for microprocessor architecture, graphics, and robotics and intelligent machines.

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.

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 student must have passed a qualifying examination in their area.

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 a minimum of 30 units of 500-, 600-, and 700-level courses selected with the approval of the adviser. All programs must include at least 24 units chosen from computer science and mathematics. Programs must also satisfy the following requirements:
 - a. At least 15 units of graduate (600-700) courses (excluding 797, 798, 799A).
 - b. At least one course from each of the following:
Programming and Formal Languages: Computer Science 520, 524, 532, 535, 620A, 620B, 624, 632.
Operating Systems and Architecture: Computer Science 572, 574, 576, 670, 672, 674.
Algorithms and Complexity: Computer Science 562, 564, 660, 662, 664.
Applications and Other Topics: Computer Science 514, 550, 551, 552, 553, 555, 556, 557, 558, 559, 561, 566, 650, 651, 656, 700; Mathematics 542, 693A, 693B.
2. With departmental approval, students may select Plan A (thesis), and must complete 799A in accordance with departmental and University regulations. An oral examination on the subject of the thesis is required. Students selecting Plan B must pass written comprehensive examinations as determined by the department.

Courses Acceptable on Master's Degree Programs in Computer Science

UPPER DIVISION COURSES

514. Database Theory and Implementation (3)

Prerequisites: Computer Science 310 and Mathematics 245.

Database systems architecture. Storage structures and access techniques. Relational model, relational algebra and calculus, normalization of relations, hierarchical and network models. Current database systems.

520. Advanced Programming Languages (3)

Prerequisites: Computer Science 237, 310, and 320.

Object oriented programming, concurrent programming, logic programming. Implementation issues.

524. Compiler Construction (3)

Prerequisites: Computer Science 237, 310, and 320.

Syntactical specification of languages. Scanners and parsers. Precedence grammars. Run-time storage organization. Code generation and optimization.

530. Systems Programming (3) I, II

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, debuggers, editors. Introduction to software engineering. Large project required. Not acceptable for the M.S. degree in computer science.

532. Software Engineering (3)

Prerequisites: Computer Science 310 and 320.

Theory and methodology of programming complex computer software. Analysis, design, and implementation of programs. Team projects required.

535. Object-Oriented Programming and Design (3)

Prerequisites: Computer Science 310 and 320.

Basic concepts of object-oriented programming; classes, objects, messages, data abstraction, inheritance, encapsulation. Object-oriented design methodology.

550. Artificial Intelligence (3)

Prerequisites: Computer Science 108 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.

551. User Interface Environments (3)

Prerequisites: Computer Science 310 and 320.

Design of user-machine interfaces in interactive systems. Problems faced by user of an interactive system; basic issues and principles involved in design and implementation of good and friendly user-machine graphical interfaces.

552. Advanced Artificial Intelligence (3)

Prerequisites: Computer Science 310, 320, and 550.

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.

553. Neural Networks (3)

Prerequisites: Computer Science 320 and Mathematics 254.

Principles of neural networks, their theory and applications.

555. Raster Computer Graphics (3)

Prerequisite: Computer Science 551.

Bit map graphics, algorithms to connect between different formats and enhancement of pictures.

556. Robotics: Mathematics, Programming, and Control (3)

Prerequisites: Computer Science 320, 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.

557. Computer Control Systems (3)

Prerequisites: Computer Science 310 and Mathematics 254.

Analysis and programming of real-time computer control systems, implementation of digital controllers including programming, intelligent control systems and fuzzy control.

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.

559. Computer Vision (3)

Prerequisites: Computer Science 310 and Mathematics 254.

Algorithms and computer methods for processing of images. Visual perception as a computational problem, image formation, characterization of images, feature extraction, regional and edge detection, computer architectures for machine vision.

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 paths, depth-first and breadth-first search), and others. NP-complete problems. Not acceptable for the M.S. degree in Computer Science.

561. Multimedia Systems (3)

Prerequisite: Computer Science 551.

System aspects of multimedia authoring, browsing, and database subsystem; digital representation for different media; audio and video; operating system support for continuous media applications; architectures; design and implementation of multimedia support systems; use of multimedia technology in software engineering.

562. Automata Theory (3)

Prerequisite: Mathematics 245 or 521A.

Definition of finite automata. Classification of finite automaton definable languages. Minimization of finite automata. Nondeterministic finite automata. Sequential machines with output. Regular sets and expressions. Introduction to grammars.

564. Introduction to Computability (3)

Prerequisite: Mathematics 245 or 523.

Definition of algorithm by abstract (Turing) machines. Universal Turing machines. Primitive recursive and recursive functions. The equivalence of the computational power of Turing machines and recursive functions. Limitations and capabilities of computing machines; the halting problem.

566. Queuing Theory (3)

Prerequisites: Computer Science 108 and Mathematics 550.

Performance prediction of computer networks and other systems (e.g., inventory control, customer service lines) via queuing theory techniques. Operational analysis.

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.

572. Microprocessor Architecture (3)

Prerequisites: Computer Science 370 and knowledge of the C programming language.

Architecture of state-of-the-art microprocessor. Internal pipeline, internal cache, external cache, and memory management. Programming a uniprocessor. Communication among computers in a distributed environment. Architecture and programming of a multiprocessor system.

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.

575. Supercomputing for the Sciences (3)

Prerequisite: Extensive programming background in Fortran or C.

Interdisciplinary course, intended for all science and engineering majors. Advanced computing techniques developed for supercomputers. Overview of architecture, software tools, scientific computing and communications. Hands-on experience with CRAY.

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 distribution of data and program functions.

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**620A. Formal Languages and Syntactic Analysis I (3)**

Prerequisites: Computer Science 310, 320 or 520, and 562.

Regular, context-free, context-sensitive, and general grammars. Corresponding machine model recognizers. Chomsky and Greibach normal forms. Closure, decidability and undecidability properties.

620B. Formal Languages and Syntactic Analysis II (3)

Prerequisite: Computer Science 620A.

Properties of deterministic context-free languages. Backtrack and matrix based general parsing techniques. LL(k) and LR(k) based parser generators. Precedence grammars.

624. Advanced Compiler Construction (3)

Prerequisite: Computer Science 524.

LR parsing. Attribute grammars and multipass translation. Intermediate representations. Global optimization. Global data flow analysis. Table compaction techniques. Syntactic error recovery and repair.

632. Advanced Software Engineering (3)

Prerequisite: Computer Science 532.

Theoretical and practical concepts associated with the specification, design, testing, and maintenance of large software systems. Use of automated tools in engineering such systems.

650. Seminar in Artificial Intelligence (3)

Prerequisite: Computer Science 550.

General problem-solving programs, expert problem solving, game-playing programs, pattern recognition and natural language processing. Understanding vision, manipulation, computer decision. May be repeated with new content with approval of graduate adviser. Maximum credit six units applicable to a master's degree.

651. Advanced Multimedia Systems (3)

Prerequisite: Computer Science 561.

System aspects of multimedia authoring, browsing, and database subsystems. Formal models for hypermedia documents. Conversion of flat text into hypertext. Artificial intelligence in hypermedia systems. Architectures, design, and implementation of multimedia support systems. Use of multimedia technology in software engineering.

656. Advanced Robotics (3)

Prerequisite: Computer Science 556.

Computer-based techniques for low-, medium-, and high-level robot control including sequential and parallel schemes for robot dynamics, robot programming and robot task planning.

660. Combinatorial Algorithms and Data Structures (3)

Prerequisite: Computer Science 560.

Algorithm design techniques. Network flow and matching. Complexity analysis. NP-completeness, reductions among NP-complete problems. Approximation algorithms for NP-complete problems such as the traveling salesman problem.

662. Theory of Parallel Algorithms (3)

Prerequisites: Computer Science 560 and Mathematics 254.

Models for parallel computation. Parallel algorithms for several common problems including sorting, searching, graph problems, and matrix problems. Complexity of parallel algorithms. Lower bounds on parallel complexity.

664. Theory of Computability (3)

Prerequisite: Computer Science 562 or 564.

Turing machines and other formal models of computation. Recursive function theory. The Ackermann function. Solvable and unsolvable problems.

670. Advanced Operating Systems (3)

Prerequisite: Computer Science 570.

Survey of advanced operating systems including distributed systems. Associated design issues. Case studies.

672. Microcomputer Software (3)

Prerequisite: Computer Science 572.

Design and implementation of a real time operating system for a state-of-the-art microprocessor. Applications of the operating system.

674. Advanced Computer Architecture (3)

Prerequisite: Computer Science 572.

Advanced computer architecture, including parallel and distributed architecture, and accompanying software and algorithmic issues.

696. Selected Topics in Computer Science (3)

Prerequisite: Consent of instructor.

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 30-unit master's degree.

700. Applications of Computer Science (3)

Prerequisite: Classified graduate standing in mathematics or computer science.

Topic to be chosen from such applications as theorem proving,

simulation, learning theory, graphics definition languages. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable 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

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 or Project 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.

Drama

In the College of Professional Studies and Fine Arts

OFFICE: Dramatic Arts 204
TELEPHONE: (619) 594-6363
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Faculty

Alicia M. Annas, M.F.A., Professor of Drama, Chair of Department
Ralph Funicello, B.F.A., The Don W. Powell Chair in Scene Design
Anne-Charlotte Harvey, Ph.D., Professor of Drama
Michael L. Harvey, Ph.D., Professor of Drama
Peter F. Larlham, Ph.D., Professor of Drama
Margaret McKerrow, Ph.D., Professor of Drama
Terry L. O'Donnell, D.M.A., Professor of Drama
Beeb Salzer, M.F.A., Professor of Drama
R. Craig Wolf, M.F.A., Professor of Drama
Paula Kalustian, M.F.A., Associate Professor of Drama
William N. Reid, M.F.A., Associate Professor of Drama
Loren P. Schreiber, M.F.A., Assistant Professor of Drama
Rick A. Simas, Ph.D., Assistant Professor of Drama

Associateships

Graduate teaching and nonteaching associateships are available to a limited number of qualified students. Application forms and further information may be obtained from the department.

The Don W. Powell Chair in Scene Design

The Don W. Powell Chair in Scene Design was established through a trust provided by the late professor emeritus. Always concerned about students, Powell, who retired after 30 years with the drama department, created the trust in order to enhance theatre education at S.D.S.U. The first holder of The Don W. Powell Scene Design Chair is the nationally acclaimed designer Ralph Funicello.

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 Fine Arts degree is offered in the areas of design/technical theatre and musical theatre. The M.A. is a 30-unit program; the M.F.A. a 60-unit program. Both programs of study limit the number of students accepted in order to offer individual attention and extensive opportunity to participate in theatre production. The Dramatic Arts building contains the proscenium-style Don Powell Theatre seating 500, with state-of-the-art computer lighting and sound control, and the flexible Experimental Theatre seating 200, rehearsal and recording areas, a design studio and CADD laboratory, 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 student's area adviser will 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. NOTE: M.A. applications are accepted for Fall admission only. Application deadline is April 15 for the following Fall semester.

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 600A, and to have removed any deficiencies assigned. It is recommended that all graduate students take Drama 600A 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 to include Drama 600A, 600B, 610, 621, 647A or 647B or 649, and 799A. Eighteen of the 30 units must be in 600- and 700-numbered drama courses and the remaining 12 units may be selected from 500-, 600-, or 700-numbered courses. A maximum of 9 units may be elected outside the Drama department. PLEASE NOTE: Drama 600A, 600B, 610, 621, 647A or 647B or 649, and 799A are required courses for all Master of Arts candidates.

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 (combined verbal and quantitative).

2. Possess a baccalaureate degree in drama or an approved affiliated field with a grade point average of not less than 2.5 overall in the last 60 units of study attempted, with a 3.0 undergraduate average in the major, and a 3.5 average in those theatre classes considered prerequisites for the M.F.A. concentration 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 concentration requirements listed below.

Students who have not met certain criteria or demonstrate deficiencies in undergraduate preparation or basic skill development, may be granted conditional admission with the understanding that remedial coursework will be completed prior to advancement to classified standing. Remedial coursework cannot be applied to the 60-unit minimum requirement for the degree. Students who do not satisfy the requirements for 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 must formally apply for the M.F.A. degree. PLEASE NOTE: Applicants holding an M.A. or M.F.A. degree from an accredited institution may transfer up to 30 units upon review and recommendation of the faculty in the area of specialization, and approval of the graduate coordinator of the Drama 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 Acting

No new students being admitted to program at this time.

In addition to meeting the admission requirements listed above, a student must demonstrate exceptional artistic talent in the acting area by providing:

1. A resume of acting accomplishments.
2. An audition, either in person or via videotape (VHS), which would include two contrasting works: one contemporary piece and one classical piece from Shakespearean drama (total time not to exceed 12 minutes).
3. Three letters of recommendation attesting to the candidate's academic qualifications and level of competence in acting.

For specific audition dates and locations, write to the Director, Graduate Acting Program, Department of Drama, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-7601.

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 design/technical theatre by submitting the following items.

1. Those students primarily interested in design must submit a design portfolio which contains sketches, renderings, graphics, floor plans, elevations, plots, color/fabric 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 scenic, lighting, or costume technology and 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.

For specific interview dates and locations, write to the Director, Design Program, Department of Drama, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-7601.

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 resumé 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.

For specific audition dates and locations, write to the Director, Musical Theatre Program, Department of Drama, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-7601.

This program admits new students every other year only. Application may be made Spring of even numbered years for the following Fall admission.

Advancement 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 600A and removed any deficiencies noted by the faculty.

Specific Requirements for the Master of Fine Arts Degree

(Major Code: 10072)

Forty-five of the sixty units required 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 not less than two semesters. No more than six units in 798 will be accepted for credit toward the degree.

Concentration in Acting

No new students being admitted to program at this time.

Candidates for the M.F.A. with a concentration in acting, in addition to meeting the requirements for classified graduate standing, must complete a 60-unit graduate program consisting of the following courses: Drama 600A, 600B, 607* (must be taken four times for a total credit of 12 units), 610, 621, 624*, 630 (maximum 2 units), 631*, 632*, 633*, 634*, 746, 795, 799A.

Twelve 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. It is recommended that students include at least 3 units from Drama 532, 533A, 533B, 551 among the 12 units of electives. In special circumstances, additional courses acceptable for graduate credit in other departments may be selected with the approval of the student's adviser.

Students in the concentration in acting will be reviewed by a faculty panel each semester to determine if their progress warrants continuation in the program. In conjunction with the completion of Drama 746 and 799A, students must complete an adjudicated performance thesis project established and approved by their thesis committee. This project will be supported by a written analysis/apologia.

* Courses not currently offered at SDSU.

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 to include 36 units of core courses as follows: 1) during the first year of study, Drama 530 and three units selected from Drama 540, 547, or 552, depending on student's area of specialization; 2) Drama 600A, 600B, 610, 621, 645, 646A, and 646B; and 3) four semesters (12 units) of Drama 643. The student must also complete 15 units of practicum, internship, and thesis/project selected from Drama 642, 746, 795 (must be taken for a total of six units) and 799A.

Nine units of electives selected by student and adviser from graduate level courses in the following areas: art, drama, education, English and comparative literature, history, linguistics, and 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.

Candidates must prepare a production thesis project approved by their thesis committee. This project must be supported by a written analysis/apologia.

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 520, 551, 555, 600A, 600B, 610, 623, 650, and 659. The student must also complete 29 units of studio, voice, internship, practicum, and thesis/project under the course numbers: Drama 627 (taken four times for a total of 16 units), Drama 630 (taken four times for a total of four units), 746, 795, 799A.

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 additional courses acceptable for graduate credit in other departments may be selected with the approval of the student's adviser.

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

510. Creative Drama II (3) I

Prerequisite: Drama 310.

Advanced techniques and procedures in teaching creative drama. Emphasis on a multicultural approach. Practical experience through fieldwork in elementary or middle school classrooms.

515. Directing for Young Audiences (3) II

Prerequisite: Drama 315.

Techniques of directing productions for young audiences: casting, staging, characterization, rehearsal techniques.

520. History of Musical Theatre (3) I

Prerequisite: Upper division standing.

Musical theatre from early Viennese operettas to musicals of modern times; representative works.

530. Period Dress and Decor (3) I

Prerequisite: Drama 240B or graduate standing.

Visual survey of relationships and cultural significance of period dress, architecture, and decorative arts as applied to theatrical productions. Emphasis on significant historic periods in dramatic literature. (Formerly numbered Drama 450.)

532. Advanced Acting and Directing (3) I

Prerequisite: Drama 231. 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 I and II (3-3)

Prerequisite: Drama 231. Acting students admitted by audition only; directing students by interview.

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 directing and production approaches. 533A: Shakespearean tragedy and history, melodrama. 533B: Greek tragedy, Shakespearean comedy.

539. Theatre Design Visualization (2) I

Four hours of activity.

Prerequisite: Drama 240B.

Approaches to completing successful set and costume rendering, scenic models, and lighting studies. Techniques, media, and portfolio presentation.

- 540. Scene Design II (3) II**
Prerequisites: Drama 440 and 530.
History of scene design and application of contemporary styles to various types of dramatic production.
- 541. Scene Painting (2) II**
Four hours of activity.
Prerequisite: Drama 530.
Theories and techniques of scene painting, including both historical backgrounds and modern procedures. Full-scale projects executed in scenery studio.
- 543. Stage Property Design (2) II**
One lecture and two hours of activity.
Prerequisite: Drama 530.
Theories and techniques of property design for the theatre: script analysis, research methods, planning and budgeting procedures, construction techniques and materials. Projects in property design for selected scripts.
- 546. Computer Systems for the Theatre (2) II**
One hour of discussion and three hours of activity.
Prerequisite: Drama 448A.
Functional study of computer systems and their application to the theatre. CADD, lighting and sound control, and production management.
- 547. Lighting Design II (3) I**
Two lectures and three hours of laboratory.
Prerequisite: Drama 447.
Advanced design theories and lighting practice for theatre and dance. Laboratory and production related activities.
- 548. Sound Design for the Theatre (3) I**
Two lectures and two hours of activity.
Prerequisites: Drama 240B and 325.
Theories and techniques of sound design and reinforcement for theatrical performance. Laboratory experience in sound production.
- 551. Costume, Movement, and Manners (3) I**
Prerequisite: Upper division standing or admission to the graduate program.
Interrelationship of period costumes and the movement and manners of selected historical periods; application to staging of plays from pre-modern theatre.
- 552. Costume Design II (3) II**
Prerequisites: Drama 452 and 530.
Advanced studies in costume design. Emphasis on theatrical style, rendering layout, design problems, materials, and budget.
- 554A. Costume Design Technology I (2) II**
Four hours of activity.
Prerequisite: Drama 240B.
Current materials and practices of costume technology: advanced construction techniques, fabric selection and use, period pattern drafting, draping and cutting.
- 554B. Costume Design Technology II (2) II**
Four hours of activity.
Prerequisite: Drama 240B.
Advanced costume craft construction techniques and management procedures for costume production: millinery, fabric dyeing and painting, jewelry, and related crafts.

- 555. Movement for the Theatre II (2) I**
Four hours of activity.
Prerequisite: Drama 130 or admission to the M.F.A. program.
Movement techniques for theatre. Movement patterns, phrase development, and musical theatre movement styles. Maximum credit four units applicable to a bachelor's degree; maximum credit eight units applicable to the M.F.A. degree in drama.
- 589. Playwriting: The Full-Length Play (3)**
Prerequisite: Drama 325. Recommended: English 588.
Format and techniques of writing the full-length play. Problems in characterization, plot, and dialogue. Reading and analysis of full-length plays written by students.
- 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 296, 496, 596 courses applicable to a bachelor's degree. Maximum 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

- 600A. Research and Bibliography (2)**
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. (Formerly numbered Drama 600.)
- 600B. Thesis Preparation (1)**
Prerequisite: Drama 600A.
Development and presentation of thesis with focus on writing and formal parameters. (Formerly numbered Drama 600.)
- 610. Aesthetics for the Stage (3)**
Prerequisites: Drama 600 and admission to M.A. or M.F.A. program in drama.
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: Minimum three units of upper division theatre history; credit or concurrent registration in Drama 600A.
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, Appia, Brecht, and Grotowski).
- 623. Seminar in Musical Theatre Script and Score Analysis (3)**
Prerequisite: Credit or concurrent registration in Drama 325.
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: Open to M.F.A. musical theatre students. Others by audition.

Acting, singing, and dancing skills in relation to musical theatre performance, direction, choreography, and composition.

630. Individual Vocal Instruction (1)

Prerequisite: Admission to M.F.A., concentration in acting or musical theatre.

Individual vocal instruction/coaching devoted to diagnosis and correction of problems for students in M.F.A. concentration in acting or musical theatre. Maximum two units applicable to acting. Musical theatre students must take one unit each semester for a maximum of four units.

642. Theatre Practicum Skills (3) Cr/NC

Prerequisite: Admission to M.F.A. program.

Assisting on design projects for department productions. To be arranged with area adviser.

643. Collaborative Studies in Design (3)

Prerequisite: Admission to M.F.A. program in design/technical theatre. 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 designs produced.

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

Prerequisite: Drama 447 or 547.

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

646. Seminar in Design for Stage and Television (3)

The principles of design in the theatre with an emphasis on the historical development of theatrical costume or scenic environment. The investigation of recent tendencies in styles and their evolution. Each section may be taken once for credit.

A. Costume Design

Prerequisite: Drama 452 or 552.

B. Scenery Design

Prerequisite: Drama 448A or 540.

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

Prerequisites: Drama 325, 460A and 460B.

A. British and Continental Theatre**B. American Theatre****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 in drama.

650. Seminar in Musical Theatre Dance Repertory (3)

Prerequisites: Drama 555 and 623.

Intensive study of the various choreographic styles of the musical theatre from the viewpoint of the choreographer and director.

659. Musical Theatre Stage Direction (3)

Prerequisite: Drama 600.

Special problems in directing for the musical theatre.

746. Theatre Internship (3) Cr/NC

Prerequisites: Drama 600 and consent of graduate coordinator and program director.

Professional field experience in areas of design/technical theatre, acting, directing musical theatre, and theatre for young audiences. (Formerly numbered Drama 746B.)

795. Practicum in Theatre Arts (1-6)

Prerequisite: Drama 600.

Faculty supervised projects in design/technical theatre, performance or direction leading to public presentation. Maximum credit six units.

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

Prerequisite: Project/assignment to be arranged with area adviser.

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 report or thesis for the master's degree.

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

Prerequisite: Prior registration in Thesis or Project 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

In the College of Arts and Letters

OFFICE: Nasatir Hall 304
TELEPHONE: (619) 594-1675

Faculty

Raford D. Boddy, Ph.D., Professor of Economics, Chair of Department
Renate K. Adler, Ph.D., Professor of Economics
Norris C. Clement, Ph.D., Professor of Economics
Roger S. Frantz, Ph.D., Professor of Economics
Louis C. Green, Ph.D., Professor of Economics
Shoshana A. Grossbard-Shechtman, Ph.D., Professor of Economics
Arthur E. Kartman, Ph.D., Professor of Economics
Murugappa C. Madhavan, Ph.D., Professor of Economics
Woo Hyun Nam, Ph.D., Professor of Economics
Dean O. Popp, Ph.D., Professor of Economics, Associate Vice President for Faculty Affairs
Harinder Singh, Ph.D., Professor of Economics
Douglas B. Stewart, Ph.D., Professor of Economics (Graduate Adviser)
Mark A. Thayer, Ph.D., Professor of Economics
Yiannis P. Venieris, Ph.D., Professor of Economics
James B. Gerber, Ph.D., Associate Professor of Economics
John W. Hambleton, Ph.D., Associate Professor of Economics
Dan Steinberg, Ph.D., Associate Professor of Economics
Camilla Kazimi, Ph.D., Assistant Professor of Economics

Associateships

Graduate associateships in economics are available to a limited number of qualified students. Application forms and additional information may be obtained from the graduate adviser of the Department of Economics.

Scholarships

Annually the Center for Public Economics awards the \$1000 Henry Cramer scholarship, the \$300 Leonard Chadwick scholarship, the \$600 Sidney Evans scholarship, the \$300 Louis Freeman scholarship, the \$600 Henry George scholarship, the \$500 Walter Weiss scholarship, and a general \$500 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. After completing the core analytical courses, students may elect general economic applications or focus on (1) microeconomic behavior and public economics or (2) macroeconomic performance and development policy. Courses in the graduate program are designed to provide advanced training in economics both for students who plan to terminate their graduate studies at the master's level and for those who plan additional graduate studies leading to the doctoral degree in economics or related fields. Special research facilities include the Center for Public Economics and the Social Science Research Laboratory of the College.

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 (combined verbal and quantitative). The letters of reference should be addressed directly to the graduate adviser of 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 June 30 for fall admission and by November 30 for spring admission. Normally students should attempt to enter for fall semester.

Applicants will be expected to have completed undergraduate courses in mathematical economics, intermediate micro and macro theory, and econometrics. Applicants whose preparation in economics and mathematics is judged inadequate by the graduate committee may be admitted with conditional graduate standing (classified). Students so admitted will be required to remove the deficiency by satisfactory performance on placement examinations or by additional coursework within an amount of time specified by the graduate adviser.

Advancement to Candidacy

In addition to the general requirements to candidacy described in Part Two of this bulletin, the student must have satisfactorily completed Economics 610, 620, 630, and 640 with a GPA of 3.0 and no grade less than a B-.

At the time of advancement to candidacy, students selecting Plan A must have a thesis proposal including an oral defense approved by the department graduate committee.

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 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 610, 620, 630, and 640. No program may contain more than a combined total of six units of 500-level economics courses or approved courses outside economics.

Written comprehensive examinations covering the core fields of mathematical economics, macroeconomics, microeconomics, and econometrics are required for Plan B students. Students selecting Plan A must include Economics 799A in their program and complete a master's thesis. No program may contain more than six units from Economics 795, 797, 798, and 799A. Students selecting Plan B must take Economics 740A and 740B.

As an alternative to electing a general program, the student may choose to specialize in (1) microeconomic behavior and public economics or (2) macroeconomic and development policy. To specialize in (1) the student would select at least nine units from the seminar topics listed under Economics 700, 710, and 750 below. To specialize in (2) the student would choose at least nine units from Economics 720, 730, and 750. Up to six units may be taken within each seminar number.

Microeconomic Behavior and Public Economics Specialization

Economics 700. Seminar in Microeconomic Applications

Topics include:

- Seminar in Industrial Organization and Firm Behavior (3)
- Seminar in Labor Economics (3)
- Seminar in Economic Issues in Demography (3)
- Seminar in Experimental Economics (3)

Economics 710. Seminar in Public Economics

Topics include:

- Seminar in Environmental Issues (3)
- Seminar in Public Expenditures (3)
- Seminar in Urban and Regional (3)
- Seminar in Regulation (3)
- Seminar in Tax Policy (3)

Macroeconomic and Development Policy Specialization

Economics 720. Seminar in Development and Planning

Topics include:

- Seminar in Development Economics (3)
- Seminar in Development Planning (3)
- Seminar in International Trade and Commercial Policy (3)

Economics 730. Seminar in Macroeconomic Policy

Topics include:

- Seminar in National Monetary Institutions (3)
- Seminar in International Monetary Policy (3)
- Seminar in Business Cycles (3)
- Seminar in Macroeconomic Modeling and Prediction (3)

Economics 750. Seminar in Economic History and Institutions (either specialization)

Topics include:

- Seminar in U.S. Economic History (3)
- Seminar in Economic Growth in Historical Perspective (3)
- Seminar in Contemporary Economic Systems (3)

Courses Acceptable on Master's Degree Programs in Economics

UPPER DIVISION COURSES

561. International Trade (3)

Prerequisites: Economics 320 and 321.

Theory and policy of international trade with examples drawn from current issues. Models of determinants of trade. Free trade and protectionism. Trade and economic development. Trading blocs, the European community, GATT and U.S. trade policy.

565. North American Economic Relations (3)

Prerequisites: Economics 101 and 102. Recommended: Economics 360.

Socioeconomic development of U.S., Mexico, and Canada since World War II. Issues affecting the three countries' relations, including trade investment, technology, and international organizations and agreements.

592. International Monetary Theory and Policy (3)

Prerequisite: Economics 320 or 490.

International monetary spillovers from domestic macroeconomic policies. Foreign exchange markets and balance of payments. Fixed, flexible and managed exchange rates. Bretton Woods, international monetary fund, and world debt crisis.

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 to a master's degree in economics.

610. Mathematical Economics (3)

Prerequisites: Economics 307 and credit or concurrent registration in Economics 320 and 321.

Static and dynamic modeling of linear and nonlinear economic systems. Optimization techniques, matrix algebra, quadratic forms, and difference equations. Cost functions, production functions and duality.

620. Macroeconomic Theory (3)

Prerequisites: Economics 320, 321, and credit or concurrent registration in Economics 610.

Static and dynamic theories of income, employment, and inflation in open and closed economies with emphasis on policy analysis. Alternative theories of investment and consumption and the role of expectations in the short and long run.

630. Microeconomic Theory (3)

Prerequisites: Economics 307, 320, 321, and credit or concurrent registration in Economics 610.

Theories of the consumer, the firm, and the market. Topics in welfare and general equilibrium. Duality and uncertainty.

640. Econometrics (3)

Prerequisites: Economics 341 and 610.

Measurement in economics. Use of economic models involving multiple regression analysis, simultaneous equation systems, and time series analysis.

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.

700. Seminar in Microeconomic Applications (3)

Prerequisites: Economics 630 or classified graduate standing in another department and consent of instructor.

Microeconomic applications to individual, firm, or government. Maximum credit six units of Economics 700 applicable to a master's degree. See Class Schedule for specific content. Seminar topics include:

- Seminar in Industrial Organization and Firm Behavior
- Seminar in Labor Economics
- Seminar in Economic Issues in Demography
- Seminar in Experimental Economics

710. Seminar in Public Economics (3)

Prerequisites: Economics 630 or classified graduate standing in another department and consent of instructor.

Government in a market economy. Impact on individual and firm behavior. Maximum credit six units of Economics 710 applicable to a master's degree. See Class Schedule for specific content. Seminar topics include:

- Seminar in Environmental Issues
- Seminar in Public Expenditures
- Seminar in Urban and Regional
- Seminar in Regulation
- Seminar in Tax Policy

720. Seminar in Development and Planning (3)

Prerequisites: Economics 620 or classified standing in another department and consent of instructor.

Development process and policies. Planning techniques. Relations among developing and developed countries. Maximum credit six units of Economics 720 applicable to a master's degree. See Class Schedule for specific content. Seminar topics include:

- Seminar in Development Economics
- Seminar in Development Planning
- Seminar in International Trade and Commercial Policy

730. Seminar in Macroeconomic Policy (3)

Prerequisites: Economics 620, credit or concurrent registration in Economics 640, or classified standing in another department, and consent of instructor.

Applications of macroeconomics to open economies. Maximum credit six units of Economics 730 applicable to a master's degree. See Class Schedule for specific content. Seminar topics include:

- Seminar in National Monetary Institutions
- Seminar in International Monetary Policy
- Seminar in Business Cycles
- Seminar in Macroeconomic Modeling and Prediction

740A. Seminar in Applied Economic Research (3)

Prerequisites: Advancement to candidacy and 15 units credit from the approved program, including Economics 610, 620, 630, and 640. Concurrent registration in Economics 740B.

Advanced treatment of research design and methodology. Application of empirical techniques to selected problems.

740B. Workshop in Applied Economics Research (3)

Prerequisites: Advancement to candidacy and 15 units credit from the approved program, including Economics 610, 620, 630, and 640. Concurrent registration in Economics 740A.

Application of economic research techniques. Each student will choose, develop, and present an original research project.

750. Seminar in Economic History and Institutions (3)

Prerequisites: Economics 620, credit or concurrent registration in Economics 640, or classified graduate standing in another department, and consent of instructor.

Economic development in historical perspective. Maximum credit six units of Economics 750 applicable to a master's degree. See Class Schedule for specific content. Seminar topics include:

- Seminar in U.S. Economic History
- Seminar in Economic Growth in Historical Perspective
- Seminar in Contemporary Economic Systems

795. Internship in Economics (3) Cr/NC

Prerequisites: Economics 610, 620, 630, 640 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.

Education

In the College of Education

General Information

The College of Education offers graduate study leading to the Master of Arts degree in education with concentrations in the following: counseling, educational technology, elementary curriculum and instruction, postsecondary educational leadership and instruction, reading education, secondary curriculum and instruction, educational leadership, 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. 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 master's 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 areas including organization and administration, cross-cultural education, curriculum and instruction, special education, educational technology, and reading, language and literacy. 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, 24 at each institution, is required before a student is eligible to take qualifying exami-

nations. In addition to these residency units, additional coursework may be needed before the student is competent to conduct dissertation research. After successful completion of qualifying examinations, the student is advanced to candidacy and enters the dissertation phase of the program.

Students seeking admission to the joint doctoral program in education should write directly to the director of the program, Dr. Marlowe J. Berg, requesting application materials. 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.

Faculty

The following members of the cooperating institutions participate in the joint doctoral program in education and are available for direction of research and as members of joint doctoral committees:

San Diego State University

Director: Marlowe J. Berg

Faculty: Allen, Atkins, Berg, Bezuk, Espinosa, Flood, Frase, Harrison, Jacobs, Kuhlman, Lapp, Lewis, Lynch, Mason, Ochoa, Rossett, Saba, Santa Cruz

The Claremont Graduate School

Coordinator: David Drew

Faculty: Briner, Douglass, Dreyer, Hale, Kerchner, Poplin, Regan, Schuster, Smith, Weeres

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 or 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, Counseling and School Psychology, Educational Technology, and Special Education.)

Advancement to Candidacy

A student desiring a Master of Arts degree in education with a concentration in postsecondary educational leadership 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 100K, or to the coordinators of the respective programs. Students in counseling and school psychology 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 or Teacher Education 634, and Plan A, which requires Education 799A, or Plan B in which two options are available, Education 791A-791B-791C 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. A 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 100K, 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 half way through the program, has secured an adviser 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 690 (3 units) as early as possible in their first graduate year.

Concentrations

Educational Leadership (Major Code: 08271)

The Master of Arts degree in education with a concentration in educational leadership provides increased knowledge and skill for the prospective administrator or supervisor. The concentration is intended for those who wish to pursue administrative or supervisory positions in education, including postsecondary institutions.

To apply for this concentration, a student must complete an application for admission to both the University and the educational leadership program. All applications should include at least two letters of recommendation from the school district, postsecondary institution or agency employer. All applicants should note that academic degree and experience required varies with the career goal of the student. Upon admission to the University and the program, 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 a K-12 administrative credential or in combination with the California Preliminary Administrative Services Credential. The degree without the credential is designed for postsecondary administrators, foreign school administrators, school business managers, administrators of educational programs in private industry, civil services, or the nonprofit sector, administrators of technical and vocation programs, or those who have other administrative objectives in educational fields. Candidates who intend to pursue administrative careers in California public schools, grades K-12, will need to obtain the Preliminary Administrative Services Credential and then the Professional Administrative Services Credential. Credential candidates are advised to satisfy the requirements for the master's degree in conjunction with the credential.

Specific Requirements for the Master of Arts degree in Education with a Concentration in Educational Leadership:

A minimum of 30 units to include:

1. Core program: Six to nine units selected from the following:
 - ARP 600 Principles of Educational Administration (3)
 - ARP 605 Postsecondary Education (3)
 - ARP 610 Educational Leadership (3)
2. Six to nine units selected, with the approval of the graduate adviser, from the following:
 - ARP 611 Curriculum Theory and Development in Postsecondary Education (3)
 - ARP 630 Curriculum Design and Management (3)
 - ARP 652 Seminar in Instructional Improvement and Evaluation (3)
 - ARP 655 Administering Educational Organizations (3)
 - ARP 680 Seminar in Administration, Rehabilitation and Postsecondary Education (2-6)
 - ARP 730 Seminar in Adult Learning (3)
 - ARP 740 Advanced Seminar in Administration, Rehabilitation and Postsecondary Education (3)

3. Electives selected with the approval of the graduate adviser (6-9 units).
4. ED 690 Procedures of Investigation and Report (3)
5. Research: Three to six units selected from the following:
 ED 791A Evaluation Techniques (3)
 ED 791B-791C Practicum: Evaluation (1-3) or
 ED 795A-795B Seminar (3-3) or
 ED 799A Thesis (3)

Specific 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.
 - 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, full-time K-12 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
 ARP 610 Educational Leadership 3
 ARP 630 Curriculum Design and Management 3
 ARP 652 Seminar in Instructional Improvement and Evaluation 3
 ARP 655 Administering Educational Organizations 3
 ARP 660 Field Experience in Educational Administration 10
 Electives selected with approval of adviser 3

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4. All students must meet the state mandated requirement for competencies needed to serve individuals with disabilities. Consult with a program adviser in the Department of Special Education for coursework and waiver requirement.

Specific Requirements for the Professional Administrative Services Credential: (Credential Code: 00502)

Candidates pursuing the Professional Administrative Services Credential must be in a credentialed administrative position. The candidate must complete the credential program within five years of initial appointment to an administrative position.

The following are required for admission to the Professional Administrative Services Credential program:

1. An application for admission to the program.
2. Admission to postbaccalaureate status at San Diego State University.
3. Possession of a valid Preliminary Administrative Services Credential or a Clear Administrative Services Credential.
4. Possession of a master's degree in Educational Leadership or another field related to educational practice.
5. Two letters of recommendation from knowledgeable field references
6. Two recent performance evaluations.
7. A letter of formal commitment of participating school district

- to support internship requirement.
8. Minimum grade point average of 3.25 in graduate study.
9. A selection interview with program area faculty members.

Program

The program requirements for the Professional Administrative Services Credential are:

	Units
ARP 707 Educational Law and Finance	3
ARP 720 Educational Human Resource Development	3
ARP 727 Emerging Issues in Educational Leadership	3
ARP 747 Leadership in a Diverse Society	3
ARP 760 Internship in Educational Leadership.....	9-12
Electives selected with approval of adviser	0-6
Total	21-30

Issuance of the Professional Administrative Services Credential requires completion of two years of successful, fulltime, K-12 administrative experience earned while holding the Preliminary Administrative Services Credential.

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 experiences necessary to prepare for doctoral studies in counseling. The program, usually with Plan B, is intended for individuals who seek to increase their understanding of human behavior and improve their interpersonal skills in their current profession or occupation. This program does *not* lead to credentials or licensure in counseling. Individuals seeking California credentials in school counseling or school psychology or licensure in marriage, family, and child counseling are referred to the description of the Master of Science in counseling program provided in the Counseling and School Psychology section of this bulletin. For further information, see the graduate adviser in the Department of Counseling and School Psychology.

1. Prerequisite: Admission to the Department of Counseling and School Psychology (see Counseling and School Psychology section of this bulletin).
2. Education 690 Procedures of Investigation and Report (3)
3. Core program (minimum of 15 units):
 - a. Common Core (3 units):
 CSP 600 Counseling Communication Skills (2)
 CSP 600L Counseling Prepracticum (1) Cr/NC
 - b. Foundations (minimum of 6 units):
 CSP 610A Determinants of Human Behavior:
 Personality (3)
 CSP 610B Determinants of Human Behavior:
 Social and Cultural (3)
 CSP 610C Determinants of Human Behavior:
 Development (3)
 CSP 610D Determinants of Human Behavior:
 School Learning (3)
 CSP 615 Seminar in Multicultural Dimensions in
 Counseling (3)
 - c. Theory, Research, and Techniques (minimum of 6 units):
 CSP 640 Theory and Process of Appraisal (3)
 CSP 660 Theory and Process of Counseling (3)
 CSP 662 Counseling Interventions with Children and
 Adolescents (3)
 CSP 670 Theory and Process of Group Counseling (3)

- CSP 680 Theory and Process of Consultation (3)
- CSP 685 Theories of Marriage and Family Therapy (3)
- 4. Electives (6-9 units).
- 5. Research (3-6 units).
Ed 799A Thesis (3) or Ed 795A-795B Seminar (3-3)
or Ed 791A Evaluation Techniques (3),
Ed 791B-791C Practicum: Evaluation (1-3)

**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): Policy Studies in Language and Cross-Cultural Education 612, Ethnographic Approach to Classroom Interaction (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)
ED 791A Evaluation Techniques (3)
ED 791B-791C Practicum: Evaluation (1-3) or
ED 795A-795B Seminar (3-3 units) or
ED 799A Thesis (3 units)

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, 684, 775, and Special Education 650. Specialization prerequisites are Educational Technology 540 and 541.

Specialization in Workforce Education and Lifelong Learning: This specialization will allow students to prepare themselves as professionals who will focus on the development of education and training programs for youth and adults who are traditionally undereducated, non-college educated and who work in non-management jobs.

Students specializing in Workforce Education and Lifelong Learning pursue the following program: Prerequisites are Educational Technology 540 and 541. Required courses included in the 15 unit core are Educational Technology 530, 544, and Administration, Rehabilitation and Postsecondary Education 565. Recommended electives to be approved by the program adviser may include: Educational Technology 572, 640, 644, 650, 670, 684, 685; Administration, Rehabilitation and Postsecondary Education 605, 631, 730, 747; Policy Studies in Language and Cross-Cultural Education 602, 612, 653; Special Education 663; Teacher Education 631, 639.

**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 program will include:
 - a. Teacher Education 600, 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; 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-791C, Evaluation (3-1-3 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 two diverse audiences with different career goals. Plan 1, curriculum development, is geared for the classroom teacher or resource specialist who will be working directly with language minority students. Plan 2 has been developed to allow students to specialize in areas outside of the Policy Studies in Language and Cross-Cultural Education Department. The nine unit specializations may be in other College of Education departments or in departments across campus, with permission of the department adviser and the cooperating department. This allows for career options in a variety of settings with an emphasis in a noneducational discipline, to provide classroom teachers, researchers, and other specialists with a different orientation in examining policy research.

Students in each specialization will take a core of nine units in the Policy Studies in Language and Cross-Cultural Education Department. All students will also take a comprehensive examination* covering coursework for the M.A. degree.

* It is recommended that students enroll in PLC 686 in preparation for the comprehensive examination.

Prerequisites: PLC 602 (3) and PLC 653 (3)

M.A. Plans 9 Units Total

Plan 1. PLC 612 (3), 613 (3), 650 (3) or

Plan 2. PLC 612 (3) and 6 units from: PLC 553, 613, 650 with approval of adviser.

Research: 6-9 Units Total

ED 690 Procedures of Investigation and Report (3) AND

ED 791A Evaluation Techniques (3) OR

ED 791B-791C Practicum: Evaluation (1-3) or

ED 795A-795B 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
 - PLC 552 Teaching Writing in Multilingual Settings (3)
 - PLC 553 Oral Language Assessment Techniques (3)
 - PLC 596 Special Topics in Bilingual and Multicultural Education (3)
 - PLC 651 Multicultural Methods and Curriculum in Content Areas (3)
 - PLC 652 Language Arts in the Multicultural Education Curriculum (3)
 - PLC 686 Seminar in Multicultural Education (1-6)
 - PLC 798 Special Study (1-6)

2. Outside Specialization
With consent of department adviser and a cooperating department or program.

**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/language arts specialists in public or private schools and clinics. The program prepares candidates to teach, tutor, develop curriculum, offer in-service instruction and administer reading centers for students ranging from kindergarten through community college, university, and adult levels. This degree is often earned concurrently with a California Reading/Language Arts Specialist Credential, which has a number of common requirements.

1. Prerequisites: Completion of a minimum of 12 units of professional coursework in education, including a basic course in methods and materials for teaching reading and a course in children's/adolescent literature prior to or concurrent with enrollment in TE 637 Instructional Strategies for Reading/Language Arts.
2. TE 634 Seminar in Research Investigations in Reading and Language Arts (4)
3. Core program (18 units)
 - TE 536 Assessment of Reading/Language Arts (3)
 - TE 631 Seminar in Language Arts (3)
 - TE 636 Leadership in Literacy Evaluation (3)
 - TE 637 Instructional Strategies for Reading/Language Arts (3)
 - TE 638 Topics in Reading Education (minimum of 3)
 - TE 639 Literacy and Language (3)
4. ED 791A Evaluation Techniques (3)
ED 791B-791C Practicum: Evaluation (1-3) or
ED 795A-795B Seminar (3-3) or
ED 799A Thesis (3)
5. Electives (2)

**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); three units from TE 604, Advanced Problems in Instruction; or TE 607, Seminar in Research in Curricular Problems; or related course with approval of adviser.
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 three units must be in 600- or 700-numbered courses. A maximum of six units may be selected from cognate fields outside the College of Education.

5. ED 791A Evaluation Techniques (3) and ED 791B-791C Practicum: Evaluation (1-3) or ED 795A-795B Seminar (3-3 units) or ED 799A Thesis (3 units)

Special Education (Major Code: 08081)

The Master of Arts degree in education with a concentration in special education provides the professional educator with advanced knowledge and skills in special education. This degree has many requirements in common with the California Specialist Credential in Special Education and may be earned concurrently with that credential. The M.A. degree can include specializations in the following areas: early childhood, gifted, learning disabilities, resource specialization, severely emotionally disturbed/behaviorally disordered, severe disabilities, teaching low achieving students in the mainstream, and school to adult transition. All programs must be approved by the graduate adviser. Alternatives to required courses may be included in the master's program upon permission of the graduate adviser. The M.A. degree program is open to individuals with undergraduate degrees in a wide range of disciplines and need not be linked to a teaching credential.

Early Childhood

Prerequisites: Special Education 500, 501, and an infant/child development course (e.g., CFD 570) approved by adviser.

Core (15 units): Special Education 526, 528, 635, 643; *Education 690.

Advanced Specialization (9-12 units): Special Education 681 (in section approved by adviser); 6-9 units selected from Special Education 650 (1-3), 670, 771 (1-3), 798 (1-3), three units of approved electives at 600-level or above or Special Education 527.

Culminating Experience (3-6 units): *Education 795A-795B or Education 791A, 791B, 791C or Education 799A.

Gifted

No new students are being admitted to this program during the 1996-97 academic year. Contact department.

Prerequisite: Special Education 500.

Core (12 units): Special Education 508**, 644**, 649**; *Education 690.

Advanced Specialization (12-15 units): Special Education 681 (in section approved by adviser); 9-12 units selected from Special Education 650 (1-3), 670, 771 (1-3), 798 (1-3), three units of approved electives at 600-level or above.

Culminating Experience (3-6 units): *Education 795A-795B or Education 791A, 791B, 791C or Education 799A.

** Courses not currently offered at SDSU.

Learning Handicapped

Prerequisites: Special Education 500 and 501.

Core (15 units): Special Education 524, 634, 647, 648; *Education 690.

Advanced Specialization (9-12 units): Special Education 681 (in section approved by adviser); 6-9 units selected from Special Educa-

tion 650 (1-3), 670, 771 (1-3), 798 (1-3), three units of approved electives at 600-level or above or Special Education 527.

Culminating Experience (3-6 units): *Education 795A-795B or Education 791A, 791B, 791C or Education 799A.

Resource Specialization

Prerequisites: Special Education 500 and 501.

Core (9-12 units): Education 690 and 6-9 units selected from the following categories:

3-6 units from Special Education 647, 648;

3-6 units from Special Education 524, 525, 529;

3-6 units from Special Education 645, 664;

3-6 units from Special Education 662, 663, 677;

3 units from Special Education 634, 635.

Advanced Specialization (12-15 units): Special Education 681 (in section approved by adviser); 3-6 units selected from Special Education 651, 652, 653; 6-9 units selected from Special Education 670, 771, 798, 3-6 units selected from Special Education 650, and other approved 600-level courses or Special Education 527.

Culminating Experience (3-6 units): Education 795A-795B or Education 791A, 791B, 791C or 799A.

Severely Emotionally Disturbed/ Behaviorally Disordered

Prerequisites: Special 500 and 501.

Core (15 units): Special Education 529, 634, 647, 677; *Education 690.

Advanced Specialization (9-12 units): Special Education 681 (in section approved by adviser); 6-9 units selected from Special Education 650 (1-3), 670, 771 (1-3), 798 (1-3), three units of approved electives at 600-level or above.

Culminating Experience (3-6 units): *Education 795A-795B or Education 791A, 791B, 791C or Education 799A.

Severely Handicapped

Prerequisites: Special Education 500 and 501.

Core (15 units): Special Education 525, 635, 645, 664; *Education 690.

Advanced Specialization (9-12 units): Special Education 681 (in section approved by adviser); 6-9 units selected from Special Education 650 (1-3), 670, 771 (1-3), 798 (1-3), three units of approved electives at 600-level or above or Special Education 527.

Culminating Experience (3-6 units): *Education 795A-795B or Education 791A, 791B, 791C or Education 799A.

Teaching Low Achieving Students in the Mainstream

Prerequisites: Special Education 501; Special Education 971 (4-6 units).

Core (15 units): Special Education 553, 647, 648, 650 (3); *Education 690.

Advanced Specialization (9-12 units): Special Education 527, 670, 681 (in section approved by the adviser), 771 (1-3), 798, three units of approved electives at 600-level or above or Special Education 527.

Culminating Experience (3-6 units): *Education 795A-795B or Education 791A, 791B, 791C or Education 799A.

Vocational Transition

Prerequisite: Special Education 501 or Administration, Rehabilitation and Postsecondary Education 584.

Core (15-18 units): Special Education 663, 664; *Education 690; 6-9 units selected from (a) Special Education 524 or 525; (b) Special Education 645 or 648; (c) Special Education 771 or Administration, Rehabilitation and Postsecondary Education 744 or Counseling and School Psychology 730; *Education 690.

Advanced Specialization (9-12 units): Special Education 681 (in section approved by adviser); 6-9 units selected from Special Education 645, 650, 662, 670, 798 (1-6), Administration, Rehabilitation and Postsecondary Education 645, 687, Counseling and School Psychology 650, 3-6 units of approved electives at the 600 or 700 level.

Culminating Experience (3-6 units): *Education 795A-795B or Education 791A, 791B, 791C or Education 799A.

* In departmentally approved sections.

Master of Science Degree in Rehabilitation Counseling

General Information

The rehabilitation counseling program has the primary objective of preparing rehabilitation students to enter the field of vocational rehabilitation and provide rehabilitation and case management services with consumers with physical, emotional, and/or cognitive disabilities. Expanded curriculum in assistive technologies, rehabilitation of deaf and hard of hearing consumers, career assessment, administration of rehabilitation programs, disability management, diversity program development and work within the public and private sectors are highlighted. The degree is accredited by the Commission on Rehabilitation Education (CORE). A limited number of graduate stipends from the Rehabilitation Services Administration are available to (1) students who are committed to entering vocational rehabilitation in publicly supported programs after graduation, and (2) students with a financial need. Graduates qualify for CRC, CIRS, and CWAVES certification.

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 file an application for admission to San Diego State University with both the Office of Admissions and Records and the Rehabilitation Counseling Program.

Students seeking admission to the graduate program which leads to a Master of Science degree in rehabilitation counseling should address their inquiries to the coordinator of the program. Detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms. As there are specific requirements for the program, it is not sufficient to file only the general university admission forms.

Students are typically admitted in the fall semester each year. Preference is given to applications that are completed and submitted by May 1.

Criteria for admission require that students submit evidence in written form and through interviews demonstrating personal, professional, and academic adequacy for the Master of Science degree in rehabilitation counseling. Only students who show reasonable promise of success in rehabilitation counseling as a career will be admitted to this program. In order to continue in the program, the student must

demonstrate ongoing academic, professional and personal growth.

A student may transfer a maximum of 30 semester units from another CORE accredited graduate program in rehabilitation counseling. Evaluation of transfer credits will be made at the time of acceptance to the program. Approval of graduate transfer credit from other programs will be at the discretion of the coordinator and subject to final approval by the Graduate Division.

Advancement to Candidacy

To be eligible for advancement to candidacy the student must, in addition to holding classified graduate standing, have completed at least 24 units of the coursework listed on the official program, maintain good standing in the rehabilitation counseling program, and otherwise comply with the regulations of the Graduate Division as described in Part Two of this bulletin.

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:

39 units of required courses:

ARP 584	Introduction to Rehabilitation Process (3)
ARP 645	Assessment and Career Development (6)
ARP 648	Group Dynamics in Rehabilitation (3)
ARP 680	Seminar in Administration, Rehabilitation and Postsecondary Education (3)
ARP 685A-685B	Medical and Psychological Aspects of Disability (3-3)
ARP 687	Placement Practices with Individuals with Disabilities (3)
ARP 710A-710B	Seminar in Rehabilitation (3-3)
CSP 615	Seminar in Multicultural Dimensions in Counseling (3)
CSP 660	Theory and Process of Counseling (3)
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 (3-9) Cr/NC

6-9 units of electives as determined by consent of the faculty adviser.

Comprehensive Examination

A written comprehensive examination is required. The student must demonstrate satisfactory performance on a written comprehensive examination, in lieu of thesis, prepared by the rehabilitation counseling program. Reservations for the examination must be made in advance in the Rehabilitation Counseling Program Office, Hardy Annex, Room 146.

Program Structure

The rehabilitation counseling program offers a two-year, full-time format that leads to the Master of Science in rehabilitation counseling. Students are accepted on a full-time and part-time basis.

Master of Science Degree in Counseling

General Information

The Department of Counseling and School Psychology 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 schools, human services agencies, and industry. The program offers a generic core of competencies and experiences with specialized study and experiences provided via defined specializations: Marriage, Family, and Child Counseling; School Counseling; and School Psychology. The first year of study in the School Counseling specialization is completed via the Community-Based Block.

The Department of Counseling and School Psychology offers courses which may be applied to either degree program. Course offerings are organized by professional specialization; the majority are sequenced in year-long blocks. Most students attend full time, although limited part-time study is offered; all students in the Community-Based Block must attend full time.

With the exception of the Community-Based Block, the majority of courses are available in the late afternoons or evenings thus accommodating students' work or fieldwork placement schedules. With careful planning and possible summer session courses, full-time students can complete the Master of Science degree in counseling in any of the specializations in three 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 adviser and should take into account the following guidelines: Education 690 should be taken as early as possible and must be completed prior to Counseling and School Psychology 640; Counseling and School Psychology 600 and 600L are to be completed prior to 660, 660 prior to 740, and 740 prior to 710B.

The Community Based Block (CBB) is a special unit within the Department of Counseling and School Psychology. 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 (almost all of the program is off-campus) and to its special focus on the inner-city and people of difference. The CBB deliberately recruits an extremely diversified group of students. Although the CBB places special emphasis on working in innercity 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.

The following departmental courses are open to students who have not been accepted into a program and are interested in exploring departmental offerings: Counseling and School Psychology 400, 401, 596, 600, 600L, 610A, 610B, 620, and 621. Credit from 500 and 600 level courses may be applied towards graduation if admitted to a program. Students should consult with the coordinator of the particular program in which they are interested about the credit application policy within the program.

Financial Assistance

The department sponsors the Counseling and School Psychology Loan Fund honoring Professors Leonard Strom and John Schmidt which along with other university-wide programs, is administered by the Financial Aid Office. 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 specializations 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 states' 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 the Department of Counseling and School Psychology, 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 Counseling and School Psychology, the student must file an application for admission to San Diego State University with the Office of Admissions and Records.

Applications to each program specialization are made separately. MFCC applications must be received by February 1 for consideration for Fall admission. School psychology, school counseling/Community-Based Block applications received by February 1 are given high priority for Fall admission. Review begins on that date. In general, all applications will require the following:

1. Completed application form.
2. At least three letters of recommendation.
3. Transcripts of all collegiate work (official copies to the Graduate Division, photocopies to the department).
4. Graduate Record Examination (GRE) scores - Aptitude portion (official copies to the Graduate Division, photocopies to the department).
5. Applicants whose GRE scores and/or grade point averages fall below the University standard must supply additional data to support consideration for admissions.

For school psychology and school counseling applicants:

6. California Basic Educational Skills Test (CBEST) must be taken.
7. Portfolio submitted.

No minimum set of qualifications in any way guarantees admission. From the large number of applications typically received, applicants considered to have demonstrated high potential are interviewed. Interviews assist the faculty in determining pre-professional readiness and "fit" with the specializations.

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 when 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 after 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 described in Part Two of this bulletin. In addition, the student must meet the requirements 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 of study 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 comprehensive examination concurrent with or following Counseling and School Psychology 710B. The examination is offered near the end of each semester. Information is available from the Counseling and School Psychology 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 must be reviewed with the adviser. Students are urged to take Education 690 and Counseling and School Psychology 600 and 600L as early as possible in their first graduate year.

The student must complete a minimum of 60 units (62 units for the Specialization in School Psychology) of 500-, 600-, 700-numbered courses, including:

1. Common Core (6 units):
 - ED 690 Procedures of Investigation and Report (3)
 - CSP 600 Counseling Communication Skills (2)
 - CSP 600L Counseling Prepracticum (1) Cr/NC
2. Foundations (a minimum of 9 units):
 - CSP 610A Determinants of Human Behavior: Personality (3)
 - CSP 610B Determinants of Human Behavior: Social and Cultural (3)
 - CSP 610C Determinants of Human Behavior: Development (3)
 - CSP 610D Determinants of Human Behavior: School Learning (3)
 - CSP 615 Seminar in Multicultural Dimensions in Counseling (3)
3. Theory, Research, and Techniques (a minimum of

- 12 units):
 - CSP 640 Theory and Process of Appraisal (3)
 - CSP 660 Theory and Process of Counseling (3)
 - CSP 662 Counseling Interventions with Children and Adolescents (3)
 - CSP 670 Theory and Process of Group Counseling (3)
 - CSP 680 Theory and Process of Consultation (3)
 - CSP 685 Theories of Marriage and Family Therapy (3)
 - CSP 686 Seminar: Gender and Ethnicity in Family Therapy (3)

4. Integration and Application of Theory, Research, and Techniques (a minimum of 6 units):
 - CSP 730 Fieldwork in Counseling (2-6) Cr/NC
 - CSP 740 Practicum: Individual Counseling (3) Cr/NC
 - CSP 741 Practicum: Group Counseling (3) Cr/NC
 - CSP 750 Advanced Seminar and Practicum: Individual Counseling (3-6) Cr/NC
 - CSP 780 Internship (2-12) Cr/NC
5. Research (a minimum of 3 units):
 - CSP 710A Professional Seminar (3) or
 - CSP 799A Thesis (3) Cr/NC/SP
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 Counseling and School Psychology for specialized study in marriage, family, and child counseling.
2. Common Core (6 units):
 - ED 690 Procedures of Investigation and Report (3)
 - CSP 600 Counseling Communication Skills (2)
 - CSP 600L Counseling Prepracticum (1) Cr/NC
3. Foundations (9 units):
 - CSP 610A Determinants of Human Behavior: Personality (3)
 - CSP 610C Determinants of Human Behavior: Development (3)
 - AND
 - CSP 610B Determinants of Human Behavior: Social and Cultural (3)
 - OR
 - CSP 615 Seminar in Multicultural Dimensions in Counseling (3)
4. Theory, Research, and Techniques (minimum of 19 units):
 - CSP 640 Theory and Process of Appraisal (3)
 - CSP 660 Theory and Process of Counseling (3)
 - CSP 662 Counseling Interventions with Children and Adolescents (3)
 - CSP 670 Theory and Process of Group Counseling (3)
 - CSP 684 Family Life Cycle Development (3)
 - CSP 685 Theories of Marriage and Family Therapy (3)
 - CSP 686 Seminar: Gender and Ethnicity in Family Therapy (3)
 - CSP 689 Family Counseling in the Schools (1)

5. Integration and Application of Theory, Research, and Techniques (minimum 9 units).

Six units selected from:

CSP 740 Practicum: Individual Counseling MFCC (3) Cr/NC and/or

CSP 750 Advanced Seminar and Practicum: MFCC (3-6) Cr/NC

Minimum of three units selected from:

CSP 730 Fieldwork in Counseling: MFCC (2-6) Cr/NC

CSP 740 Practicum: Individual Counseling (3) Cr/NC

CSP 740 Practicum: MFCC (3) Cr/NC

CSP 750 Advanced Seminar and Practicum: MFCC (3-6) Cr/NC

CSP 780 Internship: MFCC (2-12) Cr/NC

6. Additional requirements for the specialization (11 units):

CSP 585A Human Sexuality for Counselors (3)

CSP 585B Dynamics of Adjustment Behavior (3)

CSP 605 Seminar in Ethical and Legal Issues for Counselors (3)

CSP 687 Family Treatment of Substance Abuse (1)

CSP 688 Family Systems Assessment of Child Abuse (1)

7. Research (3 units):

CSP 710A Professional Seminar (3) or

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

8. Electives (3 units): Selected with approval of adviser.

For additional information related to the marriage, family, and child counselor specialization and licensure, contact the Department of Counseling and School Psychology 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 in grades K through 12. Additional information may be obtained from the Department of Counseling and School Psychology or the director of the school counseling specialization. Students may opt to obtain this credential in either a 30-unit M.A. (with 18 additional units required for the credential) or a 60-unit M.S. sequence. The first year of both is completed in the Community-Based Block Program. The sequence of the degree must be planned in consultation with the program director. For those completing the M.S. and credential, a minimum of 500-, 600-, and 700- numbered courses are required, including:

1. Prerequisites:
Admission to the University and the Department of Counseling and School Psychology for specialized study in school counseling.
2. Common Core (6 units):
ED 690 Procedures of Investigation and Report (3)
CSP 600 Counseling Communication Skills (2)
CSP 600L Counseling Prepracticum (1) Cr/NC
3. Foundations (minimum 9 units):
CSP 610A Determinants of Human Behavior: Personality (3)
CSP 610B Determinants of Human Behavior: Social and Cultural (3)
CSP 610C Determinants of Human Behavior: Development (3)
CSP 610D Determinants of Human Behavior: School Learning (3)
CSP 615 Seminar in Multicultural Dimensions in

Counseling (3)

4. Theory, Research, and Techniques (15 units):

CSP 640 Theory and Process of Appraisal (3)

CSP 660 Theory and Process of Counseling (3)

CSP 662 Counseling Interventions with Children and Adolescents (3)

CSP 670 Theory and Process of Group Counseling (3)

CSP 680 Theory and Process of Consultation (3)

5. Integration and Application of Theory, Research, and Techniques (minimum 12 units):

CSP 730 Fieldwork in Counseling: School Counseling (3-6) Cr/NC

CSP 740 Practicum: School Counseling (3) Cr/NC

CSP 780 Internship: School Counseling (2-12) Cr/NC

6. Additional requirements for specialization (minimum 3 units):

CSP 620 Guidance Services in Public Education (3)

CSP 745 Program Development for Pupil Services (3)

7. Research (a minimum of 3 units):

CSP 710A Professional Seminar (3) or

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

8. Electives (12 units):

Selected with approval of adviser.

Students must receive a grade of B or better (Cr for credit/no credit graded courses) 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 department chair or the director of the school counseling specialization.

In addition to the required courses and experiences, the student must pass all components of the CBEST to be eligible for the credential. Students must have Certificate of Clearance *prior* to starting fieldwork (CSP 730), practicum (CSP 740), or internship (CSP 780). Students should contact the Center for Careers in Education (ED-100) regarding the CBEST and Certificate of Clearance.

Students already holding a master's degree in counseling or in a related area may apply for non-degree credential preparation in school counseling. This option is offered by the department when space and funding are available. These students must follow the regular application procedures and requirements. An individualized program of study may be designed on approval of the school counseling committee. To pursue the non-degree credential preparation, contact the school counseling program director.

Specialization in School Psychology

The Master of Science in counseling with a specialization in school psychology (**Major Code: 08261**) includes coursework and experiences for the development of competencies required for the California credential in school psychology (**Credential Code: 00950**). The credential authorizes the holder to function as a school psychologist from preschool through high school settings. Additional information may be obtained from the office of the Department of Counseling and School Psychology or the director of the school psychology specialization. The student should design the sequencing of the degree program in consultation with the adviser, and must complete a minimum of 62 units of 500-, 600-, and 700-numbered courses, including:

1. Prerequisites:
 - a. Admission to the University and the Department of Counseling and School Psychology for specialized study in school psychology.
 - b. Related undergraduate coursework in psychology, education, child development, and/or culture studies is strongly

- recommended.
- c. California Basic Educational Skills Test (CBEST) scores must be reported to the department *prior* to beginning this sequence of study. A photocopy will suffice.
 - d. The student must apply for a Certificate of Clearance *prior* to beginning the sequence of study. Consult the Center for Careers in Education, ED-100.
2. Common Core (6 units):
 - ED 690 Procedures of Investigation and Report (3)
 - CSP 600 Counseling Communication Skills (2)
 - CSP 600L Counseling Prepracticum (1) Cr/NC
 3. Foundations (a minimum of 9 units):

Required courses:

 - CSP 610C Determinants of Human Behavior: Development (3)
 - CSP 610D Determinants of Human Behavior: School Learning (3)

Three units from the following selected in consultation with the adviser:

 - CSP 610B Determinants of Human Behavior: Social and Cultural (3)
 - CSP 615 Seminar in Multicultural Dimensions in Counseling (3)
 4. Theory, Research, and Techniques (a minimum of 12 units).

Required courses:

 - CSP 640 Theory and Process of Appraisal (3)
 - CSP 662 Counseling Interventions with Children and Adolescents (3)
 - CSP 680 Theory and Process of Consultation (3)

Three units from the following selected in consultation with the adviser:

 - CSP 620 Guidance and Services in Public Education (3)
 - CSP 660 Theory and Process of Counseling (3)
 - CSP 670 Theory and Process of Group Counseling (3)
 - CSP 685 Theories of Marriage and Family Therapy (3)

or other course(s) in the department or in a related field.
 5. Integration and Application of Theory, Research, and Techniques (a minimum of 12 units selected in consultation with the adviser).
 - CSP 730 Fieldwork in Counseling: School Psychology (2-6) Cr/NC
 - CSP 740 Practicum: Individual Counseling (3) Cr/NC
 - CSP 752 Seminar and Practicum: School Psychology (3-6) Cr/NC
 6. Additional requirements for specialization (a minimum of 11 units):
 - CSP 621 Introduction to School Psychology (3)
 - CSP 642A and 642B Individualized Appraisal of Learning Characteristics (4-4)
 7. Research (a minimum of 3 units selected in consultation with the adviser).
 - CSP 710A or 710B Professional Seminar (3)
 - CSP 760 Advanced Seminar in School Psychology (3)
 - CSP 770 Advanced Seminar in Counseling (3)
 - CSP 799A Thesis (3) Cr/NC/SP
 8. Electives (a maximum of 9 units).

Electives must be chosen in consultation with the adviser to form a coherent cognate that complements the student's program in school psychology.
- In addition to the courses required for the Master of Science in

counseling with a specialization in school psychology, the following courses or equivalents are required for the California School Psychology Credential:

- SPED 500 Human Exceptionality (3)
- CSP 745 Program Development for Pupil Services (3)
- CSP 780 Internship (2-12) Cr/NC

Students must maintain the university minimum 3.0 grade point average. Falling below a 3.0 GPA automatically places a student on academic probation. A student may not remain on academic probation for more than one year. Students must earn a grade of B- or better (Cr for credit/no credit graded courses) in every course to document attainment of the competencies required for the school psychology credential. Students not meeting this requirement must immediately consult with the adviser or the director of the school psychology specialization. In addition, three grades of B- or lower (including NC) are grounds for dismissal from the program regardless of a student's overall GPA.

Adherence to the National Association of School Psychologists Principles for Professional Ethics is a mandatory requirement. Students who knowingly or unknowingly violate any part of the ethical code may be dismissed from the program without further qualification regardless of coursework or other academic achievement. A copy of the ethical principles is included in the program handbook which is distributed to students at orientation.

In addition to the required courses and experiences, the student must (a) receive the recommendation of the school psychology faculty and (b) pass all components of the CBEST for eligibility for the credential.

The school psychology program, including degree and credentials requirements, may be completed on three-, four-, or five-year plans. Students must maintain residency throughout their tenure in the program unless specifically granted a formal leave of absence. The final year, Counseling and School Psychology 780 (Internship) is a full-time experience.

Students already holding a master's or doctoral 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. After admission to the program, an individualized program of study may be designed on approval of the school psychology faculty.

After receiving the school psychology credential and completing two years of post-internship, full-time service as a school psychologist in the public schools, the school psychologist is eligible to take the standardized examination for licensure as an educational psychologist in California.

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.

**Section III.
Teaching and Service Credentials**

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 advisers 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 Center for Careers in Education, ED-100.

The College of Education has obtained approval for programs leading to the following credentials:

Approved Credential Program

- | | |
|--|---|
| 1 Multiple Subject | School Service Authorized
Teach in any self-contained classroom, kindergarten through twelfth grade. |
| 2. Multiple Subject Cross-Cultural Language and Academic Development (CLAD) emphasis | Teach in self-contained classrooms and provide Specially Designed Academic Instruction in English (SDAIE) and English Language Development (ELD), kindergarten through twelfth grade. |
| 3. Multiple Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) emphasis: Spanish | Teach in self-contained classrooms and in primary language and English, English Language Development (ELD), and Specially Designed Academic Instruction in English (SDAIE). |
| 4. Single Subject | Teach single subject area in grades kindergarten through twelve. |
| 5. Single Subject Cross-Cultural Language and Academic Development (CLAD) emphasis | Teach single subject area in grades K-12 and provide Specially Designed Academic Instruction in English (SDAIE) and English Language Development (ELD). |
| 6. Single Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) emphasis: Spanish | Teach single subject area in primary language and English in grades K-12 and provide Specially Designed Academic Instruction in English (SDAIE) and English Language Development (ELD). |

Specialist Credentials

- Bilingual/Cross-cultural
- Reading/Language Arts
- Special Education:
- Communication Handicapped (Dept. of Communicative Disorders)
- Gifted

- Learning Handicapped
- Physically Handicapped
- Severely Handicapped

Service Credentials

- Administrative Services
- Clinical or Rehabilitative Services (Dept. of Communicative Disorders)
- Health - School Nurse (School of Nursing)

- Pupil Personnel: Child Welfare and Attendance (School of Social Work)
- School Counseling
- School Psychology
- School Social Work (School of Social Work)

Specialist Certificates

- Cross-Cultural Language and Academic Development (CLAD)
- Resource Specialist of Competence
- Supported Employment and Transition Specialist

**Bilingual/Cross-Cultural
Specialist Credential**

(Credential Code: 00440)

This program is in the process of revision to meet the standards of the new CLAD/BCLAD Specialist Credential.

Candidates in the credential program must possess a valid California Teaching Credential, must have completed 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 Center for Careers in Education, ED-100, upon successful completion of the program.

	<i>Units</i>
PLC 553 Oral Language Assessment Techniques	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 690 Procedures of Investigation and Report	3
Linguistics 550 Theory and Practice of English as a Second Language	3

**Multiple Subject Credential
(Elementary Education)**

(Credential Code: 00200)

Multiple Subject–Professional Clear Credential

Persons interested in teaching in the traditional elementary school will typically pursue the Multiple Subject credential which authorizes teaching service in self-contained classrooms in preschools, grades K-12, and in classes organized primarily for adults (classrooms in which one teacher is responsible for all the subjects commonly taught). Recommendation for this credential requires:

1. A baccalaureate or higher degree.
2. Completion of an approved program of professional education, including student teaching and coursework in reading methods with a grade point average of 3.0 or higher.
3. Basic skills competency as demonstrated through passing scores on the California Basic Educational Skills Test (CBEST).
4. Demonstrated subject matter competency through completion of an approved waiver program (Liberal Studies, Emphasis in Education) or passing scores on the NTE Multiple Subjects Assessment for Teachers (MSAT) (must have scores taken within five years prior to recommendation).
5. Demonstrated knowledge of the principles and provisions of the United States Constitution through successful completion of a three-unit collegiate-level course or examination. (Courses are listed in General Catalog section on "Graduation Requirements," IV. American Institutions Requirement, B.2. United States Constitution.)
6. Knowledge of health education in California, including substance abuse and nutrition: Community Health Education 101 or 320 and verification of CPR competency.
7. Demonstrated knowledge of PL 94-142: Needs of, and methods of providing educational opportunities to individuals with exceptional needs (mainstreaming), TE 526 or SPED 501.
8. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): EDTEC 470.
9. Completion of a fifth year of study (30 units of upper division or graduate-level coursework completed *after* issuance of the baccalaureate degree; coursework in professional preparation, including student teaching, may apply if completed after the baccalaureate degree).

The Professional Clear Multiple Subject credential is valid for five years and requires completion of a minimum of 150 hours of approved professional growth activities and 90 days of teaching-related activities in order to be renewed.

Multiple Subject (Elementary)– Preliminary Credential

Candidates may be recommended for Preliminary Multiple Subject teaching credentials when they have satisfied requirements 1, 2, 3, 4, and 5 listed above. Applicants whose academic programs allow them to meet these requirements concurrently with their baccalaureate degrees will be eligible for preliminary certification. The Preliminary credentials have the same teaching authorizations as the Professional Clear credentials and are valid for five-year periods. Holders of the Preliminary credentials must complete items 6, 7, 8, and 9 within that five-year time period in order to be renewed as Professional Clear credentials. Five-year preliminary credentials may not be extended without completion of the additional requirements within the original five years of issuance.

NOTE: *Undergraduate students in the Multiple Subject credential program may register for concurrent postbaccalaureate credit in their final semester prior to obtaining a baccalaureate degree as explained in the section of this catalog on "General Regulations."*

Admission Standards and Qualifications for the Multiple Subject Credential Program

Candidates for the Multiple Subject Credential Program must satisfy the standards and qualifications listed below and submit complete application packets to the Center for Careers in Education within the specified application periods. Applications for program admission for the 1997 academic terms are available from Aztec Shops Copy Center during the following open enrollment dates:

For Spring 1997 – August 19 through November 1, 1996

For Fall 1997 – January 20 through April 4, 1997

Completed application packets will include items verifying satisfaction of the following:

1. **CBEST Examination.** Students must pass the California Basic Educational Skills Test (CBEST) **prior to admission** to the Multiple Subject credential program. Information may be obtained from the Test Office, SS-2549. Candidates are urged to take this examination as early as possible. Candidates are required to submit a photocopy of the individual score reports.
2. **Subject Matter Competency.** Students must verify completion of subject matter competency in diversified subjects commonly taught in self-contained classrooms prior to admission to the Multiple Subject Credential Program. This may be done through successful completion of the Liberal Studies major, Emphasis in Education or its equivalent at another California teacher-training institution or passing scores on the PRAXIS Multiple Subject Assessment for Teachers (MSAT). Test scores submitted for verification of subject matter competency are valid for five years from the date of the examination and must be valid at the time of recommendation for the credential. Registration information and materials for the PRAXIS are available through the Center for Careers in Education, ED-100.
3. **Prerequisite Courses.** These courses or approved equivalents must be completed with grades of "C," "CR," or higher no more than five years prior to admission to the Multiple Subject Credential Program:
 - a. **Education 451, "Introduction to Multicultural Education,"** This course provides an introduction to ethnicity, language, and culture in education, particularly the ways in which those factors differentially affect educational outcomes for children. The course assists in preparing teacher applicants to work with students from diverse backgrounds by examining both societal and personal belief systems and the ways that those beliefs are expressed in public school classrooms.
 - b. **Mathematics 210, "Structure and Concepts of Elementary Mathematics I."** This course covers pre-number concepts; development of whole numbers, integers, and their operations; number theory; geometric concepts of two and three-dimensional spaces; problem-solving strategies. With approval of the mathematics adviser, any of the following courses may be substituted for Mathematics 210: Mathematics 121, 150, 312.
 - c. **Music 102, "Basic Musicianship for Non-Music Majors."** Topics in this course include rudimentary music theory involving the elements of music: melody, rhythm, and harmony; developing the understanding of these elements through instrumental and vocal experiences which include the use of unison and part-singing, the keyboard, and simple melodic and harmonic instruments.

- d. **Exercise and Nutritional Sciences 241A-241B, “Physical Education of Children.”** Course content includes discussion of scientific principles, programs, activities, and instructional techniques for physical education in elementary schools. Practical field experience with elementary students is also required.

Candidates are required to submit unofficial transcripts from SDSU and official transcripts from all other colleges and universities attended including any current coursework-in-progress to verify completion of or enrollment in these courses.

- 4. **Grade Point Average.** Candidates must have cumulative grade point averages (GPAs) within the upper one-half of undergraduate students in the candidates’ majors. GPAs vary according to discipline and graduating institution. GPA requirements are available in the Center for Careers in Education, ED-100. Candidates are required to submit official copies of transcripts from all colleges and universities attended and unofficial copies of transcripts for SDSU coursework for GPA calculations.
- 5. **TB Clearance.** Evidence of a negative tuberculosis test (these tests are valid for four years and must be in effect during the time that candidates are enrolled in the credential program). Clearance statements may be secured from Health Services, private physicians or HMO’s, or public health agencies.
- 6. **California Certificate of Clearance.** This certificate represents a background clearance and check conducted by the State Department of Justice and Federal Bureau of Investigation. Turnaround time for the clearance can take as long as eight months; forms are available in the Center for Careers in Education, ED-100. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. In lieu of the actual Certificate of Clearance or copy of a valid credential, candidates may submit their clearance application packets and fees concurrently with program applications.
- 7. **Early Field Experience.** All candidates are required to participate in an early field experience in the public schools prior to admission to the program. This requirement can be satisfied through documented experience or completion of Liberal Studies 300, “Introduction to Liberal Studies,” or Teacher Education 290 since August 1991.
- 8. **Appeals Process.** Candidates who do not meet all the admission requirements may petition the Multiple Subject Admissions and Retention Committee for individual consideration; petition forms must be submitted concurrently with the applications packets.

In addition to the minimum admissions standards identified above, the Multiple Subject Admissions and Retention Committee also may consider qualifications such as previous teaching experience, relevant working experience with children, and second language ability. Due to the number of applicants, application to the program does not ensure admission.

NOTE: *Appointments for discussion of individual concerns relative to the credential program may be made with the Multiple Subject Credential Program Adviser during the academic year through the Center for Careers in Education, ED-100, 594-5964. All candidates are urged to attend one of the regularly scheduled group advising sessions prior to making an individual appointment.*

Multiple Subject Credential with a Cross-Cultural, Language and Academic Development Emphasis (CLAD) (Credential Code: 00200)

The program of study leading to the Multiple Subject Credential with an emphasis in Cross-Cultural, Language, and Academic Development (CLAD) prepares candidates to teach in classrooms serving the increasing number of children in our schools with limited English proficiency in situations where bilingual teachers are not available. The CLAD program provides candidates with more training than basic credential candidates in three areas: language acquisition/development, culture, and pedagogical strategies for English language development. This credential will help meet the critical shortage of bilingual teachers in California public schools by preparing entry level teachers to deliver specially-designed academic instruction in English promoting both language development and academic success in all content areas.

Candidates recommended for the Multiple Subject Teaching Credential with a Cross-Cultural, Language and Academic Development Emphasis (CLAD) must meet all the requirements for the Multiple Subject Preliminary Credential and satisfy the admission standards and qualifications for the Multiple Subject Credential program listed above. In addition, they must complete the following prerequisites:

1. Experience Learning a Second Language

Six semester units of college coursework in a second language or equivalent experience such as three years of high school foreign language, Peace Corps training and service or residence in a non-English speaking country.*

2. Prerequisite Courses

Education 451	3 units
Linguistics 420**	3 units
Linguistics 452**	3 units
Linguistics 550.....	3 units
Policy Studies in Language and Cross-Cultural	
Education 515	3 units

*Already required for Liberal Studies major and some Single Subject majors.
**Linguistics 420 and 452 are requirements for the Liberal Studies major.

Multiple Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) Emphasis Credential: Spanish (Credential Code: 00200)

The Multiple Subject Bilingual Cross-Cultural Language and Academic Development credential (BCLAD) emphasis: Spanish is available to students interested in teaching in a bilingual elementary school classroom. This credential authorizes the holder to teach in any self-contained bilingual or regular classroom in which one teacher is responsible for all the subjects commonly taught in the elementary schools.

Candidates who will pursue this credential need to specify “Multiple Subject with Bilingual Cross-Cultural Language and Academic Development (BCLAD) emphasis: Spanish” in the application for admission to SDSU (Code: 00200). Applications for program admission are available from Aztec Shops Campus Store during December to May. Packet includes items verifying the following:

Standards for Admission

- 1. CBEST.** Students must pass the California Basic Educational Skills Test prior to admission to the BCLAD credential program. This examination is required by the Commission on Teacher Credentialing. Booklets containing registration forms and test information are available from the Test Office in SS-2549 (594-5216).
- 2. Major.** The Liberal Studies major, Emphasis in Education may be selected in preparation for the teaching credential. Students who have academic majors other than liberal studies are required to pass the commission-approved PRAXIS Multiple Subject Assessment for Teachers (MSAT). Information may be obtained through advisers in the Policy Studies in Language and Cross-Cultural Education Department (PLC), ED-152, and registration materials are available through the Center for Careers in Education, ED-100.
- 3. Prerequisite Courses.**

Policy Studies in Language and

Cross-Cultural Education 515.....	3 units
Education 451	3 units
Exercise and Nutritional Sciences 241A, 241B.....	2 units
Linguistics 420* or 520	3 units
Linguistics 452*.....	3 units
Linguistics 550.....	3 units
Mathematics 210**.....	3 units
Art or Drama or Music - Art 100, 101; Drama 105; Music 102	3 units

* Linguistics 420 and 452 are requirements for the Liberal Studies major.

** With approval of the mathematics adviser, any of the following mathematics courses may be substituted for Mathematics 210: Mathematics 121, 150, 312.

- 4. Grade Point Average.** Candidates must have cumulative grade point averages (GPAs) within the upper one-half of undergraduate students in the candidates' majors. GPAs vary according to discipline and graduating institution. GPA requirements are available in the Center for Careers in Education, ED-100. Candidates are required to submit official transcripts from all colleges and universities attended and unofficial SDSU transcripts for GPA calculations.
- 5. Letters of Recommendation.** Three letters of recommendation must be submitted attesting to the applicants following characteristics: (a) attitude, aptitude and ability to teach children; (b) personality and character; (c) academic ability. At least one letter should be from an elementary school teacher the student has worked with and the others may be from faculty and administrators.
- 6. Tuberculin Clearance.** Evidence of a negative tuberculosis test (these tests are valid for four years and must be in effect during the time that candidates are enrolled in the credential program). Clearance statements may be secured from Health Services, private physicians or HMOs, or public health agencies.
- 7. Early Field Experience.** A minimum of 60 hours in a typical elementary classroom with University supervision within the five years preceding admission.
- 8. Oral English and Written Statement.** Have an interview with the admissions committee of the PLC Department.
- 9. California Certificate of Clearance.** This certificate represents a background clearance and check conducted by the State Department of Justice and Federal Bureau of Investiga-

tion. Turnaround time for the clearance can take as long as eight months. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. In lieu of the actual Certificate of Clearance or copy of a credential, candidates may submit their clearance application packets and fees concurrently with program applications.

- 10. Credential Advising Appointment.** Each applicant must meet with a faculty adviser to plan an appropriate program, which includes a minimum of 31 units as defined by the Commission on Teacher Credentialing. Make appointment in ED-152, telephone 594-5155.
- 11. Language and Culture.** Passage of the Spanish Language Proficiency and Cultural Awareness Examination prior to entering the credential program. Please call 594-5155 for test date.
- 12. Appeals Process.** Candidates who do not meet all the admission requirements may petition the PLC Department Admissions and Retention Committee for individual consideration; petition forms must be submitted concurrently with the application packets.
- 13. Application.** Applicants should complete application procedures the semester prior to beginning the credential program. Call the department for Policy Studies application deadline.

New Students Who Seek to Complete a Credential

Teachers with preliminary credentials who are working toward clear credentials may have programs designed to fit their individual backgrounds. Evaluations of college credit and arrangements for programming should be made through the Center for Careers in Education, ED-100; telephone 594-5964.

Advanced Standing in Policy Studies and Cross-Cultural Education

A student transferring into San Diego State University with advanced standing must complete a minimum of six units of professional education work in residence at this university in order to obtain a recommendation for a credential, regardless of the extent of education work completed elsewhere.

Evaluation of Credits

After an interval of five years, prerequisites and courses in education are reevaluated and subject to reduction in credit in light of new requirements and changes in educational procedures. All courses taken either at this university or elsewhere must be approved by an official adviser in order to be credited toward meeting credential requirements or pattern requirements for a degree.

Program*	Units
PLC 910 Teaching Mathematics to Bilingual Elementary Students.....	3
PLC 911 Teaching Social Studies to Bilingual Elementary Students	2
PLC 912 Teaching Science to Bilingual Elementary Students.....	2
PLC 923 Psychological Foundations of Education and Bilingual Students.....	3
PLC 931 Skills in Teaching Reading to Bilingual Elementary Students	3
PLC 932 Teaching Spanish Language Arts to Bilingual Elementary Students.....	3
PLC 960 Student Teaching Seminar for Bilingual Elementary Students	2-3
PLC 961 Student Teaching for Bilingual Elementary Students (six units per semester)	1-12

* Contact department for details.

Preliminary Credential Requirements

1. A bachelor’s degree (or higher) with any major other than education.
2. Completion of an approved program of professional education. (See Department of Policy Studies in Language and Cross-Cultural Education for further information.)
3. Passage of PRAXIS Multiple Subject Assessment for Teachers (MSAT) or approved waiver program (Liberal Studies major, Emphasis in Education).
4. Passage of the Spanish Language Proficiency and Cultural Awareness Examination.
5. Demonstrated knowledge of principles and provisions of United States Constitution through successful completion of three-unit college level course or examination. Courses are listed in General Catalog section on “Graduation Requirements,” IV. American Institutions Requirement, B.2. United States Constitution.
6. Passage of California Basic Educational Skills Test (CBEST).

Clear Credential Requirements

1. Completion of an approved fifth year program (a minimum of 30 upper division or graduate-level postbaccalaureate units).
2. Coursework/fieldwork to satisfy PL 94-142: Needs of, and methods of providing educational opportunities to individuals with exceptional needs (mainstreaming). (Teacher Education 526.)
3. Coursework/training in computer literacy (Educational Technology 470).
4. Knowledge of health education in California, including substance abuse and nutrition: CHE 101, or 320 and verification of CPR competency.
5. Candidates are required to verify cardiopulmonary resuscitation.

**Single Subject Credential
(Secondary Education)**

(Credential Code: 00100)

Single Subject–Professional Clear Credential

Persons interested in teaching in the traditional secondary school will typically pursue the Single Subject credential which authorizes teaching service in departmentalized, subject matter classrooms in preschools, grades K-12, and in classes organized primarily for adults (classes where instruction is provided in only one subject). Candidates must verify subject matter competency in one of the following subject fields:

ACCEPTABLE SINGLE SUBJECT CREDENTIAL AREAS AND APPLICABLE MAJORS

- Art:** Art
- Business:** Accounting, Finance, Information Systems, Management, Marketing
- English:** Communication, Comparative Literature, Drama, English, Journalism, Linguistics
- Foreign Languages:** Classics (Latin), French, German, Russian, Spanish
- *Science:** Biology, Physical Science
- Mathematics:** Mathematics
- Music:** Music
- Physical Education:** Physical Education
- *Social Science:** Social Science

* These programs are in the process of being revised. See department.

Recommendation for this credential requires:

1. A baccalaureate or higher degree.
2. Completion of an approved program of professional education, including student teaching with a grade point average of 3.0 or higher and coursework in reading methods. The required courses at SDSU are Teacher Education 903, 914, 922, 933, 954, 963, 964.
3. Basic skills competency as demonstrated through passing scores on the California Basic Educational Skills Test (CBEST).
4. Demonstrated subject matter competency through completion of an approved waiver program in one of the California Single Subject areas, through a combination of coursework and competency examinations, or through PRAXIS. Competency must be verified and assessed by a designated departmental adviser regardless of the means of establishing knowledge proficiency.
5. Demonstrated knowledge of the principles and provisions of the United States Constitution through successful completion of a three-unit collegiate-level course or examination. (Courses are listed in the section of this catalog on “Graduation Requirements,” IV. American Institutions Requirement, C.2. United States Constitution.)
6. Knowledge of health education in California, including substance abuse and nutrition, Community Health Education 101 or 320 and verification of CPR competency.
7. Demonstrated knowledge of PL 94-142, needs or and methods of providing educational opportunities to individuals with exceptional needs (mainstreaming): TE 526.

8. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): EDTEC 470.
9. Completion of a fifth year of study (30 units of upper division or graduate-level coursework completed *after* issuance of the baccalaureate degree; coursework in professional preparation, including student teaching, may apply if completed after the baccalaureate degree).

The Professional Clear Single Subject credential is valid for five years and requires completion of a minimum of 150 hours of approved professional growth activities and 90 days of teaching-related activities in order to be renewed.

Single Subject–Preliminary Credential

Candidates may be recommended for Preliminary Single Subject teaching credentials when they have satisfied requirements 1, 2, 3, 4, and 5 listed above. Applicants whose academic programs allow them to meet these requirements concurrently with their baccalaureate degrees will be eligible for preliminary certification. The Preliminary credentials have the same teaching authorizations as the Professional Clear credentials and are valid for five-year periods. Holders of the Preliminary credentials must complete items 6, 7, 8, and 9 within that five-year time period in order to be renewed as Professional Clear credentials. Five-year Preliminary credentials may not be extended without completion of the additional requirements within the original five years of issuance.

Admission Standards and Qualifications for the Single Subject Credential Program

Candidates for the Single Subject Credential Program must satisfy the standards and qualifications listed below and submit complete application packets to the Center for Careers in Education within the specified application periods. Applications for program admission for the 1997 academic terms are available from Aztec Shops Copy Center during the following open enrollment dates:

- For Spring 1997– August 19 through November 1, 1996
- For Fall 1997– January 20 through April 4, 1997

Completed application packets will include items verifying satisfaction of the following:

1. **CBEST Examination.** Students must pass the California Basic Educational Skills Test (CBEST) prior to admission to the Single Subject Credential Program. Information may be obtained from the Test Office, SS-2549. Candidates are urged to take this examination as early as possible. Candidates are required to submit a photocopy of the individual score reports.
2. **Subject Matter Competency.** Students must verify competency in a specified single subject area through a university assessment process which consists of reviewing coursework for completion of an approved teaching major or its equivalent at San Diego State University or another approved California teacher-training institution, passing scores on the appropriate PRAXIS examinations, or a combination of coursework and examination scores. New examinations in biology, chemistry, English, general science, geoscience, mathematics, physics, and social science are being implemented effective August 31, 1995. Competency will be assessed and verified by subject matter departments at SDSU. Requirements for the various single subject majors are listed with the academic majors in the General Catalog. Candidates may offer passing NTE/CAPA scores taken between January 1992 and August 1993 to verify subject matter competency provided those scores will still be valid at the time of recommendation for certification.

Test scores submitted for verification of subject matter competency are valid for five years from the date of the examination. Information and registration materials for all current examinations are available at the Center for Careers in Education, ED-100. Students who have completed approved waiver programs at other universities must still be assessed by SDSU subject matter departments prior to admission to this university's credential program.

3. **Prerequisite Course.** This course or approved equivalent must be completed with grades of "C," "Cr," or higher no more than five years prior to admission to the Single Subject Credential Program:

Education 451, "Introduction to Multicultural Education." This course provides an introduction to ethnicity, language, and culture in education, particularly the ways in which those factors differentially affect educational outcomes for children. The course assists in preparing teacher applicants to work with students from diverse backgrounds by examining both societal and personal belief systems and the ways that those beliefs are expressed in public school classrooms.

4. **Grade Point Average.** Candidates must have cumulative grade point averages (GPAs) within the upper one-half of undergraduate students in the candidates' majors. GPAs vary according to discipline and graduating institution. GPA requirements are available in the Center for Careers in Education, ED-100. Candidates are required to submit official transcripts from all colleges and universities attended and unofficial copies of transcripts for SDSU coursework for GPA calculations.
5. **TB Clearance.** Evidence of a negative tuberculosis test (these tests are valid for four years and must be in effect during the time that candidates are enrolled in the credential program). Clearance statements may be secured from Health Services, private physicians or HMO's, or public health agencies.
6. **California Certificate of Clearance.** This certificate represents a background clearance and check conducted by the State Department of Justice and Federal Bureau of Investigation. Turnaround time for the clearance can take as long as eight months; forms are available in the Center for Careers in Education, ED-100. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. In lieu of the actual Certificate of Clearance or copy of a valid credential, candidates may submit their clearance application packets and fees concurrently with program applications.
7. **Early Field Experience.** All candidates are required to participate in an early field experience in the public schools prior to admission to the program. This requirement can be satisfied through documented experience of successful completion of Teacher Education 453 since August 1991.

8. Appeals Process. Candidates who do not meet all the admission requirements may petition the Single Subject Admissions and Retention Committee for individual consideration; petition forms must be submitted concurrently with the application packets.

In addition to the minimum admissions standards identified above, the Single Subject Admissions and Retention Committee also may consider qualifications such as previous teaching experience, relevant working experience with children, and second language ability. Due to the number of applicants, application to the program does not ensure admission.

NOTE: *Appointments for discussion of individual concerns relative to the credential program may be made with the Single Subject Credential Program Adviser during the academic year through the Center for Careers in Education, ED-100, 594-5964. All candidates are urged to attend one of the regularly scheduled group advising sessions prior to making an individual appointment.*

Single Subject Teaching Credential with a Cross-Cultural Language and Academic Development Emphasis (CLAD)

(Credential Code: 00100)

The program of study leading to the Single Subject Credential with an emphasis in Cross-Cultural, Language, and Academic Development (CLAD) prepares candidates to teach in classrooms serving the increasing number of students in our schools with limited English proficiency in situations where bilingual teachers are not available. The CLAD program provides candidates with more training than basic credential candidates in three areas: language acquisition/development, culture, and pedagogical strategies for English language development. This credential will help meet the critical shortage of bilingual teachers in California public schools by preparing entry level teachers to deliver specially-designed academic instruction in English promoting both language development and academic success in all content areas.

Candidates recommended for the Single Subject Teaching Credential with a Cross-Cultural, Language, and Academic Development Emphasis (CLAD) must meet all the requirements for Single Subject Preliminary Credential and satisfy the admission standards and qualifications for the Single Subject Credential Program. In addition, they must complete the following prerequisites:

1. **Experience Learning a Second Language.** Six semester units of college coursework in a second language or equivalent experience such as three years of high school foreign language, Peace Corps training and service or residence in a non-English speaking country.
2. **Prerequisite Courses:**
 - ED 451 Introduction to Multicultural Education..... 3
 - LING 420 Linguistics and English 3
 - PLC 515 Bilingual Teaching Strategies 3
3. **Single Subject CLAD Coursework:**
 - TE 903 Secondary School Student Teaching Seminar, Cr/NC 2
 - TE 914 Teaching and Learning in the Content Area: Major 3
 - PLC 914 Teaching and Learning in the Content Area: English Language Development/Spec. Des. Instr. in English 3
 - TE 922 Behavioral and Psychological Aspects of Teaching 3-4
 - TE 933 Teaching of Reading in the Secondary School 3

TE 954 Humanistic and Social Aspects of Teaching.....	3-4
TE 963 Secondary School Student Teaching I, Cr/NC/SP	3-4
TE 964 Secondary School Student Teaching II, Cr/NC/SP	9-12
LING 496 Language Issues in the Secondary School	3

Total Units 32

Single Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) Emphasis Credential: Spanish

(Credential Code: 00100)

The Single Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) Emphasis Credential is available to students interested in teaching in a bilingual secondary school classroom. This credential authorizes the holder to teach in any self-contained bilingual or regular classroom in which one teacher is responsible for teaching the given subject area.

Candidates who pursue this credential need to specify “Single Subject with Bilingual Emphasis (BCLAD)” in the application for admission to SDSU (Code: 00100). Applications for program admission are available from Aztec Shops Campus Store during December to May. Packet includes items verifying the following:

Standards for Admission

1. **CBEST.** Students must pass the California Basic Educational Skills Test (CBEST) prior to admission to the Single Subject Bilingual Emphasis credential program. This examination is required by the Commission on Teacher Credentialing. Booklets containing registration forms and test information are available from the Test Office in SS-2549 (594-5216).
2. **Subject Matter Competency.** Students must verify competency in a specified single subject area through a university assessment process which consists of reviewing coursework for completion of an approved teaching major or its equivalent at San Diego State University or another approved California teacher-training institution, passing scores on the appropriate PRAXIS examinations, or a combination of coursework and examination scores. Competency will be assessed and verified by subject matter departments at SDSU. Requirements for the various single subject majors are listed with the academic majors in the General Catalog. Test scores submitted for verification of subject matter competency are valid for five years from the date of the examination. Information and registration materials for the current PRAXIS examinations are available at the Center for Careers in Education, ED-100. Students who have completed approved waiver programs at other universities must still be assessed by SDSU subject matter departments prior to admission to this university’s credential program.
3. **Prerequisite Courses:**
 - ED 451 Introduction to Multicultural Education 3 units
 - LING 420 Linguistics and English 3 units
 - PLC 400 The Secondary School and Bilingual Education 3 units
 - PLC 515 Bilingual Teaching Strategies 3 units

- 4. Grade Point Average.** Candidates must have cumulative grade point averages (GPAs) within the upper one-half of undergraduate students in the candidates' majors. GPAs vary according to discipline and graduating institution. GPA requirements are available in the Center for Careers in Education, ED-100. Candidates are required to submit official transcripts from all colleges and universities attended and unofficial SDSU transcripts for GPA calculations.
- 5. Letters of Recommendation.** Three letters of recommendation must be submitted attesting to the applicant's following characteristics: (a) attitude, aptitude and ability to teach children; (b) personality and character; (c) academic ability. At least one of these letters should be from a school teacher with whom the student has worked and the others may be from faculty and administrators.
- 6. Tuberculin Clearance.** Evidence of a negative tuberculosis test (these tests are valid for four years and must be in effect during the time that candidates are enrolled in the credential program). Clearance statements may be secured from Health Services, private physicians or HMOs, or public health agencies.
- 7. Early Field Experience.** Applicants must provide evidence of a minimum of 45 hours of experience with students in typical classroom settings within the last five years. Such evidence consists of a description and evaluation of the experience by a supervisor.
- 8. Oral English and Written Statement of Professional Goals and Philosophy.** Interview with the admissions committee of the PLC Department.
- 9. California Certificate of Clearance.** This certificate represents a background clearance and check conducted by the State Department of Justice and Federal Bureau of Investigation. Turnaround time for the clearance can take as long as eight months. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. Submit clearance application packet and fees to Center for Careers in Education, ED-100.
- 10. Credential Advising Appointment.** Each applicant must meet with a faculty adviser to plan an appropriate program, which includes a minimum of 31 units as defined by the Commission on Teacher Credentialing. Appointments can be made in ED-152, 594-5155.
- 11. Language and Culture Examination.** All candidates must pass the PLC Department Spanish Language Proficiency and Cultural Awareness Examination.
- 12. Appeals Process.** Candidates who do not meet all the admission requirements may petition the PLC Department Admissions and Retention Committee for individual consideration; petition forms must be submitted concurrently with the application packets.
- 13. Application.** Applicants should complete application procedures the semester prior to beginning the credential program. Call the department for Policy Studies department deadline.

New Students Who Seek to Complete a Credential

Teachers with preliminary credentials who are working toward clear credentials may have programs designed to fit their individual backgrounds. Evaluations of college credit and arrangements for programming should be made through the Center for Careers in Education, ED-100; 594-5964.

Evaluation of Credits

After an interval of five years, prerequisites and courses in education are reevaluated and subject to reduction in credit in light of new requirements and changes in educational procedures. All courses taken either at this university or elsewhere must be approved by an official adviser in order to be credited toward meeting credential requirements or pattern requirements for a degree.

Program

Prerequisites	Units
ED 451 Introduction to Multicultural Education	3
PLC 400 The Secondary School and Bilingual Education.....	3
PLC 515 Bilingual Teaching Strategies.....	3
LING 420 Linguistics and English.....	3
First Semester	
PLC 924 Behavioral and Psychological Aspects of Teaching in the Bilingual Classroom	1-4
PLC 933 Skills in Teaching Reading to Bilingual Secondary Students	3
PLC 954 Humanistic and Social Aspects of Teaching in the Bilingual Classroom	1-4
PLC 963 Student Teaching for Bilingual Secondary Students I.....	3
LING 496 Language Issues in the Secondary School	3
TE 914 Teaching and Learning in the Content Area: Major	3
Second Semester	
PLC 903 Bilingual Secondary Student Teaching Seminar	2
PLC 914 Teaching and Learning in the Content Area: English Language Development/Spec. Des. Instr. in English	3
PLC 964 Student Teaching for Bilingual Secondary Students II	9
	32 units total

Preliminary Credential Requirements

1. A bachelor's degree with one of the approved single subject majors listed in the School of Teacher Education single subject teaching credential catalog section. Credentials can be granted only in the designated single subject credential areas.
2. Completion of an approved program of professional education. (See Department of Policy Studies in Language and Cross-Cultural Education for further information about the approved programs.)
3. Major Adviser's Recommendation. Passage of subject matter examination(s) or waiver thereof through completion of one of the approved single subject credential majors listed below with a written recommendation from the Ryan major adviser.

Art: Art

Business: Accounting, Finance, Information Systems, Management, Marketing

English: Communication, Comparative Literature, Drama, English, Journalism, Linguistics

Foreign Languages: Classics (Latin), French, German,

Russian, Spanish

***Science:** Biology, Physical Science

Mathematics: Mathematics

Music: Music

Physical Education: Physical Education

***Social Science:** Social Science

* These programs are in the process of being revised. See department.

Candidates applying for the Single Subject Credential program after August 31, 1995 who have not satisfied subject matter competency through coursework or PRAXIS examination(s), must take and pass a new set of examinations for the Single Subject Credential in seven areas: biology#, chemistry#, English, geoscience#, mathematics, physics#, and social science. Candidates for the science authorizations (noted with #) must also take and pass a general science examination. Candidates should check with the Center for Careers in Education, ED-100, to clarify the appropriate means for satisfaction of the subject matter competency requirement.

4. Passage of the Spanish Language Proficiency and Cultural Awareness Examination.
5. Demonstrated knowledge of principles and provisions of United States Constitution through successful completion of three-unit college level course or examination. Courses are listed in General Catalog section on "Graduation Requirements," IV. American Institutions Requirement, B.2. United States Constitution.
6. Passage of California Basic Educational Skills Test (CBEST).

NOTE: *Undergraduate students in their final semester prior to obtaining a baccalaureate degree may sign up for concurrent post-baccalaureate credit as explained in the bulletin.*

Clear Credential Requirements

1. Completion of an approved fifth year program (a minimum of 30 upper division or graduate-level postbaccalaureate units).
2. Knowledge of health education in California, including substance abuse and nutrition, Community Health Education 320, and verification of current CPR competency.
3. Coursework/fieldwork to satisfy PL 94-142: Needs of, and methods of providing educational opportunities to individuals with exceptional needs (mainstreaming) (TE 526).
4. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470.
5. Candidates are required to verify cardiopulmonary resuscitation.

Information Applicable to Both Multiple Subject and Single Subject Credentials

Departmental admission to either the Multiple Subject or Single Subject credential program does not constitute admission to the university. Candidates who are entering the university for the first time, or who have graduated or who are graduating, and are planning to re-enroll for the credential program must file a separate application for admission to the university during the regular university application period.

New Students Who Seek to Complete a Credential

Teachers with Preliminary Multiple Subject or Single Subject credentials who are working toward Professional Clear certification may

have individual programs designed to meet their needs and interest areas. Arrangements for evaluation of college credit and program design can be made through the Center for Careers in Education, ED-100, 594-5964.

Advanced Standing in Teacher Education

A student transferring into San Diego State University to complete requirements for either the Preliminary or Professional Clear Multiple Subject or Single Subject credential must complete a minimum of six units of professional education coursework in residence at SDSU in order to be recommended for certification regardless of the extent of education work completed at other institutions.

Evaluation of Credits

After an interval of five years, courses in education are reevaluated and subject to reduction in credit, in light of new requirements and changes in educational procedures. All courses taken either at this University or elsewhere must be approved by an official adviser in order to be credited toward meeting credential requirements or pattern requirements for a degree.

GPA Requirements For Continuation in Multiple Subject/Single Subject Credential Programs

A grade point average of 3.0 must be maintained each semester to permit a student to continue in the Multiple Subject and Single Subject credential programs.

Supplementary Authorizations

With completion of additional units in certain curriculum areas, both Single and Multiple Subject teachers can be granted supplementary authorizations to teach in generalized areas in middle and junior high schools (e.g., Introductory English). Single subject teaching credential candidates can also be granted supplementary authorizations to teach in specialized areas K-12 (e.g., psychology). Information on requirements for these supplementary authorizations is available through the Center for Careers in Education, ED-100.

Reading/Language Arts Specialist Credential (Credential Code: 00410)

San Diego State University offers a program leading to a Reading/Language Arts Specialist Credential. This credential authorizes the holder to function as a reading specialist in grades K through 12.

Requirements for Admission

1. A valid California basic teaching credential applicable within the range of grades kindergarten to 12.
2. Admission and planning interviews with a program adviser.
3. An approved basic course in methods and materials for teaching reading.

Program	Units
Curricular/Instructional Strand	
TE 530 Children's/Adolescents' Literature	3
TE 631 Seminar in Language Arts	3
TE 637 Instructional Strategies for Reading/Language Arts.....	3
TE 638 Topics in Reading Education	1
TE 639 Literacy and Language	3
Assessment	
TE 536 Assessment of Reading/Language Arts	3
TE 636 Leadership in Literacy Evaluation.....	3
TE 638 Topics in Reading Education	1
Research	
TE 634 Seminar in Research Investigations in Reading and Language Arts.....	4
Leadership	
TE 638 Topics in Reading Education	1
TE 736 Field Experience as a Reading Specialist.....	2

Additional Requirements

1. A minimum of one year of full-time teaching experience (or the equivalent) within the range of grades kindergarten to 12.
2. Satisfactory completion of a comprehensive examination covering the program coursework.
3. Satisfactory completion of the GRE General Test.

Special Education Specialist Credentials

San Diego State University offers programs leading to the following Special Education Specialist Credentials: Learning Handicapped (**Major Code: 00463**), Severely Handicapped (**Major Code: 00464**), Physically Handicapped (**Major Code: 00462**), and Gifted (**Major Code: 00465**). These credentials authorize the holders to teach in the special education setting designated. There are many common requirements between the specialist credential programs and the Master of Arts degree; coursework completed for the credential may count toward the M.A. degree. Once admitted, to retain classified graduate status, students must maintain a GPA of 3.0 and must successfully complete all enrollments attempted in SPED 771 or 980. Only grades of C or better will count toward a degree, a credential or a certificate. See Department handbook for policies related to these regulations.

Requirements for Admission

1. Admission to the appropriate program within the Department of Special Education.
 - a. Complete application to department as well as to the University.
 - b. Meet all requirements for classified graduate standing as described in Part Two of this bulletin.
 - c. Satisfactory completion of the GRE General Test (verbal and quantitative sections).
 - d. A minimum grade point average of 2.5 for the last 60 undergraduate units attempted.
 - e. Admissions interview with faculty.
2. A valid basic California Teaching Credential.
3. Completion of prerequisite coursework: For gifted education, Special Education 500. For all other programs, Special Education 500 and 501 (6 units).

4. Evidence of successful experiences in educational settings children and youth with disabilities.
5. Completion of a cohort program plan with adviser.

Program

1. Core Course
Special Education 553 (3) (Not required for the gifted specialization.)
2. Specialization Courses
 - a. Learning Handicapped - Special Education 524, 634, 647, 648, 979, 980A (4-6 units) and six units from the following: Special Education 527, 528, 529, 560, 662, 663 (23-25 units).
 - b. Severely Handicapped - Special Education 525, 526, 528, 560, 635, 645, 664, 979, 980 (4 or 6 units) (26-28 units).
 - c. Physically Handicapped - Special Education 526, 560, 634, 647, 648, 662, 979, 980 (4 or 6 units) (23-25 units).
 - d. Gifted --

No new students are being admitted to this program during the 1996-97 academic year. Contact department.

Special Education 508*, 644*, 649*, three units of Special Education 650 (approved by adviser), 771 (2-4 units), and four units of approved electives (15-17 units).

* Courses not currently offered at SDSU.

Experimental Program for Teacher Preparation: A Combined Program for the Multiple Subject Credential and the Special Education Specialist Credential in Learning or Severely Handicapped

This experimental program provides concurrent coursework and fieldwork experiences in regular and special education that lead to the completion of both the Multiple Subject and the Special Education Specialist (Learning Handicapped and Severely Handicapped) credentials.

The experimental combined program is designed to respond to California's critical need for credentialed special education teachers and to evaluate methods of preparing regular classroom teachers to better meet the needs of all students who experience learning difficulties within the regular education environment.

The difference in this program from the existing programs is that it permits the completion of 48 semester units of work that meet all the requirements for the Multiple Subject Credential and the majority of the Special Education Specialist Credential in one calendar year (one summer and two full semesters). Then during the first year of full-time employment as teacher, the candidates will be expected to complete the remaining 6 to 9 units of coursework required to obtain their clear specialist credentials.

This is an experimental program. A request has been submitted to the Commission on Teacher Credentialing to offer the program for three years.

Section IV. Certificate Programs

Resource Specialist Certificate of Competence

The Department of Special Education offers coursework leading to the California Resource Specialist Certificate. This certificate authorizes the holder to function as a Resource Specialist in special education settings. To be recommended for this certificate by San Diego State University, the candidate must hold a valid special education specialist credential, have completed three years of teaching in regular and special education settings, and must have satisfied the competencies specified in the four Resource Specialist courses: Special Education 645 or 648, 651, 652, 653.

Rehabilitation Administration Certificate

The purpose of this certificate program is to provide the student with administrative knowledge and skills needed to develop and supervise rehabilitation programs and services, in collaboration with consumers, in a variety of organizational settings. This academic certificate is designed for individuals who currently function or aspire to function as program coordinators and administrators in state rehabilitation agencies, community rehabilitation programs, disability management programs, and other programs and/or organizations involved in serving consumers with disabilities.

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 a rehabilitation organization or program. The certificate is intended to focus on diversity among consumer populations and service delivery systems within the student's area of career interest. A focus on disability management is available. A master's degree in rehabilitation counseling, as well as leadership experience in rehabilitation is strongly encouraged. Relevant career or academic training experience may be substituted in lieu of the above admission criteria at the discretion of the program director, except that a bachelor's degree is required. Students who do not have a master's degree are expected to achieve a score of 500 on the verbal section and 460 on the quantitative section of the Graduate Record Examination (GRE) and must have a GPA of at least 2.5 in the last 60 semester units attempted.

This 21-unit certificate includes the following courses:

- ARP 710A Seminar in Rehabilitation (3)
- ARP 745 Internship in Rehabilitation (3-9)

With the approval of the Program Adviser, 12 units selected from:

- ARP 610 Educational Leadership (3)
- ARP 680 Seminar in Administration, Rehabilitation and Postsecondary Education (2-6)
- ARP 710B Seminar in Rehabilitation (3)
- ARP 720 Educational Human Resource Development (3)
- ARP 740 Advanced Seminar in Administration, Rehabilitation and Postsecondary Education (3)
- ARP 747 Instructional Leadership in a Diverse Society (3)
- ARP 755 Governance and Policy Development in Learning Organizations (3)
- ARP 798 Special Study (1-6) Cr/NC/SP

Contact the Director of the Rehabilitation program at (619) 594-6406 (V/TTY) for further information.

Students must maintain a minimum grade point average of 3.0 in all certificate coursework with no less than a grade of "C" in any course. Only three units of coursework with a grade of "C" will count towards a certificate. Maximum of three units of coursework repeatable.

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.
4. Knowledge of the target culture and bilingual teaching strategies. Will satisfy prerequisites for Policy Studies in Language and Cross-Cultural Education 602. 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, three units of special education selected with the approval of the department chair, 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.

Cross-Cultural Language and Academic Development (CLAD) Certificate

The Cross-Cultural Language and Academic Development (CLAD) Certificate provides an interdisciplinary approach in linguistics and policy studies to prepare credentialed teachers in theory and application of English Language Development (ELD) and Specially Designed Academic Instruction in English (SDAIE) methodology for linguistically diverse students in grades K-12.

A. Prerequisites: Linguistics 420 or 520.

B. Certificate Requirements:

1. Twelve units including: Policy Studies in Language and Cross-Cultural Studies 602, 653; Linguistics 552; Policy Studies in Language and Cross-Cultural Studies 651 or Linguistics 550.
2. Six units of foreign language at the college level or equivalent.
3. Completion of program with a 3.0 grade point average.

C. Candidates who hold valid basic K-12 teaching credentials will also be able to apply directly to the Commission on Teacher Credentialing for the state's CLAD Certificate for public school service.

Apply in the Policy Studies Department, ED-152 or call 594-5155 for more information.

Instructional Software Design Certificate

The purpose of this certificate is to prepare specialists who can develop or assist in the development of software to meet specific instructional, training or management needs. There are two competency areas incorporated in the certificate: instructional design 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 satisfactory score on the verbal and quantitative sections of the GRE General Test.

Required Courses (18 units):

- EDTEC 540 Educational Technology (3)
- EDTEC 541 Multimedia Development (3)
- EDTEC 544 Instructional Design (3)
- EDTEC 572 Technology for Course Delivery (3)
- EDTEC 671 Instructional Multimedia (3)
- Electives (3) To be selected with the approval of the program director.

Instructional Technology Certificate

Refer to General Catalog.

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 disabilities. A student may elect to emphasize programs for youth with either moderately and mildly or severe and multiple disabilities. Students must complete a minimum of 21 units with a 3.0 (B) grade point average. Students are able to develop additional competencies in instructional interventions, living options, community networking, and assistive technologies. 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 satisfactory score on the Graduate Record Examination, Special Education 500 and 971.

Required courses (12 units)

- SPED 501 Special Education Procedures (3) or
- ARP 584 Introduction to Rehabilitation Process (3)
- SPED 663 Theory and Process of Vocational Development for Youth with Handicaps (3)
- SPED 664 Issues Affecting Employment of Individuals with Severe Handicaps (3)

SPED 771 Directed Internship: Special Education (3) Cr/NC or

ARP 743 Fieldwork in Rehabilitation (3) Cr/NC or

CSP 730 Fieldwork in Counseling (3) Cr/NC

Nine units from the following:

SPED 645 Issues in Curriculum and Instruction for Students with Severe Handicaps (3)

SPED 647 Instructional Adaptations for Students Who Are Learning Handicapped or Low Achieving (3)

SPED 650 Special Topics in Special Education (3)

SPED 798 or ARP 798 Special Study (3) Cr/NC/SP

ARP 645 Assessment and Career Development (6)

ARP 687 Placement of Individuals with Disabilities (3)

Program advisers will meet with each certificate student to design an individualized program of study based on the student's educational background and professional experience. Student may enroll in certificate program and master's degree program concurrently.

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 disordered in the school setting, including those children labeled as seriously emotionally disturbed.

Prerequisites to admission to the certificate program include the following:

1. Completion of, or admission to, the departmental program for the Specialist Credential in Special Education (Learning Handicapped or Severely Handicapped).
2. A graduate grade point average of 3.0.
3. Interview with program faculty.

Program requirements for the Certificate in Teaching the Emotionally Disturbed/Behaviorally Disordered include the following: Special Education 529, 634, 647, 648, 677, 771 (3 units, with approval of adviser), 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.

Workforce Education and Lifelong Learning Certificate

The Workforce Education and Lifelong Learning Certificate offers advanced study and field-based research opportunities for educators interested in assuming leadership roles in the development of education and training programs for non-college bound youth and adults. Employment opportunities include positions as training specialists, instructional developers, program administrators, and instructors in community colleges, adult education programs, and job training programs.

Improving the knowledge and skills of families and workers is one of the most important challenges facing American education. Economists note that even if school reform could be rapidly accomplished, it would have minimal influence on productivity, literacy, or quality of life in the work place during the next 20 years because out-of-school youth and adults are not subject to school reform, and they will constitute the vast majority of the American workforce until well into the next century.

Successful applicants must have completed a bachelor's degree from an accredited institution and demonstrate a record of excellence in working with youth or adults in schools, agencies, or employer-sponsored education and training programs. A minimum grade point average of 3.0 must be maintained in certificate coursework.

Required courses (12 units);

EDTEC 530 Workforce Education and Lifelong Learning (3)

EDTEC 544 Instructional Design (3)

ARP 565 Psychological Foundations of Adult and Vocational Education (3)

ARP 730 Seminar in Adult Learning (3)

Electives: Three units selected with approval of the certificate program director.

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

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.

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-791C. Practicum: Evaluation (1-3)

791B: One lecture. 791C: Independent study.

Prerequisites: Education 791A and advancement to candidacy for the Master of Arts degree in education. Concurrent registration in Education 791B and 791C.

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

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

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

DOCTORAL COURSES

800. Professional Seminar (1)

Prerequisite: Admittance to doctoral program.

Identification of professional goals and research interests. Includes exposure to major research activities in all areas of program and discussion of current problems and trends in these program areas.

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.

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.

811. Handicapped Individuals in Society: Issues in Practice and Policy (3-4)

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, systems modeling, normalization, change theory, needs assessment, personnel development, supervision, manpower and resources development. Emphasizing services to the handicapped, adjustment to family living.

814. Seminar in Curricular Change Processes (3)

Prerequisite: Education 810.

Description and analysis of curricular change processes in educational organizations. Emphasis on process of planned change and elements necessary for implementing and managing curricular change.

820. Advanced Educational Statistics (3-4)

Prerequisites: Education 690, Teacher Education 646, or equivalent graduate level course and consent of graduate coordinator.

Theory and practice of statistical inference for research in education. Probability and sampling theory, data collection and organization, computer applications in educational research, statistical significance testing and prediction, use of statistical computer program libraries.

822. Seminar in Analysis and Issues in Race and Ethnic Relations (3)

Prerequisite: Education 801.

Analysis of race and ethnic relations in education from a theoretical, research and action based perspective. Conceptual framework of race, ethnicity and prejudice theory needed for policies and strategies of reform in education to address unequal race relations. Not open to students with credit in Policy Studies in Language and Cross-Cultural

Education 622.

823. Seminar in Action Oriented Policy Research in Multicultural Contexts (3)

Prerequisite: Education 801.

Multidimensional ways to resolve social problems. Development of community based issues, analysis, research and implementation. Not open to students will credit in Policy Studies in Language and Cross-Cultural Education 623.

824. Seminar in Institutional Change in Multicultural Contexts (3)

Prerequisite: Education 801.

Sociocultural dynamics of urban context, approaches for assessing institutional effectiveness, and strategies for developing and implementing educational innovations. Conceptual understanding of educational and social innovations that address multicultural context of school communities. Not open to students with credit in Policy Studies in Language and Cross-Cultural Education 614.

825. Reading Research (3)

Prerequisites: Master of Arts degree 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. Seminar: Emerging Trends in Educational Systems and Technology (3)

Prerequisites: Admission to doctoral program or consent of graduate coordinator and credit or concurrent registration in Teacher Education 646 and Education 801.

Analysis, design, and application of technology for solving problems of learning and human performance in various social, organizational, and technological settings including schools, corporate training, and international environments.

831. Seminar: Educational Technology Research and Development (3)

Prerequisites: Admission to doctoral program or consent of graduate coordinator and credit or concurrent registration in Teacher Education 646 and Education 801.

Analysis of existing literature in educational technology research and its application to the field. Examination of current needs for research.

832. Leadership and Educational Technology (3)

Prerequisite: Admission to doctoral program or consent of graduate coordinator and credit or concurrent registration in Teacher Education 646 and Education 801.

Leadership and educational technology at personal, team, and organizational levels. Analysis of educational systems with emphasis on implementing organizational and cultural change through selected technological innovations.

850. Seminar in Inquiry and Research in Education (3)

Prerequisite: Completion of 48 units in doctoral program.

Inquiry and empirical research in educational settings within public schools, postsecondary institutions, and public and private sector educational organizations, culminating in a dissertation proposal.

890. 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.

895. Seminar (1-8)

Prerequisite: Admission to the doctoral program or consent of the graduate coordinator.

Investigation of a particular topic or issue, emphasis on empirical research in education. See Class Schedule for specific content. Maximum credit eight units applicable to an advanced degree.

897. Doctoral Research (1-3) 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

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

OFFICE: North Education 279
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In the College of Education

Faculty

Fred R. McFarlane, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education, Chair of Department

Educational Leadership

Larry E. Frase, Ed.D., Professor of Administration, Rehabilitation and Postsecondary Education

Raymond F. Latta, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education

Alfred Merino, Ed.D., Professor of Administration, Rehabilitation and Postsecondary Education

William E. Piland, Ed.D., Professor of Administration, Rehabilitation and Postsecondary Education, Program Coordinator

William A. Streshly, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education

Carolyn J. Downey, Ph.D., Associate Professor of Administration, Rehabilitation and Postsecondary Education

Rehabilitation Counseling

Bobbie J. Atkins, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education

John D. Chamley, Ed.D., Professor of Administration, Rehabilitation and Postsecondary Education

Ron Jacobs, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education

Fred R. McFarlane, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education

Courses Acceptable on Master's Degree Programs in Education

General

UPPER DIVISION COURSES

584. Introduction to Rehabilitation Process (3)

Background and legislation related to vocational rehabilitation, client services, role and function of rehabilitation counselor as a professional. Orientation to community rehabilitation agencies.

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 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

680. Seminar in Administration, Rehabilitation and Postsecondary Education (2-6)

Prerequisite: Consent of instructor.

Study of administration, rehabilitation, or postsecondary education 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.

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. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

735. Measurement and Evaluation in Administration and Supervision (3)

Prerequisite: Education 690.

Research and evaluation methods to conduct investigations of administrative policies, styles, patterns, and impact on public schools and rehabilitation agencies. Use of inferential statistics to evaluate issues and outcomes related to program administration.

740. Advanced Seminar in Administration, Rehabilitation and Postsecondary Education (3)

Prerequisite: Consent of instructor.

Study of a selected area in administration, rehabilitation or postsecondary education, 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.

798. Special Study (1-6) 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.

Educational Leadership

UPPER DIVISION COURSE

565. Psychological Foundations of Adult and Vocational Education (3) I, II, S

Prerequisite: Administration, Rehabilitation and Postsecondary Education 380 or 381.

Learning processes of adult and vocational education students in relation to theories of learning and methods of teaching.

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.

605. Postsecondary Education (3)

Philosophy, history, aims, scope, function, outcomes, principles and problems of postsecondary education. Relationship of K-12 education to postsecondary education. Fieldwork required.

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.

611. Curriculum Theory and Development in Postsecondary Education (3)

Prerequisite: Administration, Rehabilitation and Postsecondary Education 605 or appropriate experience.

Process of curriculum change and improvement. Development and evaluation of curricula in postsecondary education and selection of appropriate teaching strategies to meet learning needs of students.

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 supervisory personnel; use of research in curriculum development and implementation.

631. Seminar in Instructional Methods and Materials: Postsecondary Education (3)

Prerequisite: Administration, Rehabilitation and Postsecondary Education 611 or appropriate experience.

Teaching process at postsecondary education level addressing lesson planning, individualization of instruction, use of learning centers, interactive instruction, other audiovisual methods and procedures of evaluation.

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.

655. Administering Educational Organizations (3)

Prerequisite: Administration, Rehabilitation and Postsecondary Education 610.

Principles and practices in the administration and leadership of elementary, middle, junior high, and secondary schools and other educational organizations.

660. Field Experience in Educational Leadership (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 10 units of which 4 units are applicable to a master's degree.

707. Educational Law and Finance (3)

Prerequisites: Completion of a graduate degree and approval of department.

Legal and financial aspects of educational administration including implications for policy formulation in the areas of personnel, instruction, and resource management.

720. Educational Human Resource Development (3)

Prerequisites: Completion of a graduate degree and approval of department.

Human resource management in educational administration including selection and evaluation of staff, contract management, and staff development. Personnel managerial styles, staff leadership, and motivation techniques as to morale and productivity. Analysis of educational personnel systems and employee assistance programs.

727. Emerging Issues in Educational Leadership (3)

Prerequisites: Completion of a graduate degree and approval of department.

Identification and analysis of emerging local, national, and international issues impacting education.

730. Seminar in Adult Learning (3)

Prerequisite: Administration, Rehabilitation and Postsecondary Education 611.

Patterns and implications for adult life-long learning.

747. Educational Leadership in a Diverse Society (3)

Prerequisites: Completion of a graduate degree and approval of department.

Current theory and practice in meeting needs of diverse learners. Leadership and administration of educational organizations as political, complex systems requiring consensus-building dynamics in a multicultural society.

755. Governance and Policy Development in Learning Organizations (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 Leadership (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.

Rehabilitation Counseling

GRADUATE COURSES

645. Assessment and Career Development (6)

Four lectures and six hours of laboratory.

Prerequisite: Admission to graduate program in rehabilitation counseling.

Rehabilitation assessment, labor market information, and career planning implications. Current assessment approaches, counseling, and career theories related to individuals with disabilities.

648. 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, self-directed groups, organizational problem solving and team-building groups in rehabilitation.

685A-685B. Medical and Psychological Aspects of Disability (3-3)

Prerequisite: Open to rehabilitation graduate students and practitioners.

Interface of the individual and the environment covering disabilities from the perspective of each disability viewed in terms of functional capacities imposed and rehabilitative services needed.

687. Placement Practices with Individuals with Disabilities (3)

Two lectures and three hours of laboratory.

Prerequisite: Admission to rehabilitation counseling program.

Determination of employment and community integration needs of individuals with disabilities. Theories and techniques are presented through case study methods. Strategies focus on continuous surveys and readings focus on employment needs and opportunities for individuals with disabilities.

710A-710B. Seminar in Rehabilitation (3-3)

Prerequisite: Completion of at least 24 units leading to Master of

Science in rehabilitation counseling.

Selected topics with emphasis in research in rehabilitation counseling. See Class Schedule for specific content.

743. Fieldwork in Rehabilitation (3-6) Cr/NC

Prerequisite: Admission to graduate program in rehabilitation counseling.

Orientation to the rehabilitation process including organizational goals, operating strategies, responsibilities and ethics, employee role expectations in partnership with consumers and service providers. Maximum credit six units applicable to a Master of Science degree in rehabilitation counseling.

744. Practicum in Rehabilitation (3-9) Cr/NC

Prerequisite: Admission to graduate program in rehabilitation counseling.

Clinical supervision within rehabilitation systems as it relates to outreach and referral, career development, counseling, and caseload management. Maximum credit nine units applicable to a Master of Science degree in rehabilitation counseling.

745. Internship in Rehabilitation (3-9) Cr/NC

Prerequisite: Completion of at least 24 units leading to Master of Science in rehabilitation counseling.

Supervised internship in rehabilitation setting which involves application of rehabilitation counseling experiences. Maximum credit of nine units applicable to a Master of Science degree in rehabilitation counseling.

746. Seminar in Rehabilitation with Consumers Who Are Deaf and Hard of Hearing (3)

Prerequisite: Consent of instructor.

Characteristics and needs of deaf and hard of hearing consumers. Procedures for collaborating with consumers to develop effective rehabilitation plans, supported employment, independent living and cross-cultural counseling through American sign language.

Counseling and School Psychology

In the College of Education

OFFICE: North Education 179
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Faculty

- Carol A. Robinson-Zañartu, Ph.D., Associate Professor of Counseling and School Psychology (Graduate Adviser), Chair of Department
- Valerie J. Cook-Morales, Ph.D., Professor of Counseling and School Psychology
- Emery J. Cummins, Ph.D., Professor of Counseling and School Psychology
- Lawrence B. Feinberg, Ph.D., Professor of Counseling and School Psychology, Associate Dean of the Graduate Division and Research
- Ralph Llewellyn Miller, Ph.D., Professor of Counseling and School Psychology
- Maria Nieto Senour, Ph.D., Professor of Counseling and School Psychology
- Colette L. Ingraham, Ph.D., Associate Professor of Counseling and School Psychology
- Linda L. Terry, Ed.D., Associate Professor of Counseling and School Psychology
- Gordon M. Thompson, Ph.D., Associate Professor of Counseling and School Psychology, Associate Dean of the College of Education
- Sharon Grant-Henry, Ph.D., Assistant Professor of Counseling and School Psychology
- Michael I. Loewy, Ph.D., Assistant Professor of Counseling and School Psychology

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 role and function of helping professions. Human sexual development, sexual variations, sexual dysfunctions, intimate lifestyles, treatment modalities and sexual ethics. Fulfills MFCC licensure requirement.

585B. Dynamics of Adjustment Behavior (3)

Prerequisite: Upper division course in abnormal psychology.
Philosophies and dynamics of adjustment behavior, patterns and types of abnormal behavior, and treatment modalities. Fulfills MFCC licensure 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 appli-

able to a 30-unit master's degree.

GRADUATE COURSES

600. Counseling Communication Skills (2)

Prerequisite: Concurrent registration in Counseling and School Psychology 600L.

Introduction to the discipline of counseling, fields utilizing this 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 Counseling and School Psychology 600.

Development of self-understanding. Communication skills needed for becoming an effective counselor.

605. Seminar in Ethical and Legal Issues for Counselors (3)

Prerequisite: Credit or concurrent registration in Counseling and School Psychology 600.

Ethical and value issues. Code of ethics and professional standards of major professional mental health associations from a case study perspective. Legal obligations, constraints, and privileges of marriage, family, and child counselors, school counselors, and psychologists.

610. Determinants of Human Behavior (3)

Implications of theory and research in behavioral sciences for the understanding of human behavior.

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|------------------------|--------------------|
| A. Personality | C. Development |
| B. Social and Cultural | 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 Counseling and School Psychology 645.

640L. Appraisal Laboratory (1) Cr/NC

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Counseling and School Psychology 640.

Directed laboratory activity focusing on topics presented in Counseling and School Psychology 640.

642A-642B. Individualized Appraisal of Learning Characteristics (4-4)

Three lectures and three hours of laboratory.

Prerequisite: Counseling and School Psychology 640. Counseling and School Psychology 642A is prerequisite to 642B.

Administration and interpretation of instruments and techniques for assessing learning characteristics of children from multicultural settings. 642A: Individualized intellectual assessment of school-aged children. 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 Counseling and School Psychology 645.

660. Theory and Process of Counseling (3)

Prerequisites: Counseling and School Psychology 600, 600L, and 610A or 610C.

Counseling process theories, approaches to and techniques for counseling, and research concerning counseling effectiveness. Not open to students with credit in Counseling and School Psychology 667.

660L. Counseling Prepracticum Laboratory (1) Cr/NC

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Counseling and School Psychology 660.

Supervised practice in and critique of counseling and other topics presented in Counseling and School Psychology 660.

662. Counseling Interventions with Children and Adolescents (3)

Prerequisites: Counseling and School Psychology 610C and 660.

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: Counseling and School Psychology 600, 600L, and 610B.

Group process, theories of group interaction, and group leadership techniques with children, adolescents, adults, couples, and families. Not open to students with credit in Counseling and School Psychology 667.

680. Theory and Process of Consultation (3)

Prerequisites: Counseling and School Psychology 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.

684. Family Life Cycle Development (3)

Prerequisite: Counseling and School Psychology 610C.

Family development examined within sociocultural and temporal contexts. Addresses predictable and crisis transitions and implications for family therapy treatment.

685. Theories of Marriage and Family Therapy (3)

Prerequisite: Counseling and School Psychology 660.

Counseling modalities, family intervention strategies and techniques of co-counseling in marriage and family therapy. Systems approaches and behavioral contracting. Fulfills MFCC licensure requirement.

686. Seminar: Gender and Ethnicity in Family Therapy (3)

Prerequisites: Counseling and School Psychology 685 and 740.

Integration of gender and cultural factors into family systems therapy theory and practice.

687. Family Treatment of Substance Abuse (1)

Prerequisite: Counseling and School Psychology 685.

Systemic models of intervention for families and couples presenting problems related to substance abuse. Includes treatment issues of interdependence, power, intimacy, generational patterns, addiction, and relapse. Fulfills MFCC licensure requirement.

688. Family Systems Assessment of Child Abuse (1)

Prerequisite: Counseling and School Psychology 685.

Examines child abuse assessment within individual, family socio-cultural, developmental and systemic frameworks. Treatment goals, issues and strategies derived from family systems therapies. Fulfills MFCC licensure requirement.

689. Family Counseling in the Schools (1)

Prerequisite: Counseling and School Psychology 685.

Roles and approaches of family counselor in working with schools for children's school-based problems. Family systems theory and practice applied to family-school interface, cultural interaction, specific symptomatology, and professional and ethical issues.

696. Selected Topics in Counseling and School Psychology (1-3)

Prerequisite: Consent of instructor.

Intensive study in specific areas of counseling and school psychology. 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.

710A-710B. Professional Seminar (3-3)

Prerequisites: Education 690. Six units from Counseling and School Psychology 640, 660, and 670. Counseling and School Psychology 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: Counseling and School Psychology 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: Counseling and School Psychology 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: Counseling and School Psychology 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: Counseling and School Psychology 620, 730, and Education 690.

Development, management, and evaluation of pupil services in schools. Analysis of models and practice in planning.

750. Advanced Seminar and Practicum: Individual Counseling (3-6) Cr/NC

Prerequisite: Counseling and School Psychology 740.

Supervised experience in individual counseling and study of problems, issues, and research. May be repeated. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree in counseling.

752. Seminar and Practicum: School Psychology (3-6) Cr/NC

Nine hours of practicum for three units.

Prerequisites: Counseling and School Psychology 730, credit or concurrent registration in Counseling and School Psychology 642A-642B.

School psychology in multicultural school settings; implications for standard and innovative school psychology practices.

760. Advanced Seminar in School Psychology (3)

Prerequisites: Counseling and School Psychology 621, 710A, and 752.

Study of selected areas in school psychology which culminates in a written project with emphases on research, problems and/or issues. See Class Schedule for specific content.

770. Advanced Seminar in Counseling (3)

Prerequisite: Advancement to candidacy or counseling experience.

Selected areas in counseling culminating in a written project with emphasis on research, problems, and issues. See Class Schedule for specific content.

780. Internship (2-12) Cr/NC

Prerequisite: Counseling and School Psychology 730.

Supervised internship experience in counseling or school psychology activities. Application to take the course must be made early during the preceding semester. May be repeated with new content. Maximum credit six units applicable to a master's degree. Maximum credit 24 units applicable to the specialization in school psychology.

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.

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

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

Preparation of a thesis for the Master of Science degree in counseling.

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 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.

Educational Technology

In the College of Education

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Faculty

Patrick J. Harrison, Ph.D., Professor of Educational Technology,
Chair of Department
Brockenbrough S. Allen, Ph.D., Professor of Educational Technology
Bernard J. Dodge, Ph.D., Professor of Educational Technology
Allison Rossett, Ed.D., Professor of Educational Technology
Farhad Saba, Ph.D., Professor of Educational Technology
Robert P. Hoffman, Assistant Professor of Educational Technology
Donn C. Ritchie, Ph.D., Assistant Professor of Educational
Technology

Courses Acceptable on Master's Degree Program in Education

UPPER DIVISION COURSES

530. Workforce Education and Lifelong Learning (3)

Prerequisite: Experience as an adult educator in settings such as adult schools or community colleges, job-training settings (JTPA and JOBS-sponsored education; the Job Corps), correctional facilities.

Principles of workforce education and lifelong learning. Work-place and continuing education of non-management employees in corporate and community-based settings.

532. Production of Instructional Materials (3) I, II

Six hours of activity.

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.

540. Educational Technology (3) I, II, S

Six hours of activity.

Rationale, foundations, theories, careers, trends, and issues in educational technology. Implications of educational technology for instruction and information in schools, government, and corporations.

541. Multimedia Development (3) I, II, S

One lecture and six hours of laboratory.

Prerequisite: Basic computer literacy and elementary knowledge of an authoring system.

Systems, aesthetic, and learning theories applied to design of educational multimedia. Use of authoring systems to plan and prototype. Not open to students with credit in Educational Technology 532.

544. Instructional Design (3) I, II

One lecture and six hours of laboratory.

Prerequisites: Educational Technology 540 and 541.

Systematic design of products for education and training. Use of cognitive task analysis to determine instructional content. Development of instructional goals and product specifications. Rapid prototyping of instructional products.

553. Educational Television (3) I, II

One lecture and six hours of laboratory.

Prerequisite: Basic audio and video recording skills.

Implications of theory and research for designing, producing, disseminating, and using linear and interactive instructional video programs. Planning pre-production, managing production and post-production.

561. Advanced Multimedia Development (3)

Six hours of activity.

Prerequisites: Educational Technology 540 and 541.

Research-based guidelines, design languages and object-oriented thinking applied to development of media-based learning systems. Two- and three-dimensional graphics, animation, video, sound, and virtual reality techniques.

572. Technology for Course Delivery (3) I, II

One lecture and six hours of laboratory.

Prerequisite: Educational Technology 541.

Use of technology to support planning, presenting and managing instructor-led courses.

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.

GRADUATE COURSES

640. Psychology of Technology-Based Learning (3)

Six hours of activity.

Prerequisite: Educational Technology 544.

Principles of human learning and cognition applied to design and use of technology-based learning systems. Development of research-based design guidelines. Media as channels for educational communications and as environments for learning by doing.

644. Advanced Instructional Design (3)

Two lectures and three hours of laboratory.

Prerequisites recommended: Educational Technology 540 and 544.

Roles and theories associated with instructional design. Problem solving on current design issues. Needs assessment and product development for community based clients.

650. Distance Education (3)

Two lectures and three hours of laboratory.

Prerequisite: Educational Technology 561.

Theories and models of tele-education at home, place of work and school. Design, development, and evaluation of instructor-led and learner-directed tele-lessons for integrated electronic dissemination systems. Social, economic and organizational context of learning at a distance.

653. Multimedia and Hypermedia (3)

One lecture and six hours of laboratory.

Prerequisite: Educational Technology 561.

Design and analysis of educational multimedia as dynamic systems. Synthesis of art, drama, and music within framework of learning theory.

670. Exploratory Learning Through Simulation and Games (3)

One lecture and six hours of laboratory.

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.

671. Instructional Multimedia (3)

One lecture and six hours of laboratory.

Prerequisite: Educational Technology 544.

Advanced design of multimedia learning environments using frame-based and object-oriented approaches. Usability testing. Integration of multimedia products with instructional programs and systems.

684. Management of Educational Technology (3)

Six hours of activity.

Prerequisite recommended: Educational Technology 544.

Research reviewed and findings related to current practices. Management of instructional design and training projects and programs. Role of educational technology and training in organizations. Recent trends evaluated.

685. Informational and Instructional Technologies for Organizations (3)

Six hours of workshop and activities.

Prerequisites: Educational Technology 540 and 541.

Organizational and informational technologies to support instructional products and services. Individual, team, and organizational analyses. Incentives, feedback, coaching, job-aid, selection and other strategies in relation to instructional technologies.

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.

798. Special Study (1-6) Cr/NC/SP

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

Individual study. May involve fieldwork. Maximum credit six units applicable to a master's degree.

Policy Studies in Language and Cross-Cultural Education

OFFICE: Education 152
TELEPHONE: (619) 594-5155
FAX: (619) 594-1183

In the College of Education

Faculty

Alberto M. Ochoa, Ed.D., Professor of Policy Studies in Language and Cross-Cultural Education, Chair of Department
Ruben W. Espinosa, Ph.D., Professor of Policy Studies in Language and Cross-Cultural Education
Natalie A. Kuhlman, Ph.D., Professor of Policy Studies in Language and Cross-Cultural Education
Richard Pacheco, Ph.D., Professor of Policy Studies in Language and Cross-Cultural Education
Russell L. Young, Ph.D., Associate Professor of Policy Studies in Language and Cross-Cultural Education
Evangelina B. Jones, M.A., Assistant Professor of Policy Studies in Languages and Cross-Cultural Education

UPPER DIVISION COURSES

515. Bilingual Teaching Strategies (3)

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.

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.

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 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

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.

Interpersonal interaction in classrooms via analysis of linguistic, paralinguistic, kinesic, and proxemic behaviors of teachers and students; levels of communicative competence and teach/learning patterns.

613. Organizational Strategies and Staff Development for the Multicultural School-Community (3)

Prerequisite: Policy Studies in Language and Cross-Cultural Education 653.

Leadership skills and change strategies for designing and implementing instructional programs, staff development approaches, and establishing a structural and functional organizational school climate that promotes culturally pluralistic educational services.

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 students.

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. May involve fieldwork. Maximum credit six units applicable to a master's degree.

903. Bilingual Secondary Student Teacher Seminar (1-3) Cr/NC

Prerequisites: Policy Studies in Language and Cross-Cultural Education 924, 954, and concurrent registration in Policy Studies in Language and Cross-Cultural Education 964.

Planning and organizing instruction for Spanish/English bilingual and nonbilingual student teaching assignments. Focus on role of the bilingual teacher and discipline specific methods in English, ESL, mathematics, science, social science, and foreign language. Course taught in Spanish and/or English.

910. Teaching Mathematics to Bilingual Elementary Students (3)

Prerequisite: Admission to BCLAD multiple subject credential program.

Underlying learning theories for teaching mathematical concepts, computation, and problem-solving skills to bilingual students. Taught in Spanish.

911. Teaching Social Studies to Bilingual Elementary Students (2)

Prerequisite: Admission to BCLAD multiple subject credential program.

Conceptual approaches for teaching bilingual social studies curriculum, incorporating sociocultural characteristics of multicultural community, social concepts, and community social issues. Taught in Spanish.

912. Teaching Science to Bilingual Elementary Students (2)

Prerequisite: Natural Science 412A or 412B or 412C.

Strategies for development of process skills and concept acquisition. Methodology for teaching activity-oriented science class in English and Spanish. Taught in Spanish.

914. Teaching and Learning in the Content Area: Major (3)

Prerequisites: Education 451, Policy Studies in Language and Cross-Cultural Education 400, 515.

Teaching strategies in content specific fields from second language acquisition perspective taken concurrently with student teaching. See Class Schedule for specific content. May be repeated with new content.

923. Psychological Foundations of Education and Bilingual Students (3)

Prerequisite: Admission to BCLAD multiple subject credential program.

Major theories of learning and cognition as applied to bilingual students and their relation to child development, first and second language acquisition, and approaches to teaching in bilingual classroom. Taught in Spanish and English.

924. Behavioral and Psychological Aspects of Teaching in the Bilingual Classroom (1-4)

Prerequisites: Policy Studies in Language and Cross-Cultural Education 400; concurrent registration in Policy Studies in Language and Cross-Cultural Education 954 and 963; admission to the single subject bilingual emphasis program.

Bilingual learning theory as it affects adolescent growth, individualized instruction, classroom management and discipline, and methods of measuring and evaluating achievement. Taught in Spanish and English. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

931. Skills in Teaching Reading to Bilingual Elementary Students (3)

Prerequisite: Admission to BCLAD multiple subject credential program.

Teaching reading in English, including methods, strategies, assessment, materials, and techniques of transition for implementing reading programs in the bilingual classroom.

932. Teaching Spanish Language Arts to Bilingual Elementary Students (3)

Prerequisite: Admission to BCLAD multiple subject credential program.

Assessing language proficiency; selecting, designing, and evaluating learning experiences to develop Spanish and English language arts. Taught in Spanish.

933. Skills in Teaching Reading to Bilingual Secondary Students (3)

Prerequisites: Upper division standing. Admission to single subject bilingual emphasis program.

Methods of teaching and diagnosing reading skills in Spanish and English, including ESL methods and individualized instruction. Transition skills. Taught in Spanish.

954. Humanistic and Social Aspects of Teaching in the Bilingual Classroom (1-4)

Prerequisites: Policy Studies in Language and Cross-Cultural Education 400; concurrent registration in Policy Studies in Language and Cross-Cultural Education 924 and 963; admission to the single subject bilingual emphasis program.

Interaction between school and society, including equity issues, values, sociocultural variables, achievement of Spanish/English bilingual students; models for appropriate curricula. Taught in Spanish and English. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

960. Student Teaching Seminar for Bilingual Elementary Students (1-4) Cr/NC

Prerequisites: Policy Studies in Language and Cross-Cultural Education 923 and admission to BCLAD multiple subject credential program.

Bilingual instructional practices, classroom management, curricula discipline, micro-teaching in Spanish and English, legal liability, and daily problems encountered in the bilingual classroom. Taught in English and Spanish. Maximum credit four units.

961. Student Teaching for Bilingual Elementary Students (1-12) Cr/NC

Prerequisite: Admission to BCLAD multiple subject credential program. Student must provide own transportation to student teaching site.

Field experience at two grade levels in a multicultural setting and a bilingual elementary classroom; student teacher assumes responsibility for planning and instruction for specified time to comply with State requirements. Maximum credit twelve units.

963. Student Teaching for Bilingual Secondary Students I (3-4) Cr/NC

Prerequisites: Policy Studies in Language and Cross-Cultural Education 400; concurrent registration in Policy Studies in Language and Cross-Cultural Education 924 and 954; admission to the single subject bilingual emphasis program. Students must provide own transportation to student teaching site.

On-site, part-time experience to implement bilingual teacher competencies introduced in Policy Studies in Language and Cross-Cultural Education 515, 924, and 954.

964. Student Teaching for Bilingual Secondary Students II (9-12) Cr/NC

Prerequisites: Policy Studies in Language and Cross-Cultural Education 924 and 963; concurrent registration in Policy Studies in Language and Cross-Cultural Education 903. Students must provide own transportation to student teaching site.

On-site, full-day experience in State approved bilingual and non-bilingual classes to implement teacher competencies as developed in the total professional sequence. Maximum credit twelve units.

Special Education

In the College of Education

OFFICE: North Education 70
TELEPHONE: (619) 594-6665

Faculty

Ian R. Pumpian, Ph.D., Professor of Special Education, Chair of Department
Patricia T. Cegelka, Ed.D., Professor of Special Education
Donald H. Doorlag, Ph.D., Professor of Special Education
Anne W. Graves, Ph.D., Professor of Special Education
Margie K. Kitano, 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
Eleanor W. Lynch, Ph.D., Professor of Special Education (Graduate Adviser)
Richard C. Brady, Ph.D., Associate Professor of Special Education
Belinda D. Karge, Ph.D., Associate Professor of 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. Human Exceptionality (3) I, II, S

Historical, philosophical, and legal backgrounds which affect special education practices. Identifying and programming for students with exceptionalities: principles, procedures, and techniques. Fieldwork.

501. Special Education Procedures (3) I, II, S

Procedures, legal requirements, and interpersonal processes in the identification, prescription, teaching and evaluation of instructional programs for students with handicaps.

524. Characteristics and Education of Students with Learning Disabilities (3) I

Prerequisites: Credit or concurrent registration in Special Education 500 and 501.

Historical and philosophical perspectives of programs related to students with learning disabilities, including review of research on educational programs, curricular approaches, and characteristics.

525. Characteristics and Education of Students with Severe Disabilities (3) I

Prerequisites: Credit or concurrent registration in Special Education 500 and 501.

Historical and philosophical perspectives of programs related to students with severe disabilities, including review of research on educational programs, curricular approaches and characteristics.

526. Characteristics and Education of Students with Physical Disabilities (3) I

Prerequisites: Credit or concurrent registration in Special Education 500 and 501.

Historical and philosophical perspectives of programs related to students with physical disabilities, including review of research on students' characteristics, educational programs, and curricular approaches.

527. Ethnolinguistic Diversity and Students with Learning Disabilities (3) II

Prerequisites: Special Education 500 and 501.

Historical and philosophical perspectives of programs related to ethnolinguistically diverse students who also have learning handicaps, including review of research on educational programs, curricular approaches, and instructional needs.

528. Early Intervention for Infants, and Young Children with Disabilities and Their Families (3) I

Prerequisites: Special Education 500 and 501 or equivalent coursework in another discipline.

Characteristics and needs of infants, toddlers, and preschoolers with handicaps and their families, focusing on approaches to educational service delivery, review of research, and analysis of best practices in a pluralistic society.

529. Characteristics and Education of Students with Serious Emotional Disturbances (3) I

Prerequisites: Special Education 500 and 501.

Historical and philosophical perspectives of programs for students with emotional disturbances and behavior disorders, including review of research on student characteristics, educational programs, and curricular approaches.

553. Dynamics of Behavior Change of the Exceptional Individual (3) I, II, S

Prerequisites: Special Education 500 and 501.

Management and treatment of individuals with exceptional needs. Current theories and programs in behavioral change studies, analyzed with reference to their applications for the educational environment. Not open to students with credit in Special Education 513A, 513B, or 513C.

560. Applications of Technology for Exceptional Learners (3) I, II, S

Prerequisite: Special Education 500.

Educational applications of current technologies for learners who are handicapped and/or gifted. Selection, modification, and classroom use of technologies to improve or bypass physical, sensory, communicative, learning, and social disabilities and for environmental control.

596. Selected Topics in Special Education (1-4) I, II, S

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

634. Issues in Assessment of Students with Learning Handicaps (3)

Prerequisite: Special Education 524.

Assessment for instructional decision making including alternative data collection strategies, models for analysis and synthesis of assessment information, influences of cultural and linguistic diversity, and implications for instruction.

635. Assessment in Early Intervention and Programs for Individuals with Severe Handicaps (3)

Prerequisite: Special Education 525 or 528.

Models of family and community based assessment of infants and preschoolers with disabilities and individuals with severe handicaps. Emphasis on a transdisciplinary approach; decision making based on performance in home, school, and society with application in a multicultural context.

643. Educational Interventions for Infants, Toddlers, and Preschoolers with Handicaps (3)

Prerequisites: Special Education 500 and 528.

Developing, implementing, monitoring, and evaluating educational interventions in center and home based programs with an emphasis on family-professional collaborations in a pluralistic society.

645. Issues in Curriculum and Instruction for Students with Severe Handicaps (3)

Prerequisite: Special Education 525.

Design and implementation issues of instructional programs for students with severe handicaps; approaches which foster school and community integration and active family involvement will be analyzed.

646. Educational Adaptation for Ethnolinguistically Diverse Students with Learning Handicaps (3)

Prerequisites: Special Education 527 and 634.

Data-based approaches to developing and selecting programs and establishing procedures for monitoring and evaluating progress of students with learning handicaps from diverse backgrounds.

647. Instructional Adaptations for Students Who Are Learning Handicapped or Low Achieving (3)

Prerequisite: Special Education 524.

Analysis and application of research related to meeting the basic academic skill needs of students who are learning handicapped or low achieving.

648. Interventions for Students Who Are Learning Handicapped or Low Achieving (3)

Prerequisite: Special Education 524.

Strategies for adaptive behavior interventions. Systematic instruction in social skills, study skills, learning strategies, and vocational skills for students who are learning handicapped or low achieving.

650. Special Topics in Special Education (1-4)

Prerequisites: Special Education 500, 501, 971.

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:

- | | |
|---|--|
| <p>A. Consultant Skills/
Multidisciplinary Teams</p> | <p>C. Specialized Assessment
Techniques</p> |
| <p>B. Affective and Social
Development</p> | <p>D. Instructional Programming</p> |

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.

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 students with handicaps. 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 for students with handicaps. Skills in behavior management, assessment, programming, evaluation, and vocational plans. Meets competencies for Resource Specialist Certificate.

662. Collaborative Partnerships in Special Education (3)

Prerequisite: Special Education 528 or 645 or 647.

Validated collaboration models for working with aides, parents, administrators, other professionals and representatives from related services; interpersonal processes, communication skills, conflict resolution, decision-making models, and team functions.

663. Theory and Process of Vocational Development for Youth with Handicaps (3)

Prerequisite: Credit or concurrent registration in Special Education 524 or 525.

Historical background, research issues, applied practices, and innovative strategies for enhancing the quality of life for youth with handicaps in education, employment, and community living.

664. Issues Affecting Employment of Individuals with Severe Handicaps (3)

Prerequisite: Special Education 525.

Transition from school special education programs into supported employment and community living; research issues, applied practices, and innovative strategies for enhancing integrated adult options.

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 Seminar 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

696. Advanced Topics in Special Education (3)

Prerequisite: Twelve units in special education.

Intensive study in specific areas of special 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.

771. Directed Internship: Special Education (1-4) Cr/NC

Prerequisite: 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. May involve fieldwork. Maximum credit six units applicable to a master's degree.

971. Fieldwork in Special Education (2-3) Cr/NC

Supervised observation and participation in classroom and related school activities of handicapped students (e.g., mentally retarded, gifted, learning disabled, and others). Maximum credit 12 units, of which no more than three units are applicable to a bachelor's degree.

979. Fieldwork Seminar (1) Cr/NC

Prerequisites: Admission to department as a postbaccalaureate classified student; credit or concurrent registration in all core courses for specific specialist credential (see catalog for listing of core courses by credential); concurrent registration in Special Education 980.

Analyze and critique teaching performances using such protocols as videotapes, case studies, and observational data. Not applicable to the M.A. degree.

980. Advanced Practicum for Specialist Credential (4 or 6) Cr/NC

Prerequisites: Admission to department as a postbaccalaureate classified student; credit or concurrent registration in all core and specialization courses for specific specialist credential (see catalog for listing of courses by credential); concurrent registration in Special Education 979.

Integration and application of skills and knowledge gained in specialization coursework. Analysis and critique of teaching performance. May be repeated in other specialty areas. Not applicable to the M.A. degree.

- | | |
|-------------------------|---------------------------|
| A. Learning Handicapped | C. Physically Handicapped |
| B. Severely Handicapped | D. Gifted |
-
-

Teacher Education

In the College of Education

OFFICE: Education 151, (619) 594-5777
Center for Careers in Education 100, (619) 594-5964

Faculty

Pamela J. Ross, Ph.D., Professor of Teacher Education, Director of School
Clifford P. Bee, Ph.D., Professor of Teacher Education
Marlowe J. Berg, 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
Dale E. Ingmanson, Ed.D., Professor of Teacher Education
Diane K. Lapp, Ed.D., Professor of Teacher Education
Alan McCormack, Ed.D., Professor of Teacher Education
Kathleen F. Mikitka, Ph.D., Professor of Teacher Education
Steve G. Moreno, Ed.D., Professor of Teacher Education
Valerie Ooka Pang, Ph.D., Professor of Teacher Education
Larry J. Shaw, Ed.D., Professor of Teacher Education (Graduate Adviser)
David W. Strom, Ed.D., Professor of Teacher Education

Gerald H. Treadway, Jr., Ed.D., Professor of Teacher Education
Barbara Armstrong, Ph.D., Associate Professor of Teacher Education
Nadine S. Bezuk, Ph.D., Associate Professor of Teacher Education
Ronald W. Evans, Ed.D., Associate Professor of Teacher Education
Nancy Farnan, Ph.D., Associate Professor of Teacher Education
Jaime L. Lujan, Ph.D., Associate Professor of Teacher Education
Cheryl L. Mason, Ph.D., Associate Professor of Teacher Education
Jesus Nieto, Ph.D., Associate Professor of Teacher Education
Carla S. Mathison, Ph.D., Associate Professor of Teacher Education
Cynthia Darche Park, Ph.D., Associate Professor of Teacher Education
Randolph A. Philipp, Ph.D., Associate Professor of Teacher Education
Rafaela M. Santa Cruz, Ph.D., Associate Professor of Teacher Education
My Luong Tran, Ph.D., Associate Professor of Teacher Education

UPPER DIVISION COURSES

508. Teaching in the Middle School (3) I, II, S

Prerequisite: Completion of or admission to a credential program in elementary or secondary education.

Developmental characteristics of early adolescents that affect teaching and learning, rationale for organizational features unique to middle schools, and interdisciplinary curriculum development.

511. Diagnosis and Remediation of Difficulties in Mathematics (3)

The assessment and remediation of underachievers in mathematics. Techniques in determining difficulties in mathematics and prescribing remedial work; for use by elementary and secondary classroom teachers and mathematics education specialists.

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 or single subject credential programs.

Knowledge, skills, and instructional programs for teaching handicapped students in the regular classroom. Meets the mainstreaming

requirements for the California Multiple Subject credential (clear). Not open to students with credit in Special Education 550, Teaching the Special Child in the Regular Classroom.

530. Children's/Adolescents' Literature (3) I, II

Survey of children's/adolescents' literature and its incorporation into the classroom curriculum.

536. Assessment of Reading/Language Arts (3)

Prerequisites: Valid teaching credential and consent of instructor.
Formal and informal assessment of reading and language arts abilities.

596. Topics in Teacher Education (1-3 or 6) SP* I, II

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 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum six units of 596 and 696 applicable to a 30-unit master's degree.

* Specified sections.

GRADUATE COURSES

- 600. Curriculum Development in Education (3)**
Prerequisite: Consent of instructor.
Advanced study of the research in curriculum development, construction and evaluation.
- 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.
Exploration of innovative instructional practice in the public and private schools, with emphasis on innovative teaching strategies. An evaluation of the motivational effect and structural validity of promising instructional practices. 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.
- 610A. Seminar in Mathematics Education – Elementary School (3)**
Prerequisite: Consent of instructor.
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: Consent of instructor.
Advanced study of the problems of teaching science in the elementary school with emphasis on the literature of science education.
- 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.
- 625. Instruction in Mathematical Problem Solving (3)**
Two lectures and three hours of laboratory.
Prerequisite: Teaching credential.
Design, implementation, and evaluation of mathematical problem-solving programs in elementary and secondary grades. Use of micro-computers and hand-held calculators to solve mathematical problems.
- 626. Advanced Educational Psychology (3)**
Prerequisite: Teacher Education 923 or valid teaching credential.
Advanced study of the research in educational psychology and its application to learning and human growth.
- 630. Seminar in Reading Education (3)**
Prerequisite: 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 (3)**
Advanced study of problems in teaching language arts. The study of the scientific research and application in the field.
- 634. Seminar in Research Investigations in Reading and Language Arts (4)**
Prerequisite: Consent of instructor.
Emphasis on interpreting, evaluating, conducting, and implementing findings of research and evaluation in reading and language arts.
- 636. Leadership in Literacy Evaluation (3)**
Prerequisite: Teacher Education 536.
Theoretical knowledge and practical skill in assessing reading/language arts abilities. Emphasis on informal measure in an interdisciplinary center requiring contacts with allied professionals in the community and parents.
- 637. Instructional Strategies for Reading/Language Arts (3)**
Two lectures and three hours of laboratory.
Prerequisites: Teacher Education 530 or concurrent enrollment, and Teacher Education 536, 636.
Supervised experience utilizing instructional strategies in individual and small group settings.
- 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. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.
- 639. Literacy and Language (3)**
Prerequisite: Teacher Education 930A or 933.
Theories of literacy and methods for developing literacy in language, reading and writing. Instructional methods and assessment techniques for children and adults.
- 646. Seminar in Educational Measurement (3)**
Problems in educational testing. Emphasis on construction, administration and validation of teacher-made tests.
- 652. Change in Education (3)**
Prerequisite: Valid teaching credential.
Examination of the process of change in education, analysis of recent major changes and study of techniques for effecting change.
- 653. Values in Education (3)**
Prerequisite: Valid teaching credential or enrollment in a credential program.
Analysis of various strategies that promote clarification of values and moral dilemmas. Development of classroom strategies to measure values and implement value clarification.
- 655. Social Foundations of American Education (2 or 3)**
Prerequisite: Admission to teacher education.
Sociological, historical, and philosophical foundations of American education and their influences on present-day educational practices.

656. 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)

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

696. Selected Topics in Community Influences on Learning and Curriculum Planning (1-3)

Prerequisite: Teaching experience.

Intensive study in specific areas of teacher 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 on a master's degree.

736. Field Experience as a Reading Specialist (2)

Prerequisite: Eighteen units of core courses.

Individually designed practicum for the reading specialist.

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.

798. Special Study (1-6) Cr/NC/SP

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

Individual study. May involve fieldwork. Maximum credit six units applicable to a master's degree.

902. Classroom Management Skills (1)

Two hours of activity.

Prerequisite: Provisional or complete admission to multiple subject credential program.

Skills in interpreting the legal aspects of education, identifying various kinds of school and classroom organization, and using instructional media and verbal stimuli to facilitate learning.

903. Secondary School Student Teaching Seminar (1-3) Cr/NC

Prerequisites: Teacher Education 922, 933, 954, 963. To be taken concurrently with Teacher Education 964.

To plan and organize instruction in relation to all competencies acquired and to be implemented in an on-site, full-time student teaching assignment. May be repeated with new content. Maximum credit three units.

910A. Teaching Mathematics in the Elementary School (1-3)

Prerequisite: Admission to multiple subject credential program or possession of a teaching credential.

Instructional methods for development of children's conceptual understanding, computational, and problem-solving skills in mathematics, including use and development of materials and programs.

910B. Teaching Social Studies in the Elementary School (1-3)

Prerequisite: Admission to multiple subject credential program or possession of a teaching credential.

Developing curriculum, principles and materials of instruction, including instructional media and participation in elementary social studies education.

910C. Teaching Science in the Elementary School (1-3)

Prerequisite: Admission to multiple subject credential program or possession of a teaching credential.

Developing research-based science curriculum, principles and materials of instruction, including instructional media and participation in elementary science education.

914. Teaching and Learning in the Content Area: Major (3)

Prerequisite: Admission to teacher education credential program.

Teaching strategies in content specific fields of study taken concurrently with student teaching. See Class Schedule for specific content. May be repeated with new content.

922. Behavioral and Psychological Aspects of Teaching (1-4)

Prerequisite: Admission to single subject credential program. To be taken concurrently with Teacher Education 954 and 963.

Teacher competencies as they relate to learning theories, adolescent growth, self-assessment, measurement and evaluation. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

923. Psychological Foundations of Education (1-3)

Prerequisites: Psychology 101 and admission to multiple subject credential program.

Implementing learning process through interactive skills, using instructional principles to facilitate learning and changes in behavior and techniques used in assessing instruction and pupil growth.

930A. Teaching Reading in the Elementary School (1-3)

Prerequisite: Admission to multiple subject credential program or possession of a teaching credential.

Nature of reading as a human behavior, various approaches, materials, and techniques used in teaching reading.

930B. Teaching Language Arts in the Elementary School (1-3)

Prerequisite: Admission to multiple subject credential program or possession of a teaching credential.

Selecting, designing and evaluating appropriate learning experiences to assure children's growth in language arts.

933. Teaching of Reading in the Secondary School (3)

Teacher competencies as they relate to the teaching of reading/writing and diagnosing needs in the content areas. For students completing a credential at SDSU, this course must be taken concurrently with enrollment in first or second semester single subject credential program.

950. Community Study Skills (2)

Four hours of activity.

Prerequisite: Provisional or complete admission to multiple subject credential program.

Skills in observing and interpreting professional values and the diversity of social, cultural, economic and educational values within elementary school communities. (Formerly numbered Teacher Education 350.)

954. Humanistic and Social Aspects of Teaching (1-4)

Prerequisite: Admission to single subject credential program and concurrent registration in Teacher Education 922 and 963.

Teacher competencies as they relate to values, awareness, self-concept, rights and responsibilities. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

960. Basic Student Teaching Seminar (1-2) Cr/NC

Prerequisites: Admission to multiple subject credential program and concurrent registration in Teacher Education 965.

Discussion of immediate problems in student teaching with emphasis on children's growth and development.

961. Advanced Student Teaching Seminar (1-2) Cr/NC

Prerequisites: Satisfactory completion of Teacher Education 960, 965; and concurrent registration in Teacher Education 966.

Discussion of immediate problems in student teaching with emphasis on the influence of philosophical, social and cultural factors on learning.

962. Fieldwork in Community Service in Education (2)

Four hours of activity.

Working on a tutorial basis with children and youth. Maximum credit four units.

**963. Secondary School Student Teaching I (1-6)
Cr/NC/SP**

Prerequisite: Admission to single subject credential program. To be taken concurrently with Teacher Education 922 and 954. Teacher Education 933 is highly recommended to be taken at this time. Student must provide own transportation to student teaching site.

On-site, part-time experience to implement teacher competencies developed in Teacher Education 922 and 954. Maximum credit six units.

**964. Secondary School Student Teaching II (1-12)
Cr/NC/SP**

Prerequisites: Teacher Education 922, 933, 954, 963. To be taken concurrently with Teacher Education 903. Student must provide own transportation to student teaching site.

On-site, full-day experience to implement teacher competencies as developed from the total professional sequence. Maximum credit twelve units.

**965. Basic Student Teaching in Elementary
Schools (1-12) Cr/NC**

Prerequisites: Admission to multiple subject credential program and concurrent registration in Teacher Education 960.

Day-to-day teaching experiences including selected instructional activities for which a teacher in a classroom is normally responsible.

**966. Advanced Student Teaching in Elementary Schools (1-12)
Cr/NC**

Prerequisites: Satisfactory completion of Teacher Education 960, 965, and concurrent registration in Teacher Education 961.

Teaching experiences including all the instructional activities for which a teacher in a classroom is normally responsible.

**967. Elementary School Student Teaching (15) Cr/NC
(Offered at IVC only)**

Prerequisites: Admission to multiple subject credential program and concurrent registration in Teacher Education 960 and 961.

On-site, full-day teaching experiences. Two consecutive eight week assignments at two different broad levels of schooling. Each eight week assignment will provide typical responsibilities of teachers through a graduated series of experiences, such as class preparation, instruction of students, maintaining accurate student records, attending faculty meetings and parent conferences. Not open to students with credit in Teacher Education 460 and 461.

**968. Secondary School Student Teaching (15) Cr/NC
(Offered at IVC only)**

Prerequisites: Admission to single subject credential program and concurrent registration in Teacher Education 903.

On-site, full-day teaching experiences. Two consecutive eight week assignments in single subject content area; one in junior high school and one in senior high school. Each eight week assignment will provide typical responsibilities of teachers through a graduated series of experiences, such as class preparation, instruction of students, maintaining accurate student records, attending faculty meetings and parent conferences. Not open to students with credit in Teacher Education 463 and 464.

OFFICE: Engineering 426
TELEPHONE: (619) 594-6061

Engineering

In the College of Engineering

Associateships

Graduate teaching associateships and graduate nonteaching associateships 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 the Ph.D. degree in engineering science/applied mechanics and Master of Science degrees in aerospace, civil, electrical, and mechanical engineering. The Ph.D. degree is offered jointly with the University of California, San Diego. 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.

Section I. Master's Degree Programs

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.

Students should contact specific engineering department for GRE test requirements.

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 and an oral defense, or Plan B, requiring a comprehensive written examination.

Students shall arrange their course pattern, in conference with their 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. Twenty-one 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 601. Computational Fluid Mechanics (3)
 - AE 612. Compressible Fluid Flow (3)
 - AE 620. Incompressible Aerodynamics (3)
 - AE 643. Laminar Flow (3)
 - AE 644. Turbulent Flow (3)
2. **Structural Mechanics**
 - EM 600. Seminar (1-3)
 - EM 603. Theory of Vibrations (3)
 - EM 611. Vibration of Elastic Solids (3)
 - EM 621. Theory of Elasticity (3)
 - EM 711. Structural Acoustics (3)
 - EM 724. Theory of Plates and Shells (3)
 - EM 727. Theory of Elastic Stability (3)

Civil Engineering
(Major Code: 09081)

General information: The Department of Civil and Environmental Engineering offers graduate study leading to the Master of Science degree in civil engineering. Available areas of research include geotechnical engineering, structural engineering, transportation engineering, and water resources and environmental engineering. Programs of study may also include combinations of the above areas and related courses from other disciplines subject to the approval of the graduate adviser.

Specific Requirements for the Degree: The student's program, prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:

1. Eighteen units of 600- and 700-numbered courses in civil engineering. A minimum of four courses should be selected from one of the specialty areas listed below; in exceptional cases, this requirement may be waived at the discretion of the graduate committee, provided the substitute course is in the College of Engineering and enhances a coherent program in a specific professional area.
2. At least twelve additional units of 500-, 600- or 700-numbered courses, approved by the graduate adviser.
3. The total combined units of 797, 798, and 799 shall not exceed nine units on the program.

Areas of Specialization in Civil Engineering

1. **Geotechnical Engineering**
CE 640. Advanced Soil Mechanics (3)
CE 641. Advanced Foundation Engineering (3)
CE 642. Seepage and Earth Dams (3)
CE 644. Soil Dynamics (3)

2. **Structural Engineering**
CE 605. Prestressed Concrete Structures (3)
CE 607. Dynamics of Structures (3)
CE 608. Earthquake Engineering (3)
CE 610. Finite Element Analysis of Structures (3)
3. **Transportation Engineering**
CE 620. Traffic Engineering (3)
CE 621. Transportation Demand Analysis (3)
CE 622. Mass Transit Engineering (3)
CE 781. Seminar in Transportation Engineering (2 or 3)
4. **Water Resources and Environmental Engineering**
CE 632. Computational Hydraulics and Hydrology (3)
CE 634. Surface Water Hydrology (3)
CE 635. Water Quality Engineering (3)
CE 636. Water Quality Processes (3)
CE 638. Sedimentation and River Engineering (3)

Electrical Engineering
(Major Code: 09091)

General information: The Department of Electrical and Computer Engineering offers graduate study leading to a Master of Science degree in Electrical Engineering. The program provides balanced opportunities to study practical engineering design and do research. Research assistantships are available in the research areas of computer engineering, digital system design, VLSI design, digital signal processing and communications systems, electro-optic system design and instrumentation, applied electron and molecular spectroscopy, power systems, and biomedical/rehabilitation engineering.

Specific Requirements for the Degree: The student's program, prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:

1. Eighteen units of 600- and 700-numbered courses in electrical engineering.
2. At least six additional units of 500-, 600- or 700-numbered courses in the College of Engineering or, with the prior approval of the graduate adviser, in the College of Sciences.
3. Six elective units of 500-, 600- or 700-numbered courses approved by the graduate adviser.
4. Prerequisites for all courses taken for the degree must be completed with a grade of C or better.
5. As a breadth requirement, each classified graduate student is required to complete, with 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-numbered courses to satisfy part of the breadth requirement.

Disciplines and related courses:

Communications: Electrical Engineering 553, 556, 558, 560, 647, 650, 652, 653, 657, 658.

Computers: Electrical Engineering 572, 672, 675, 676, 677, 678, 679.

Electronics/Networks: Electrical Engineering 502, 530, 539, 570, 634.

Physical Electronics: Electrical Engineering 534, 540, 541, 546, 642, 644, 645.

Power/Control Systems: Electrical Engineering 520, 580, 581, 582.

6. Students selecting Plan B must pass a written comprehensive examination. The examination tests the student's understanding and mastery of *fundamental principles* and their ability to apply them to engineering problems. Members of the ECE faculty will grade the comprehensive examination for technical correctness, completeness and clarity of expression. After two unsuccessful attempts, the student may not take the examination again without specific, written permission from the department chair. The chair, at this time, may require the student to successfully complete certain courses before taking the comprehensive examination a third and final time.

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, controls, CAD/CAM and robotics, materials, optimization and bioengineering.

Specific Requirements for the M.S. 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 621. Mechanical Vibrations (3)
- ME 632. Advanced Topics in Automatic Controls (3)
- ME 645. Mechanical Metallurgy of Engineering Materials (3)

Section II. Doctoral Program

Engineering Sciences/Applied Mechanics

(Major Code: 09012)

The cooperating faculties of the Department of Applied Mechanics and Engineering Sciences (AMES) at the University of California, San Diego and the College of Engineering at San Diego State University offer a joint doctoral program in engineering sciences/applied mechanics. The Doctor of Philosophy degree in engineering sciences/applied mechanics 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.

The Ph.D. degree in engineering sciences/applied mechanics is a research degree and represents both attainment of advanced knowledge and demonstration of research skills. It is not awarded solely for the fulfillment of technical requirements such as academic residence and coursework. A typical student with an appropriate bachelor of science degree in engineering may complete the joint program in four to five years of full-time study and research. A student with advanced standing may complete the program in a shorter period of time.

The research interests of the participating faculty members cover a wide range of mechanics including: acoustics, biomechanics, boundary layer separation, boundary layer stability, computational fluid mechanics, experimental fluid mechanics, finite element methods in structural analysis, flow field acoustic interaction, gas physics, hydrology, hypersonic flow field, low speed aerodynamics, soil mechanics, structural fluid interaction, and two phase flows.

At SDSU, the major areas of research at the graduate level and the participating faculty members include:

Acoustics: M. Pierucci

Aerodynamics: J. Katz, A. Plotkin

Bioengineering: J. Pinto, A. Szeto

Combustion: S. Bhattacharjee

Computational Field Mechanics: J. Castillo

Computational Mechanics: J. Katz, V. Ponce, N. Sharabi, K.C. Wang

Engineering Physics: G. Massey

Experimental Mechanics: Z. Bayasi

Fluid Mechanics: J. Katz, N. Nosseir, A. Plotkin, K.C. Wang

Hydrology: H. Chang, V. Ponce

Material Engineering: Z. Bayasi, J. Burns, C. Liang, B. Westermo

Robotics: M. Tarokh

Soil Mechanics: I. Noorany, B. Westermo

Structural Fluid Interactions: M. Pierucci, B. Westermo

Structural Mechanics: Z. Bayasi, C. Lyrintzis, M. Pierucci, N. Sharabi, B. Westermo

Thermal Sciences: S. Bhattacharjee, H. Güven, P. Lowrey

Financial Support

Students admitted to the program will be eligible for teaching associateships and graduate assistantships. It is the policy of SDSU College of Engineering to support doctoral students during their entire tenure as long as they are in good standing and are making satisfactory progress toward their degree and are in residence at one of the two institutions.

For further information, the student should write to the Director of the Engineering Sciences/Applied Mechanics Joint Doctoral Program at the College of Engineering, San Diego State University, San Diego, CA 92182.

Program

Preparation for Admission

Applicants must have an acceptable bachelor's degree or master's degree and must meet the requirements for admission to the Graduate Division of UCSD and SDSU. Students are expected to have engineering degrees in the classical applied mechanics areas (i.e., aerospace, civil, mechanical, engineering science). Students with degrees in one of the allied fields (i.e., physics, mathematics, electrical engineering, and engineering physics) will be required to remove any academic deficiencies by completing a series of courses normally required of the students who have academic degrees in the applied mechanics areas.

APPLICATIONS MUST BE RECEIVED NOT LATER THAN FEBRUARY 15 FOR THE PH.D. PROGRAM IN ENGINEERING SCIENCES/APPLIED MECHANICS.

Application

Students seeking admission to the joint doctoral program in engineering sciences/applied mechanics should write directly to the Doctoral Program Adviser, Dr. M. Pierucci, requesting application materials. A complete application requires that the following information be provided:

The appropriate application forms.

Three letters of recommendation.

An official transcript of academic work completed at all institutions attended. A minimum grade point average of 3.0 in the major field for students with the B.S. degree or 3.4 for students with the M.S. degree.

Acceptable scores on both the qualitative and the quantitative sections of the Graduate Record Examination General Test (GRE).

The applicant must be recommended to the Deans of the Graduate Divisions at SDSU and UCSD by the faculty of the joint doctoral program on each campus. Entry occurs when the student is formally accepted by both graduate deans.

Residency Requirements

The student must spend at least one academic year in full-time residence at each of the two institutions. The definition of such residence must be in accord with the regulations of the Graduate Divisions of UCSD and SDSU.

Advising Committee

When a student is admitted to the joint doctoral program, the chairs of the Department of Applied Mechanics and Engineering Sciences at UCSD and of the Graduate Group in Applied Mechanics at SDSU will appoint a three-member advising committee consisting of at least one member from each institution. It is the responsibility of this committee to develop in consultation with the student a course of study and a plan of preparation for the joint doctoral qualifying examination, which should be taken as soon as possible after the two years of study at the two institutions. Students with advanced standing may be capable of taking the examination earlier. Upon the student's successful completion of the examination the advising committee will recommend to the chairs of the Department of Applied Mechanics and Engineering Sciences and of the Graduate Group in Applied Mechanics the membership of the student's joint doctoral committee, which, upon appointment, will supersede the advising committee and be responsible for the student's program of study and dissertation research. The joint doctoral committee will consist of three members from each institution; one of the three will be from outside of the Department of Applied Mechanics and Engineering Sciences and one outside the Graduate Group in Applied Mechanics.

Course Requirements

The Doctor of Philosophy degree in engineering sciences/applied mechanics is a research degree and represents both attainment of advanced knowledge and demonstration of research skills. Therefore, no specific course requirements for the joint doctoral program exist; however, the joint doctoral program qualifying examination is based on a certain level of competence in the general areas of: (1) fluid mechanics, (2) solid mechanics, and (3) applied mathematics.

Qualifying Examinations

Joint Qualifying Committee

The joint doctoral program qualifying examination is administered by the student's advising committee supplemented, if appropriate, by faculty appointed by the chairs of the Department of Applied Mechanics and Engineering Sciences and the Graduate Group in Applied Mechanics. The examination will be oral, will cover at least four areas selected to ensure appropriate competence in the general area of applied mechanics, and will be at the level and content of the UCSD and SDSU courses. The specific areas will be approved in advance by the chair of the Department of Applied Mechanics and Engineering Sciences and the Graduate Group in Applied Mechanics. One of the areas may be satisfied by completing a series of courses in the area with at least a B grade in each course.

Joint Dissertation Committee

Upon successful completion of the joint doctoral qualifying examination, a joint doctoral committee shall be appointed by the Deans of the Graduate Divisions of UCSD and SDSU upon the recommendation of the chairs of the Department of Applied Mechanics and Engineering Sciences and the Graduate Group in Applied Mechanics. The doctoral committee shall supervise the study and research programs of the student. The chair of the committee may be from either the Graduate Group in Applied Mechanics from SDSU or the Department of Applied Mechanics and Engineering Sciences at UCSD.

Senate Qualifying Examination

The major requirement for the doctorate under the Joint Doctoral program in engineering sciences/applied mechanics is the completion of a dissertation, based on original research, that contributes new knowledge to the fields. The Senate Qualifying Examination consists of a presentation of initial dissertation results and plans for future research. The chair of the joint doctoral committee will determine in consultation with the student when the Senate Qualifying Examination will be held. Approval of a student's dissertation topic by the joint doctoral committee implies that the committee believes that the work will contain the potential for one or more articles publishable in refereed journals.

Dissertation

The joint doctoral committee will administer the final examination, which will consist of the student's presentation and defense of the dissertation, with particular emphasis on the principal findings and areas of future research. The first part of this examination is open to the public; a concluding portion involves appropriate questioning of the student by the committee.

The detailed requirements concerning the preparation of the dissertation, the number of copies, the editorial style, etc., are set forth in the UCSD document entitled "Instructions for the Preparation and Submission of Doctoral Dissertations and Masters' Theses." Acceptance of the dissertation by the University Librarian at UCSD and the Graduate Division at SDSU represents the final step in completion of the student's degree requirements.

Satisfactory Progress

The students admitted to this program are expected to make continuous, satisfactory progress and to remain in good standing at both institutions.

Award of the Degree

The Doctor of Philosophy degree in engineering sciences/applied mechanics 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.

Faculty

The following faculty members of the cooperating institutions participate in the joint doctoral program in engineering sciences/applied mechanics and are available for direction of research and as members of joint doctoral committees.

San Diego State University:

Program Director: M. Pierucci

Committee Members:

J. Katz, C. Lyrintzis, N. Nosseir, M. Pierucci, A. Plotkin, K.C. Wang (Aerospace Engineering and Engineering Mechanics), H. Chang, I. Noorany, V. Ponce, N. Sharabi, B. Westermo (Civil Engineering), G. Massey, A. Szeto (Electrical Engineering and Computer Engineering), S. Bhattacharjee, H. Güven, J. Pinto (Mechanical Engineering), J. Castillo, M. Tarokh (Mathematical Sciences).

Associate Members:

Z. Bayasi, J. Burns, C. Liang, P. Lowrey.

University of California, San Diego:

Program Director: F. Talke

Committee Members (Department of Applied Mechanics and Engineering Sciences):

R.K. Herz, A. Hoger, S. Nemat-Nasser, N. Priestley, S. Sarkar.

Courses Acceptable on Master's Degree Programs in Engineering

UPPER DIVISION COURSE

510. Methods of Analysis (3) I, II

Prerequisite: Engineering 280 with a minimum grade of C.

Selected topics from vector calculus, partial differential equations, and complex analysis, with engineering applications.

Courses Acceptable on Doctoral Degree Program in Engineering

In addition to the courses listed below, a number of other graduate level courses are acceptable for the doctoral degree. For a description of these courses, see individual department listings (e.g., aerospace, civil, or mechanical), and contact the director of the doctoral program.

GRADUATE COURSES

800. Seminar (1) Cr/NC

Prerequisite: Admission to the doctoral program.

Doctoral students are expected to attend a weekly seminar dealing with current topics in different areas of applied mechanics. Course is to be taken every semester.

810. Colloquium in Engineering Sciences (1) Cr/NC/SP

Prerequisite: Admission to the doctoral program.

Discussions on advances in research in engineering science/applied mechanics conducted by SDSU and UCSD faculty.

896. Doctoral Laboratory and Computer Research (1-3) Cr/NC/SP

Prerequisite: Admission to the doctoral program.

Independent research in laboratory and computer settings in the areas of applied mechanics. Content to be determined after consultation with adviser.

897. Doctoral Research (1-3) Cr/NC/SP

Prerequisite: Admission to the doctoral program.

Independent research in general areas of applied mechanics. Content to be determined after consultation with adviser.

898. Doctoral Special Study (1-3) Cr/NC/SP

Prerequisite: Advancement to candidacy.

Individual study leading to study and research required for doctoral dissertation.

899. Doctoral Dissertation (3-6) Cr/NC/SP

Prerequisites: An officially constituted joint doctoral committee and successful completion of Senate Qualifying Examination.

Final research and preparation of dissertation for doctoral degree. Enrollment required during term in which dissertation is approved.

Aerospace Engineering and Engineering Mechanics

In the College of Engineering

OFFICE: Engineering 308
TELEPHONE: (619) 594-6074

Faculty

Joseph Katz, D.Sc., Professor of Aerospace Engineering and Engineering Mechanics, Chair of Department
John F. Conly, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics
Sangiah Nadar Dharmarajan, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics
Balbir S. Narang, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics
Nagy Nosseir, 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
Kuo Chang Wang, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics
Constantinos S. Lyrintzis, Ph.D., Associate Professor of Aerospace Engineering and Engineering Mechanics (Graduate Adviser)

UPPER DIVISION COURSES IN AEROSPACE ENGINEERING

- 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 410.

Static and dynamic analysis of aerospace structures utilizing finite element methods. (Formerly numbered Aerospace Engineering 510.)

530. Composite Structural Analysis (3)

Prerequisites: Engineering 280 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)

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

601. Computational Fluid Mechanics (3)

Prerequisites: Credit or concurrent registration in Aerospace Engineering 302 and Engineering 510.

Finite difference method of solving general fluid mechanics problems. Study of stability, convergence, compatibility, dissipation, and dispersion. A project is required.

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: Aerospace Engineering 302 and Engineering 510.
Fluid kinematics and dynamics. Governing equations in general coordinate systems. Navier-Stokes equations; exact solutions, approximations including boundary layer. Three-dimensional flows. Numerical methods. Vector and tensor notation will be used.

644. Turbulent Flow (3)

Prerequisites: Engineering Mechanics 340 and Engineering 510.
Nature of turbulence based on simple flow observations and a theoretical basis for interpreting and predicting the behaviors of specialized turbulent flow problems.

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.

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 or Project 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.

603. Theory of Vibrations (3)

Prerequisites: Aerospace Engineering 410 and Engineering 510.
Linear and nonlinear periodic phenomena as applied to discrete systems and continuous media with application to physical problems. (Formerly numbered Engineering Mechanics 703.)

611. Vibration of Elastic Solids (3)

Prerequisites: Engineering 510 and Aerospace Engineering 410 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; flexure and torsion.

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.

724. Theory of Plates and Shells (3)

Prerequisite: Engineering Mechanics 621.
Bending and buckling of plates. Membrane and bending theory of shells of revolution. Discontinuity analysis of shells.

727. Theory of Elastic Stability (3)

Prerequisite: Engineering Mechanics 621.
Stability of elastic systems. Differential equations of stability by summation of forces and moments, and by the variational method. Applications.

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.

Civil and Environmental Engineering

OFFICE: Engineering 424

TELEPHONE: (619) 594-6071

In the College of Engineering

Faculty

Janusz C. Supernak, Ph.D., Professor of Civil and Environmental Engineering, Chair of Department
James H. Banks, Ph.D., Professor of Civil and Environmental Engineering
Howard H. Chang, Ph.D., P.E., Professor of Civil and Environmental Engineering
Fang-Hui Chou, Ph.D., P.E., Professor of Civil and Environmental Engineering, Assistant Dean for Student Affairs, College of Engineering (Graduate Adviser)
Govindarajalu Krishnamoorthy, Ph.D., Professor of Civil and Environmental Engineering
Robert D. McGhie, Ph.D., P.E., Professor of Civil and Environmental Engineering
Iraj Noorany, Ph.D., P.E., Professor of Civil and Environmental Engineering
Victor M. Ponce, Ph.D., Professor of Civil and Environmental Engineering
Frank E. Stratton, Ph.D., P.E., Professor of Civil and Environmental Engineering
Bruce D. Westermo, Ph.D., Professor of Civil and Environmental Engineering
M. Nazmi Sharabi, Ph.D., Associate Professor of Civil and Environmental Engineering
M. Ziad Bayasi, Ph.D., P.E., Assistant Professor of Civil and Environmental Engineering

UPPER DIVISION COURSES

521. Structural Analysis II (3) I

Prerequisite: Civil Engineering 321 with minimum grade of C.
Analysis of statically indeterminate structures by virtual work. Advanced treatment of slope deflection, moment distribution. Arch analysis, secondary stresses in trusses. Advanced treatment of influence lines. Introduction to matrix analysis of structures.

525. Design of Steel Structures (3) I, II

Prerequisite: Civil Engineering 321 with 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.
Proof of completion of prerequisite required: Copy of transcript.
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.
Proof of completion of prerequisite required: Copy of transcript.
Water and wastewater. Physical, chemical and biological methods of treatment. Advanced waste treatment processes. Water reclamation.

558. Solid Waste Management (3) II

Prerequisite: Civil Engineering 355 with a grade of C or better.
Proof of completion of prerequisite required: Copy of transcript.
Management of municipal solid waste from a civil engineering perspective, including waste minimization and recycling. Engineered volume reduction through composting, incineration, mechanical compaction, and other methods. Ultimate disposal, landfill design and legislative regulations.

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.
Dynamic disturbances, structures with variable degelastic beams; continuous beams, rigid frames, floor systems. Energy methods in structural dynamics.

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 321 with minimum grade of C.
General procedure, various types of finite elements; analysis and design of isotropic and orthotropic plates and shells, deep beams, and shear walls using finite element technique; use of digital computers for solutions. Application to civil engineering structures.

620. Traffic Engineering (3)

Prerequisite: Consent of instructor.
Traffic characteristics and studies. Control and regulation of street and highway traffic. Parking facilities, mass transportation, traffic engineering administration.

621. Transportation Demand Analysis (3)

Prerequisite: Civil Engineering 481 or Geography 559 or City Planning 625.

Travel demand modeling with emphasis on application to growing metropolitan areas; four-step travel demand forecasting; disaggregate, behavioral, and activity-based approaches; recent methodological developments; transportation-land use interactions.

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)

Prerequisites: Civil Engineering 445 and 530.

Computational methods applied to hydraulics and hydrology. Explicit and implicit schemes for solving hyperbolic problems. Method of characteristics. One- and two-dimensional nonsteady open channel flow simulation.

634. Surface Water Hydrology (3)

Prerequisite: Civil Engineering 445.

Hydrologic systems. Physical hydrology. Kinematic wave theory. Diffusion and dynamic wave theories. Watershed and stream channel routing. Hydrologic simulation.

635. Water Quality Engineering (3)

Prerequisite: Civil Engineering 555 with a grade of C or better.

Proof of completion of prerequisite required: Copy of transcript.

Development of water quality criteria. Survey of current methods of water treatment, wastewater treatment and water renovation. Economic considerations of water quality management.

636. Water Quality Processes (3)

Prerequisite: Civil Engineering 555 with minimum grade of C.

Two lectures and three hours of laboratory.

Theoretical and laboratory study of the chemical and microbiological processes which govern modern water and wastewater treatment.

637. Process Design for Industrial Waste Treatment and Bioremediation (3)

Prerequisite: Civil Engineering 555 with a grade of C or better and consent of instructor.

Process design of physical, chemical, and biological treatment methods for in-plant treatment of specialized hazardous and non-hazardous industrial waste streams. In-situ remediation of problems associated with industrial waste spill and dump sites.

638. Sedimentation and River Engineering (3)

Prerequisite: Civil Engineering 444 with minimum grade of C.

Hydraulics of sediment transport and related erosion and sedimentation problems in natural streams. River mechanics and morphology. Design of alluvial channels. Mathematical modelling of erodible channels.

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 physicochemical behavior of soils, theories of compaction, consolidation, stress distribution, shear strength, settlement analyses, lateral pressures, and bearing capacity of soils.

641. Advanced Foundation Engineering (3)

Prerequisite: Civil Engineering 640.

Advanced theories of soil bearing capacity and stress distribution in soils. Analysis and design of foundations and retaining walls. Shallow foundations, piles, piers and caissons. Design of foundations for dynamic loads. Dewatering and other field problems.

642. Seepage and Earth Dams (3)

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.

644. Soil Dynamics (3)

Prerequisite: Civil Engineering 462 and 463 with a minimum grade of C.

Behavior of soil and soil-structure systems under dynamic loading. Applications include dynamic earth bearing capacity and pressure, soil spring constants for machine foundation design, liquefaction analysis, site response spectra, and seismic stability of slopes. Case histories discussed. Not open to students with credit in Civil Engineering 643.

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. Maximum combined credit of six units of Civil Engineering 596 and 696 applicable to a 30-unit 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. Independent Research (1-3) Cr/NC/SP

Prerequisite: Consent of graduate adviser.

Independent research in civil engineering. Maximum credit three 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 or Project 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

In the College of Engineering

OFFICE: Engineering 409
TELEPHONE: (619) 594-5718

Faculty

Nicholas Panos, M.S.E.E., P.E., Professor of Electrical and Computer Engineering, Chair of Department
Hüseyin 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 Iosupovici, Ph.D., Professor of Electrical and Computer Engineering
Long C. Lee, Ph.D., Professor of Electrical and Computer Engineering
Mao-Shiu Lin, Ph.D., Professor of Electrical and Computer Engineering
Leonard R. Marino, Ph.D., Professor of Electrical and Computer Engineering
Gail A. Massey, Ph.D., 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
Kadayam S. Thyagarajan, Doct. Eng., Professor of Electrical and Computer Engineering (Graduate Adviser)
Greg W. Bailey, Ed.D., Associate 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
Patrick A.D. Powell, Ph.D., Associate Professor of Electrical and Computer Engineering

UPPER DIVISION COURSES

NOTE: Prerequisites will be enforced in all 500-level courses. A copy of an official transcript will be accepted as proof. For corequisites, an enrollment confirmation form will be accepted.

502. Electronic Devices for Rehabilitation (3)

Two lectures and three hours of laboratory.

Prerequisite: Electrical Engineering 303 or 330.

Recent developments in electronic assistive devices and micro-computers for persons with various disabilities; assessment of disabled persons for suitable technological assistive devices.

520. Feedback Control Systems (3) I

Prerequisite: Electrical Engineering 410. Recommended: Electrical Engineering 420.

Analysis of regulatory systems including servomechanisms by the Laplace transform method. System performance and stability; Nyquist, Bode, and root-locus diagrams; elementary synthesis techniques. Practical components and examples of typical designs.

530. Analog Integrated Circuit Design (3) I, II

Prerequisite: Electrical Engineering 430 with minimum grade of C-.

Advanced treatment of transistor pairs, device mismatches, differential amplifiers, current mirrors, active loads, level shifting, and output stages. Parasitic and distributed device parameters. Economics of IC fabrication and impact on design.

534. Solid-State Devices (3)

Prerequisite: Electrical Engineering 434.

Conduction theory of solids. Characteristics of tunnel, backward, breakdown, multilayer and varactor diodes; silicon controlled rectifiers and switches, unijunction transistors, hot electron devices. Lasers and laser applications.

539. Instrumentation Circuits I (3)

Prerequisite: Electrical Engineering 430.

Design and analysis of hybrid analog/digital electronic sub-systems incorporated into modern instrument design. Emphasis on operational amplifier based circuit design and analog-to-digital and digital-to-analog conversion processes.

540. Microwave Devices and Systems (3)

Prerequisite: Electrical Engineering 340. Recommended: Engineering 510.

Applications of Maxwell's equations to wave propagation. Microwave network parameters; guided wave transmission and reflection. Design of filters, couplers, power dividers and amplifiers. Applications in radar and telecommunications systems.

540L. Microwave Measurements Laboratory (1)

Three hours of laboratory.

Prerequisites: Credit or concurrent registration in Electrical Engineering 430L and 540.

Experimental study of microwave generation including klystrons, Gunn and IMPATT oscillators. TWT and microwave transistor amplifiers. Microwave modulation and detection. Microwave transmission and antennas.

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: Electrical Engineering 410.

Random signals, correlation functions, power spectral densities, the Gaussian process, narrow band processes. Applications to communication systems.

556. Digital Signal Processing (3)

Prerequisite: Electrical Engineering 410 or Physics 516.

Digital signal processing. Discrete-time signals, transform techniques, and digital filters. Design of FIR and IIR filters, FFTs, and finite length effects on digital systems.

558. Communication Systems II (3) II

Prerequisite: Electrical Engineering 458.

Performance of analog and digital communication systems. Effects of noise and spectral characteristics.

558L. Communications and Digital Signal Processing Laboratory (1)

Prerequisite: Electrical Engineering 558.

Experiments in modulation techniques, effects of noise on system performance, digital filters, and signal processing. (Formerly numbered Electrical Engineering 554L.)

560. Computer and Data Networks (3)

Two lectures and one hour of laboratory.

Prerequisites: Electrical Engineering 371 and 410.

Wide area and local area networks. Multi-layered protocol models, telephone systems, modems, and network applications.

572. VLSI Circuit Design (3) I

Prerequisites: Electrical Engineering 330 and 371.

Design of digital integrated circuits based on CMOS technology; characterization of field effect transistors, transistor level design and simulation of logic gates and subsystems; chip layout, design rules, introduction to processing; ALU architecture. (Formerly numbered Electrical Engineering 578.)

580. Modern Power Systems I (3) I

Prerequisites: Engineering 280, Electrical Engineering 310 and 380.

Modern power system elements; calculation of load flow, fault currents, and system stability.

581. Modern Power Systems II (3) II

Prerequisite: Electrical Engineering 580.

Transient response of modern power system elements; positive, negative and zero sequence impedance; subharmonic effects.

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 nine units for any combination of Electrical Engineering 496 and 596 applicable to a bachelor's degree. Maximum combined credit of six units of Electrical Engineering 596 and 696 applicable to a 30-unit master'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. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

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 power amplifiers including varactor multipliers.

642. Optical Communications (3)

Prerequisite: Electrical Engineering 541 or 546.

Advanced topics of interest in electro-optical communications, including lasers, background light sources, modulators, receivers, optical fiber and atmospheric channels, and adaptive techniques.

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. Acousto-optic and electro-optic processing devices and their applications.

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.

650. Modern Communication Theory I (3)

Prerequisite: Electrical Engineering 553 or 558.

Probability theory, random variables, random processes, Gaussian process, random signals through linear systems, noise considerations, optimum receiver design, applications to digital and wave-form communication.

652. Principles and Applications of Information Theory (3)

Prerequisite: Electrical Engineering 650.

Measure of information; digital communication systems, Shannon theorems, channel coding for applications in interference, noise combatting and jamming; source encoding for data compression. Multi-channel and multi-user information theory with applications to diversity, multipath and other environments.

653. Coding Theory (3)

Prerequisite: Electrical Engineering 650.

The theory of coding to combat noise over communication channels. Redundancy added to messages to assure arbitrarily small error rates at a given information rate. Discussion of channels and capacity. Block codes, cyclic codes, BCH codes, convolutional code.

657. Digital Image Processing (3)

Prerequisite: Electrical Engineering 556.

Theory of two-dimensional signals and systems, image transforms, image enhancement, restoration and compression, image analysis and computer vision. (Formerly numbered Electrical Engineering 557.)

658. Advanced Applications of Digital Signal Processing (3)

Prerequisite: Electrical Engineering 556 or 657.

Concepts of spectral analysis. Applications of DSP to speech encoding. Image coding, fast algorithms applied to speech, image, radar, sonar and geophysical signal processing.

672. VLSI System Design (3)

Prerequisite: Electrical Engineering 572.

Design of microprocessor data paths and controllers, memory management, pipelines, multipliers, Risc and multiprocessor systems and applications. (Formerly numbered Electrical Engineering 579.)

675. Advanced Microprocessors (3)

Prerequisite: Electrical Engineering 475.

Program development, circuit design, direct-memory access, multi-processing, co-processing, and standardized bus design for a 32-bit microprocessor.

676. Fault Tolerant Computing (3)

Prerequisite: Electrical Engineering 470.

Redundancy in computer design. Reliability modelling for digital systems. State-of-the-art in fault tolerant computers. Testing and diagnostics of digital systems. Designing for testability.

677. Topics in Logic Design (3) II

Prerequisite: Electrical Engineering 570.

Review of current technical periodic literature in logic design and digital systems. Stress on specialized synthesis techniques and recent theoretical developments.

678. Advanced Computer Design (3)

Prerequisite: Electrical Engineering 475.

Design principles for high performance computers. State-of-the-art in parallel computer systems, including pipelined computers, array processors and multiprocessor systems.

679. Real-Time Software Engineering (3)

Prerequisite: Electrical Engineering 675.

Principles of real-time programming and software engineering for microprocessor systems. Concurrent programming and multitasking. Structured programming. Software validation. Team programming projects.

705. Seminar in Communications Systems (1-3)

Prerequisite: Electrical Engineering 650.

An intensive study in communication theory and systems. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. (Formerly numbered Electrical Engineering 605.)

706. Seminar in Computer Engineering (1-3)

Prerequisite: Consent of instructor.

Intensive study in computer engineering topics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. (Formerly numbered Electrical Engineering 606.)

797. Research (1-3) Cr/NC/SP

Prerequisite: Consent of department chair.

Research in engineering. Maximum credit six units applicable to a master's degree.

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

Prerequisite: Consent of department chair.

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 or Project 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.

Mechanical Engineering

In the College of Engineering

OFFICE: Engineering 323M
TELEPHONE: (619) 594-6067

Faculty

John G. Pinto, Ph.D., Professor of Mechanical Engineering, Chair of Department (Graduate Adviser)
George T. Craig, Ph.D., Professor of Mechanical Engineering
Halil M. Güven, Ph.D., Professor of Mechanical Engineering
Nihad A. Hussain, Ph.D., Professor of Mechanical Engineering, Associate Dean of the College of Engineering
Basil Ohnysty, M.S., P.E., Professor of Mechanical Engineering
Subrata Bhattacharjee, Ph.D., Associate Professor of Mechanical Engineering
D. Preston Lowrey, III, Ph.D., Associate Professor of Mechanical Engineering
Larry D. Thompson, Ph.D., Associate Professor of Mechanical Engineering
James S. Burns, Ph.D., Assistant Professor of Mechanical Engineering
Chen Liang, Ph.D., Assistant Professor of Mechanical Engineering

UPPER DIVISION COURSES

NOTE: Proof of completion of prerequisites required for all Mechanical Engineering 300-, 400-, and 500-level courses: Copy of transcript. In addition, Mechanical Engineering 390, 450, 490A, and 530 require evidence of concurrent registration in appropriate courses.

510. Advanced Machine Design (3) I, II

Prerequisites: Mechanical Engineering 314 and 340.

Application of advanced mechanics of materials to the design and analysis of mechanical elements. Introduction to probabilistic design and to finite element methods and applications. Design projects involve extensive use of finite element programs.

512. Simulation of Engineering Systems (3) I, II

Two lectures and three hours of laboratory.

Prerequisites: Mechanical Engineering 314 and 395.

Modeling, simulation, analysis, and design of mechanical engineering dynamics, vibration, electromechanical systems, heat transfer, thermodynamics and control systems. Introduction to virtual instrumentation using software such as LABVIEW.

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.

530. Automatic Control Systems (3)

Prerequisites: Engineering 280 with a grade of C or better, 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 314 and 340.

Fundamentals of ceramics, polymers, and composite materials. Materials design and selection. Statistical methods of brittle materials design, appropriate for ceramic materials, and rheological modeling of polymeric materials. Stress and strain analysis using classical lamination theory of multi-ply composite laminates.

542. Manufacturing with Non-Metallic Materials (3)

Prerequisites: Mechanical Engineering 340 and Engineering 280 with a grade of C or better.

Engineering polymers and composites, processes, and manufacturing techniques. Polymer flow in extrusion, compression molding, RTM, and calendaring. Hands-on fabrication and test exercises included along with a capstone manufacturing project.

544. Advanced Manufacturing Processes (3)

Prerequisites: Mechanical Engineering 195, 314, 340, 350; and Engineering 280 with a grade of C or better.

Technical and business aspects of contemporary and emerging manufacturing. Emphasis on ethical and sustainable engineering in a global business setting. Includes TQM, SPC, cost modeling and ergonomics. Net-shape and non-net-shape manufacturing and mechanics.

546. Computer Aided Manufacturing (3)

Prerequisites: Mechanical Engineering 195, 314, 340; Engineering 120 and 280, both with a grade of C or better.

Computer controlled manufacturing and assembly techniques and devices. Databases and special languages. Agile manufacturing software programs and technologies.

570. Thermal Systems Analysis and Design (3)

Prerequisite: Mechanical Engineering 470.

Analysis, design, and optimization of thermal systems using microcomputers. Modeling 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)

Prerequisite: Mechanical Engineering 350.

Principles of physics and chemistry applied to design and performance analysis of a broad spectrum of direct and alternative energy systems. Solar photovoltaics, passive and active solar energy conversion, thermoelectrics, thermionics, magnetohydrodynamics, nuclear fusion, wind and wave energy, and fuel cells.

582. Heating, Ventilating, and Air-Conditioning (3)

Prerequisite: Mechanical Engineering 470.

Fundamentals of air conditioning processes, psychrometrics, and

building cooling load calculations. Design and analysis of HVAC systems. Equipment selection. Design codes and standards. Computerized cooling load calculations.

586. Solar Energy Conversion (3)

Prerequisites: Engineering Mechanics 340, Mechanical Engineering 450 and 470.

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.

Application of engineering methodologies for quantitative understanding of biological/physiological phenomena. Continuum mechanics principles. The cardiovascular system and its components viewed from a mechanistic standpoint.

596. Advanced Mechanical Engineering Topics (1-3) I, II

Prerequisite: Consent of instructor. **Proof of completion of prerequisite required:** Copy of transcript.

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 280 with a grade of C or better 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.

Classical optimization techniques, digital computer methods of optimization, design decision theory, reliability in design.

621. Mechanical Vibrations (3)

Prerequisites: Mechanical Engineering 512, 520 and Engineering 510.

Topics in vibration relating to mechanical design such as nonlinear 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 sample data systems. State space analysis of multivariable systems, optimal control systems.

Prerequisite: Mechanical Engineering 510.

Behavior of materials in mechanical design. Analysis, prediction and prevention of failure.

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.

645. Mechanical Behavior of Engineering Materials (3)

Prerequisites: Mechanical Engineering 314, 340, and 350.

Elastic and plastic deformation of monolithic engineering materials and composites. Dislocation theory and plasticity of crystalline solids. Linear elastic and elastic-plastic fracture mechanics. Failure analysis of engineering components. Design optimization based on materials and service environment variables.

651. Advanced Thermodynamics (3)

Prerequisites: Engineering 280 with a grade of C or better and Mechanical Engineering 450.

Advanced concepts of macroscopic thermodynamics are developed including entropy generation, irreversibility, effectiveness, availability, and chemical availability of fuels. Concepts applied to power and refrigeration cycles using computer software.

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 propulsive duct 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 and Diffusion Mass Transfer (3)

Prerequisites: Mechanical Engineering 470 and Engineering 510.

Conduction heat transfer analysis of multi-dimensional and transient processes using both classical analysis and numerical methods. Analogous transport problems involving mass transfer by diffusion.

673. Convection Heat Transfer (3)

Prerequisites: Mechanical Engineering 470 and Engineering 510. Recommended: Concurrent registration in Mechanical Engineering 663.

Convection heat transfer processes under laminar and turbulent conditions. Mass transfer. Scaling arguments, analytical and numerical modeling.

675. Radiation Heat Transfer (3)

Prerequisites: Mechanical Engineering 470 and Engineering 510.

Radiation heat transfer processes. Radiative properties of surfaces and gases. Absorption, emission, and scattering phenomena. Numerical modeling.

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.

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.

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.

final approval.

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

Prerequisite: Prior registration in Thesis or Project 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

English and Comparative Literature

In the College of Arts and Letters

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Faculty

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James L. Wheeler, Ph.D., Associate Professor of English and Comparative Literature
E. Jane Robinett, Ph.D., Assistant Professor of English and Comparative Literature
Jeanette Shumaker, Ph.D., Assistant Professor of English

Associateships and Scholarships

Graduate teaching associateships in English are available to a limited number of qualified students. Application blanks and additional information may be secured from the graduate director.

General Information

The Department of English and Comparative Literature offers graduate study leading to a Master of Arts in English and the Master of Fine Arts in creative writing. The M.A. student can choose one of four areas of specialization: American literature, British literature, comparative literature, or rhetoric and writing. The M.A. is a 30-unit degree program particularly well suited for students who anticipate further graduate work in a literature or rhetoric Ph.D. program or who intend to teach English in a community college or a secondary school (after obtaining a credential). The M.F.A. in creative writing is a 54-unit program which offers study in poetry or fiction with a balance between studio and academic, traditional and experimental, commercial and aesthetic approaches. The program has two stages – graduate seminars followed by intensive study with one or more professors in tutorials and thesis preparation. The M.F.A. is a professional program intended 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 offers a wide range of courses and approaches to the study of literature and writing, many of which are outlined in English 600, Introduction to Graduate Study, required of all entering M.A. students. Faculty publications in literature and rhetoric are similarly diverse. They include major literary biographies, historical studies, critical analysis from various current perspectives, reviews of and interviews with contemporary writers, as well as a broad spectrum of original poetry and fiction. The department also sponsors the literary periodicals *Fiction International* and *The Pacific Review*.

Admission to Graduate Study

Students will be admitted in both the fall and spring semesters. Submit applications by October 1 for the spring and by April 1 for the fall.

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 two categories:

1. Classified Graduate Standing

To be considered for admission, students must meet the following minimal requirements:

- a. 24 units of upper division work in English. (Students choosing the comparative literature specialization may substitute

foreign language literature or comparative literature courses.)

- b. 2.75 overall on a 4.0 Grade Point Scale.
 - c. 3.0 grade point average in the English major. (Students choosing the comparative literature specialization in either foreign language literature or comparative literature courses must possess a 3.0 grade point average.)
 - d. 1050 on the GRE General Test (combined verbal and quantitative or analytical scores, minimum 550 verbal).
2. Conditional Classified Graduate Standing
- a. Conditional acceptance will be considered for a candidate who is below requirements in one of the above. A student may be granted conditional acceptance if there is a deficiency in any of the above requirements. A student accepted conditionally must achieve an average of 3.25 in nine units of English or comparative literature courses with no grade less than B– before proceeding to further study and is limited to 12 units. Any units taken above this quota will not count toward the 30 units for the master’s degree in English.
 - b. English major unit deficiencies. Students who lack 24 units of credit in upper division courses in English or in foreign language literature or comparative literature courses will be considered for conditional standing if they meet the requirements of 2.75 overall and 1000 on the GRE General Test (combined verbal and quantitative). After the completion of 24 units for the undergraduate major, students will be considered for classified graduate standing if they meet the other requirements. Students choosing a comparative literature specialization may substitute 24 units of upper division coursework in foreign language literature or comparative literature courses for part of this requirement.

Applicants are required to submit a 750-1000 word statement of purpose with their application, along with three letters of recommendation.

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 one three-unit 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 adviser if the chosen language is not one taught in a department at San Diego State University.

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 the department’s director of graduate studies, which includes a major consisting of 30 units, with at least 21 units of 600- and 700-numbered courses. The major includes a specialization in one of four program areas: American literature, British literature, comparative literature, or rhetoric and writing. Students

specializing in literature may choose Plan A (thesis) or Plan B (oral and written examination). Students specializing in rhetoric and writing may only select the thesis option (Plan A).

Specialization in American Literature

Core Courses (9 units):

- English 600 Introduction to Graduate Study (3)
- English 601 Literary Study in a Multicultural World (3)
- English 602 Literary Theory and Critical Practice (3)

American Literature Research Focus. With prior approval by the graduate adviser, a student will select nine units from the following:

- English 604A American Literary Period or Movement (3)
- English 606A American Literary Type (3)
- English 625 American Literature (3) or
- English 700 Seminar: A Major Author or Authors (3)
- English 725 Seminar: Issues in American Literature (3)

(With the consent of the graduate adviser, English 798, with appropriate content, may be substituted for **one** of the above courses.)

Electives: Diversification in Literary and Writing Research.

With the approval of the graduate adviser, nine units selected from other English and comparative literature departmental graduate offerings. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

Culminating Experience:

- Plan A: (Thesis or Project) – 799A (3 units)
- Plan B: (Comprehensive Examination) – Additional 3 units of 700-level coursework in English.

Specialization in British Literature

Core Courses (9 units):

- English 600 Introduction to Graduate Study (3)
- English 601 Literary Study in a Multicultural World (3)
- English 602 Literary Theory and Critical Practice (3)

British Literature Research Focus. With prior approval by the graduate adviser, a student will select nine units from the following:

- English 604B British Literary Period or Movement (3)
- English 606B British Literary Type (3)
- English 624 British Literature (3)
- English 700 Seminar: A Major Author or Authors (3)
- English 724 Seminar: Issues in British Literature (3)

(With the consent of the graduate adviser, English 798, with appropriate content, may be substituted for **one** of the above courses.)

Electives: Diversification in Literary and Writing Research.

With the approval of the graduate adviser, nine units selected from other English and Comparative Literature departmental graduate offerings. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

- Plan A: (Thesis or Project) – 799A (3 units)
Plan B: (Comprehensive Examination) – Additional
3 units of 700-level coursework in English.

Specialization in Comparative Literature

Core Courses (9 units):

- English 600 Introduction to Graduate Study (3)
English 601 Literary Study in a Multicultural World (3)
English 602 Literary Theory and Critical Practice (3)

Comparative Literature Research Focus. With prior approval by the graduate adviser, a student will select nine units from the following:

Three units acceptable for graduate credit, in a foreign language literature read in the original language.

Six units from the following:

- English 604C Comparative Literature Literary Period or Movement (3)
English 606C Comparative Literature Literary Type (3)
English 626 Comparative Literature (3)
English 700 Seminar: A Major Author or Authors (3)
English 726 Seminar: Issues in Comparative Literature (3)

(With the consent of the graduate adviser, English 798, with appropriate content, may be substituted for **one** of the above courses.)

Electives: Diversification in Literary and Writing Research.

With the approval of the graduate adviser, nine units selected from other English and comparative literature departmental graduate offerings. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

Culminating Experience:

- Plan A: (Thesis or Project) – 799A (3 units)
Plan B: (Comprehensive Examination) – Additional 3 units of
700-level coursework in English.

Specialization in Rhetoric and Writing

Core Courses (9 units):

- English 600 Introduction to Graduate Study (3)
English 601 Literary Study in a Multicultural World (3)
English 602 Literary Theory and Critical Practice (3)

Rhetoric and Writing Research Focus (9 units):

- Rhetoric and Writing Studies 741 Seminar in Classical Rhetoric and Composition (3)
Rhetoric and Writing Studies 742 Seminar in Modern Rhetoric and Composition (3)

Three units selected from:

- Rhetoric and Writing Studies 744 Seminar: Issues in Rhetorical Theory and Practice (3)
Rhetoric and Writing Studies 745 Advanced Seminar: Research Methods in Rhetoric and Writing (3)

Electives: Diversification in Literary and Writing Research.

With the approval of the graduate adviser, nine units selected from other English and comparative literature departmental graduate offerings. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

Culminating Experience:

- Plan A: (Thesis or Project) – 799A (3 units)

Master of Fine Arts Degree in Creative Writing

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 FEBRUARY 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.

1. The applicant must submit a sample of creative work (15 poems or 30 pages of prose) and three letters of recommendation, to enable the creative writing faculty to assess the candidate's suitability to pursue an M.F.A. in creative writing. The sample of creative writing 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 undergraduate grade point average in the major, and a 3.5 average in those courses considered prerequisite for the M.F.A. focus the student elects. The applicant should send all transcript information directly to the Office of Admissions and Records, San Diego State University.
3. If deficient, the applicant must complete undergraduate requirements commensurate with the proposed focus in the M.F.A. program.
4. The applicant normally must achieve a minimum score of 1050 on the Graduate Record Examination, with a minimum of 550 on the verbal section. The results of the GRE should be sent directly to the Office of Admissions and Records, San Diego State University.

Students who submit especially compelling samples of creative work, but who have not met certain criteria or who demonstrate deficiencies in undergraduate preparation or basic skill development may be granted conditional classified admission to the program. The graduate coordinator shall specify the conditions for such admission with the proviso that any remedial coursework assigned must be completed with a minimum grade point average of 3.0 and no grade less than a B-

A student holding an M.A. degree in English with a specialization in creative writing from San Diego State University, or any other acceptable accredited institution of higher learning, must formally apply for admission to the M.F.A. program. Applicants holding an M.A. or pursuing an M.F.A. at an acceptable accredited institution may transfer up to 18 units upon review and recommendation by the creative writing faculty in the area of focus, the graduate coordinator of the English Department, and the approval of the Dean of the Graduate Division and Research. Students unable to satisfy the requirements for the M.F.A. degree will not automatically be considered for an M.A. degree.

Students already accepted into the M.F.A. program at San Diego State University who request a change of focus (poetry or fiction) at a later date will be required to reapply to the creative writing committee.

Advancement 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. degree must have completed 30 units within their official program of study, including transfer credit, with a minimum grade-point average of 3.25 and have no grade less than B-. Students will be permitted to repeat only one course to achieve these levels.

In addition, the department graduate committee must have recommended appointment of a thesis adviser from the student's area of focus (poetry, fiction) and the creative writing committee must have approved a thesis topic. Applicants for advancement should submit a portfolio of their creative work to the creative writing committee for a recommendation for advancement. Aspects to be reviewed include artistic achievement, ability to function in situations that writers and teachers usually encounter, and demonstration of skills in the focus area.

After advancement to candidacy, a student must enroll in and complete a minimum of 24 units from the official program to include English 789, 797, and 799A.

Specific Requirements for the Master of Fine Arts Degree in Creative Writing

(Major Code: 15071)

In addition to meeting the requirements for classified graduate standing, candidates for the M.F.A. in creative writing must complete a 54-unit graduate program, 39 of which must be in courses numbered 600 and above as follows:

1. Core Requirements.

English 689 Advanced Tutorial in Creative Writing (3)
This course must be taken prior to advancement to candidacy.
English 789 Directed Writing for M.F.A. Students (3)
This core course must be taken after advancement to candidacy.

2. Creative Writing Research Focus.

Student to select one 18-unit research focus as follows:

A. Poetry

English 680 Seminar: Poetry Writing (6)
English 780 M.F.A. Seminar: Poetry (6)
Six units of electives in another creative writing research focus with the approval of the M.F.A. adviser.

B. Fiction

English 681 Seminar: Fiction Writing (6) and six units to be selected from
English 781 M.F.A. Seminar: Fiction (3-6)
English 783 M.F.A. Seminar: Novel (3-6)
Six units of electives in another creative writing research focus with the approval of the M.F.A. adviser.

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 M.F.A. adviser.

C. Six units selected from the following:

English 700 Seminar: A Major Author or Authors (3)
English 724 Seminar: Issues in British Literature (3)
English 725 Seminar: Issues in American Literature (3)
English 726 Seminar: Issues in Comparative

Literature (3)

English 730 Seminar: Perspectives in Critical Analysis (3)
Rhetoric and Writing Studies 741 Seminar in Classical Rhetoric and Composition (3)

Rhetoric and Writing Studies 742 Seminar in Modern Rhetoric and Composition (3)

Rhetoric and Writing Studies 744 Seminar: Issues in Rhetorical Theory Practice (3)

Rhetoric and Writing Studies 745 Advanced Seminar: Research Methods in Rhetoric and Writing (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 M.F.A. adviser.

5. **Thesis.** Six units in preparation of the thesis; a book-length creative work.

English 797 Thesis Research (3)

English 799A Thesis (3)

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.

501. Literature for Children (3) I, II

Critical analysis of literature intended for children. Study of texts and illustrations.

502. Adolescence in Literature (3)

Prerequisite: Six units in literature.
Works centrally concerned with an adolescent protagonist. Includes both traditional novels of development (Bildungsroman) and contemporary young adult novels.

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) I, II

Prerequisites: 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:** Test scores or verification of exemption; copy of transcript.

Theory and practice of literary criticism. Emphasis on the work of important critics and on development of student's own critical writing.

510. Teaching Literature (3)

Prerequisite: Six units in 500-level literature courses.
Theory and practice of teaching literature in high schools, colleges, and universities; various critical approaches (such as feminist, new historical deconstruction, reader response) to literature and their implications for teaching and developing teaching styles.

519. American Ethnic Literatures (3) I, II

Prerequisite: Six units in literature.
Works from American ethnic literatures, with emphasis on formerly excluded traditions as African-American, Hispanic and Chicano, Asian-American, and American Indian.

520. African-American Literary Tradition (3)

Prerequisite: Six units in literature.

African-American literature from its eighteenth century beginnings to the present. Early political and social concerns and concomitant utilitarian forms; aesthetic concerns and forms in nineteenth and twentieth centuries.

522. American Literature, 1800-1860 (3) I, II

Representative works by American writers from 1800 to 1860; likely to include works by Emerson, Hawthorne, Melville, Poe, H.B. Stowe, Thoreau, Whitman, others.

523. American Literature, 1860-1920 (3) I, II

Representative works by American writers from 1860 to 1920; likely to include works by Charles Chesnutt, Kate Chopin, Stephen Crane, Emily Dickinson, Henry James, Mark Twain, Edith Wharton, others.

524. American Literature, 1920-1950 (3) I, II

Representative works by American writers from 1920 to 1950; likely to include works by Willa Cather, T.S. Eliot, William Faulkner, F. Scott Fitzgerald, Ernest Hemingway, Zora Neale Hurston, Eugene O'Neill, K.A. Porter, Ezra Pound, John Steinbeck, others.

525. American Literature, 1950 to Present (3) I, II

American writers from 1950 to the present; likely to include works by Edward Albee, Saul Bellow, Allen Ginsberg, Joseph Heller, Maxine Hong Kingston, 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 outcast in American literature, the immigrant experience 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)

Study of a specific literary genre: overview of the genre's development in American literature (the American novel, the American short story, American poetry) or focus on a narrower period (the modern American novel, the contemporary American novel, American autobiographies, others). May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

528. Individual American Authors (3)

Works of a major American author or, if useful comparisons and juxtapositions warrant it, the works of two or three authors: Melville, Twain, James, Faulkner, Steinbeck, Nabokov, Morrison; or Pound and Eliot, Emerson and Thoreau, Vonnegut and Barth, Rich and Levertov, 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 302 to satisfy General Education requirements.

534. Study of Shakespeare (3)

Prerequisite: English 533.

Advanced study of Shakespeare's achievement as a poet and play-

wright.

536. Seventeenth Century Literature (3)

English poetry and prose from 1603 to 1660.

537. Milton (3)

Milton's writings, with emphasis on *Paradise Lost*.

538A-538B. Restoration and Eighteenth Century Literature (3-3)

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)

The development of English fiction from its beginnings to the end of the nineteenth century. Semester I: The eighteenth century. Semester II: The nineteenth century.

541A-541B. English Drama (3-3)

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 1790s to the 1830s by such writers as Wollstonecraft, Blake, Wordsworth, Coleridge, Byron, Shelley, Keats, Austen, and Scott.

543. Victorian Literature (3)

Representative British works from 1837 to 1890 by such writers as Carlyle, Tennyson, Ruskin, Browning, Dickens, Arnold, Eliot, and Pater.

544. British Literature, 1890-1918 (3)

Representative British works from 1890 to 1918 by such writers as Hardy, Gissing, Shaw, Conrad, Yeats, Wells, Forster, Mansfield, and the World War I poets.

547. British Literature, 1918-1950 (3)

Representative British works from 1918 to 1950 by such writers as Joyce, Woolf, Lawrence, T.S. Eliot, Mansfield, Huxley, Bowen, Greene, Auden, Orwell, and Thomas.

548. British Literature, 1950 to Present (3)

Representative British works from 1950 to the present by such writers as Golding, Amis, Murdoch, Lessing, Pinter, Hughes, Fowles, Stoppard, Drabble, and Ishiguro.

549. Topics in English Literature (3)

The works of Spenser, the metaphysical school of poetry, the English satirists, major movements in contemporary English fiction, and the like. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

560A. British Literature, Beginnings Through the Eighteenth Century (3) I, II

Survey of major British writers, with emphasis on reading of complete works. From the beginnings to the neoclassical period. Especially appropriate for those who will teach British literature, and for those proceeding on to graduate study.

560B. British Literature, Romanticism to the Present (3) I, II

Survey of major British writers, with emphasis on reading of complete works. Begins with the Romantic writers. Especially appropriate for those who will teach British literature, and for those proceeding on to graduate study.

570. Techniques of Poetry (3)

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)

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.

573. Techniques of the Novel (3)

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.

576. Literary Editing and Publishing (3)

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)

Prerequisite: English 280 or Television, Film, and New Media 110 or 410 for television, film, and new media majors.

Techniques of screenwriting. Introduction to critical and theoretical literature on screenwriting. Includes a creative writing workshop.

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. Writing of Fiction (3) I, II

Prerequisites: English 280. 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:** Test scores or verification of exemption; copy of transcript.

A creative writing workshop in fiction. Continuation of English 571. Maximum credit six units.

583. Writing Long Narrative (3)

Prerequisite: English 573.

A creative writing workshop in long narrative, especially the novella or novel. Continuation of English 573. Maximum credit six units.

584W. Writing Informal Essays (3) I, II

Prerequisites: English 280. 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:** Test scores or verification of exemption; copy of transcript.

A creative writing workshop in nonfiction, especially the essay as

an art form. Maximum credit six units.

587. Writing the Screenplay (3)

Prerequisite: English 577 or Television, Film, and New Media 110 or 410 for television, film, and new media 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.

596. Selected Topics in English (1-3)

Selected topics in English. May be repeated with new content and approval 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 bachelor's or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**UPPER DIVISION COURSES
IN COMPARATIVE LITERATURE**

Prerequisite for all 500-level courses: Six units in literature or three units in literature and three units in a related area appropriate to the course in question.

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.

530. Topics in Asian Literature (3)

Specialized study of a selected topic in Asian literature. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

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.

562. 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.

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.

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. See Class Schedule for specific content.

577. Major Individual Authors (3)

In-depth study of the works of a major author, such as Sophocles, Dante, Cervantes, Goethe, Dostoyevsky or Proust. May be repeated with new 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.

582. Contemporary Literary Theory (3)

Prerequisite: Six upper division units in literature.

Comparative study of literary theory since Russian formalism and Anglo-American "New Criticism." Emphasis on current developments in Europe and North America.

594. Topics in Literature and the Arts (3)

Prerequisite: Six upper division units in literature or any of the other arts.

Comparative study of literature and other arts such as painting, sculpture, architecture, music, dance, and film. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to the M.F.A. degree in creative writing.

595. Literature and Aesthetics (3)

Prerequisite: Six upper division units in literature or any of the other arts.

Theoretical and experiential investigation of relationships between literature 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.

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 and expository writing, with attention to basic reference works, bibliographical techniques, analytical strategies, scholarly frames of reference, and pedagogy. Recommended for first semester graduate students.

601. Literary Study in a Multicultural World (3)

Prerequisite: Credit or concurrent registration in English 600.

Relationship of literature to gender, race, class, and nationality. Changing conceptions of literary canons. Exploration, through literary texts, of values in literature and the constituents of literary value.

602. Literary Theory and Critical Practice (3)

Prerequisite: Credit or concurrent registration in English 600.

Major issues in the history of literary criticism as well as contemporary approaches. Study of criticism and theory accompanied by writing practicum. Students will write in several critical modes and build graduate level proficiency in analyzing literary issues. Prerequisite to 700-level seminars.

604. A Literary Period or Movement (3)

Prerequisites: An appropriate upper division or graduate level background course; credit or concurrent registration in English 600.

Advanced study, through its literature, of a literary period such as the Renaissance, or a movement such as American modernism. May be repeated with new content. Maximum credit six units.

A. American Literary Period or Movement

B. British Literary Period or Movement

C. Comparative Literature Literary Period or Movement

606. A Literary Type (3)

Prerequisite: Credit or concurrent registration in English 600.

Advanced study of a specific literary genre, such as the novel, tragic drama, lyric poetry, the personal essay, autobiography. May be repeated with new content. Maximum credit six units.

A. American Literary Type

B. British Literary Type

C. Comparative Literature Literary Type

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.

626. Comparative Literature (3)

Prerequisite: Twelve upper division units in English, comparative literature, or a foreign language literature.

Comparative approaches to literature: study of a theme, geographical region, external relationship, or of selected authors. May be repeated with new content. Maximum credit six units.

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 M.F.A. 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 M.F.A. degree in creative writing.

680. Seminar: 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.

681. Seminar: Fiction Writing (3)

Prerequisites: English 581W and at least 12 units in upper division and graduate English courses. Strongly recommended: English 571, 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.

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.

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.

700. Seminar: A Major Author or Authors (3)

Prerequisites: English 600 and 602.

Critical study of a major author or authors such as Shakespeare, Emily Dickinson, Charles Dickens, Virginia Woolf, Edith Wharton, Marcel Proust, and others. May be repeated with new content. Maximum credit six units.

724. Seminar: Issues in British Literature (3)

Prerequisites: English 600 and 602.

Advanced study of issues within the development of the novel in Great Britain colonial literatures in English, the British lyrical tradition and others. May be repeated with new content. Maximum credit six units.

725. Seminar: Issues in American Literature (3)

Prerequisites: English 600 and 602.

Advanced study of such issues in regionalism, ethnicity, the urban experience, gender, the political novel in American literature. May be repeated with new content. Maximum credit six units.

726. Seminar: Issues in Comparative Literature (3)

Prerequisites: At least two courses selected from English 600, 601, and 602.

Advanced study of an issue such as translation, negritude, poetic language, or literature and censorship. May be repeated with new content. Maximum credit six units.

730. Seminar: Perspectives in Critical Analysis (3)

Prerequisites: English 600 and 602.

Advanced study of analytical perspectives such as contemporary literary theory, feminist poetics, canon and exclusion, literature and other arts, literature and other disciplines.

780. M.F.A. Seminar: Poetry (3)

Prerequisite: English 680; open only to students admitted to M.F.A. in creative writing.

Advanced poetry writing for M.F.A. 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 M.F.A. degree in creative writing.

781. M.F.A. Seminar: Fiction (3)

Prerequisite: English 681; open only to students admitted to M.F.A. in creative writing.

Fiction writing for M.F.A. candidates. Emphasis on forms of short fiction. May be repeated with new content. Maximum credit six units applicable to the M.F.A. degree in creative writing.

783. M.F.A. Seminar: Novel (3)

Prerequisites: English 583 and 681; open only to students admitted to the M.F.A. in creative writing.

Novel writing for M.F.A. 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 M.F.A. in creative writing.

789. Directed Writing for M.F.A. Students (3)

Prerequisite: English 780, or 781, or 783 and advancement to candidacy for the M.F.A. in creative writing.

Directed, individual practice in a particular genre or problem in writing with emphasis on critical evaluations and revision within problem areas of the students' work.

796. Internship (3) Cr/NC

Prerequisites: Advancement to candidacy for the Masters of Arts degree in English and comparative literature or admission to the Master of Fine Arts program and consent of the graduate adviser and supervising professor.

Work experience with a practicing professional or company in the community, such as working as editorial assistant or teacher intern.

797. Thesis Research (3)

Prerequisite: Advancement to candidacy in the M.F.A. 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

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

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

French

In the College of Arts and Letters

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Faculty

Thomas J. Cox, Ph.D., Professor of French, Chair of Department

Edith J. Benkov, Ph.D., Professor of French

Alvord G. Branan, Ph.D., Professor of French

Laurie D. Edson, Ph.D., Professor of French

James L. Schorr, Ph.D., Professor of French, Graduate Adviser

JoAnne Cornwell, Ph.D., Associate Professor of French

Associateships

Graduate teaching associateships 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.

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, 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; (4) a score of 500 on the verbal section and 450 on the quantitative section of the Graduate Record Examination (GRE) General Test.

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 (minimum GPA 3.6), or Plan B, which includes written and oral examinations 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 French novelists of the twentieth century.

560. Applied French Linguistics (3)

Prerequisites: French 302 and 304.

Phonemics, morphemics, syntax and semantics of present day French. Taught in English.

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 296, 496, 596 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.

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.

761. Seminar in Francophone Literatures (3)

Prerequisite: Eighteen units of upper division French.

Works by noncontinental French authors. Connections among literature, politics, and cultural identity. Critical responses examined in terms of their cultural relativity and relationship to French literary tradition. 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 adviser.

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

In the College of Arts and Letters

OFFICE: Storm Hall 323
TELEPHONE: (619) 594-5437

Faculty

Douglas A. Stow, Ph.D., Professor of Geography, Chair of Department
Edward Aguado, Ph.D., Professor of Geography (M.A. Program Coordinator)
Stuart C. Aitken, Ph.D., Professor of Geography
Janet Franklin, Ph.D., Professor of Geography
Lawrence R. Ford, Ph.D., Professor of Geography
Barbara E. Fredrich, Ph.D., Professor of Geography
Arthur Getis, Ph.D., Professor of Geography, The Stephen and Mary Birch Foundation Chair in Geographical Studies
Ernst C. Griffin, Ph.D., Professor of Geography, Doctoral Program Coordinator
Allen S. Hope, Ph.D., Professor of Geography
Warren A. Johnson, Ph.D., Professor of Geography
David S. McArthur, Ph.D., Professor of Geography
John F. O'Leary, Ph.D., Professor of Geography
Philip R. Pryde, Ph.D., Professor of Geography
Imre E. Quastler, Ph.D., Professor of Geography
Frederick P. Stutz, Ph.D., Professor of Geography
John R. Weeks, Ph.D., Professor of Geography
Richard D. Wright, Ph.D., Professor of Geography
Sergio J. Rey, Ph.D., Assistant Professor of Geography

The Stephen and Mary Birch Foundation Chair in Geographical Studies

The Stephen and Mary Birch Foundation Chair in Geographical Studies was created through the Birch Foundation's grant to the Geography Department to endow a chair and create a Center for Earth Systems Analysis Research. Dr. Arthur Getis, internationally recognized for his expertise in spatial pattern analysis, spatial statistics, urban structure, and spatial modelling, is the occupant of the Chair.

Associateships

Approximately 40 graduate teaching associateships and graduate research associateships 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 associateships or research associateships is March 15 for the Master of Arts degree and February 1 for the Doctor of Philosophy degree. Applications for associateships 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 and Doctor of Philosophy degrees in geography. In addition to the general M.A. pro-

gram, it is possible to pursue a concentration in either resources and 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.

The Doctor of Philosophy degree, offered jointly with the University of California, Santa Barbara, provides advanced training for research and teaching at the highest academic level.

Research and instructional facilities provided by the Department of Geography include an excellent map library, the Stephen and Mary Birch Center for Earth Systems Analysis Research (CESAR), a state-of-the-art image processing/GIS 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.

Section I. Master's Degree Program

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 master's program 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 candidacy, as stated in Part Two of this bulletin. In addition, the student must submit a written thesis proposal to the department and make an oral defense of the approved proposal to the thesis committee.

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. The student may choose from the General Program, the Concentration in Resources and Environmental Quality, or the Concentration

in Transportation.

General Program

The requirements for students electing the general program are as follows:

1. A minimum of 30 units of courses numbered 500 or above as approved by the geography department M.A. advising committee. At least 24 of these units must be from the geography department.
2. A minimum of 18 of the 30 units of coursework must be 600- or 700-level courses.
3. Geography 700 and 701, normally taken during the first two semesters.
4. Completion of Geography 799A (Thesis) under Plan A.

Concentration in Resources and Environmental Quality

The requirements for students electing a concentration in resources and environmental quality are as follows:

1. A minimum of 30 units of which not more than six may be in disciplines other than geography.
2. A minimum of 18 units of 600- and 700-numbered courses, to include Geography 670, 700, 701, 770, 799A, and three units from courses numbered Geography 581-588 or 682-688L.

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 658, 700, 701, 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 730 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.
6. A student should have completed a quantitative methods course prior to initiating the program, or take Geography 585, Quantitative Methods in Geographic Research(3), concurrently.

Section II. Doctoral Program

The cooperating faculties of the Department of Geography at San Diego State University and the University of California, Santa Barbara offer a joint doctoral program in geography. The research interests of the participating faculty members cover a range of geographic problems. The joint doctoral program offers work leading to the Ph.D. in the following systematic areas (Group A) with supporting development of skills in spatial techniques (Group B) as follows:

Systematic Areas – Group A

Human Geography

Spatial behavior
Urban and regional modeling
Comparative urbanization
Urban structure
Social theory

Environmental Geography

Natural resources management and policy

Physical Geography

Biogeography
Physical climatology and hydroclimatology
Coastal processes

Spatial Techniques – Group B

Remote Sensing and Image processing
Geographic Information Systems and Computer
Cartography
Spatial quantitative or qualitative techniques
Social theoretic techniques

Each student's program is designed around one of the areas selected from Group A and at least one of the technique emphases selected from Group B. The main regional foci are problems of Latin America, Western Europe, Australia-New Zealand, the former USSR, the Pacific Rim, Mexico-U.S. borderlands, and arid lands. Students must attain the requisite skills in programming, statistics, mathematics, and foreign language necessary to successfully pursue their research goals.

Admission to Doctoral Study

Applicants for admission to the doctoral program in geography offered jointly by SDSU and UCSB must meet the general requirements for admission to both universities with classified graduate standing as outlined in the respective current catalogs. There are no inflexible requirements for entrance to graduate study in this program, but a strong background in geography or a closely related field is essential. Admission to the program requires acceptance by the graduate deans and by the participating departments at UCSB and SDSU. Applications from outstanding students in other majors are encouraged, but such students should expect to take additional courses during their first year to improve their background. All students entering the program should have completed a lower and upper division statistics course and the appropriate mathematics and computer science courses for the specialty chosen.

Applications must be received by the Department of Geography not later than February 1 for the Ph.D. program.

Application. Students seeking admission to the joint doctoral program in geography should write directly to the Doctoral Program Coordinator, Department of Geography, SDSU, requesting application materials. A complete application requires that the following information be provided:

- The appropriate application form.
- Transcripts of academic work already completed.
- Graduate Record Examination scores.
- Three letters of recommendation.
- An essay describing the applicant's purpose in seeking the Ph.D.

A high undergraduate grade point average, normally 3.25 or higher for the last 60 units taken (90 quarter units), and/or a graduate grade point average of 3.50 or higher are required for admission. A minimum combined score of 1100 on the GRE is expected. Scores on both the verbal and quantitative sections of the GRE should exceed the 50th percentile.

Satisfaction of the minimum requirements at San Diego State University or the Department of Geography does not guarantee admission to the doctoral program.

Specific Requirements

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 UCSB and SDSU. Usually, the first year is spent at SDSU, the second at UCSB, and subsequent years at SDSU.

Advising Committee. Upon admission to the program, the joint doctoral graduate advisers of the two institutions will establish an advising committee for each student. The committee will consist of four faculty members, normally two from each campus, but at least one from UCSB. In consultation with the student, the committee will develop a course of study, including identifying academic deficiencies and recommending remedies for them. The advising committee will be the official advising group for the student until a joint doctoral committee has been chosen and recommended to the Graduate Divisions by the advising committee.

Language Requirement. There is no specific foreign language requirement for this program, but knowledge of a foreign language may be deemed necessary by the advising committee to successfully pursue the student's research goal.

Course Requirements. All students admitted into the joint doctoral program will take common core courses which include: Geography 700 (Seminar in Geographic Research Design) and Geography 701 (Seminar in Development of Geographic Thought). No specified number of courses beyond core courses is required for the doctoral degree. However, students are expected to have a broad understanding of modern geographic principles in addition to a specialist's competence in their own sub-field. In addition, all doctoral students must have computation skills and knowledge of spatial analysis.

Qualifying Examinations

Joint Doctoral Committee. When a doctoral student makes a definitive selection of the systematic area and technique emphasis as well as the general topic of their dissertation research, she/he will select a dissertation supervisor (major professor), who can be from either department but who normally will be a member of the SDSU faculty, and the members of his/her joint doctoral committee. The

joint doctoral committee shall be composed of at least four members (with the rank of Assistant Professor or above), two from the SDSU department and two from the UCSB department. The committee may be augmented as needed by an additional member from outside geography at UCSB or a member of the faculty at SDSU from outside of geography or, when authorized, another university. Chaired by the student's major professor, the joint doctoral committee shall be responsible for evaluating the dissertation proposal, administering and evaluating the qualifying examination, judging the dissertation, and administering and evaluating the dissertation defense.

Qualifying Examinations. The process of qualifying to write a Ph.D. dissertation has three steps. First, the student must take a written qualifying examination that normally consists of three portions devoted to: 1) the student's substantive area, 2) her or his technical field(s) of interest, and 3) general geographic thought and inquiry. Second, the student prepares a dissertation proposal that describes the dissertation topic, summarizes the relevant background literature, and presents a comprehensive research plan for the dissertation. Third, the student's doctoral committee will conduct an oral qualifying examination to ensure that the student possesses the full knowledge and competence required to carry out her or his dissertation research. The doctoral committee will assign a pass or fail grade for each examination. Passing the written examination allows the student to proceed to the preparation of the dissertation proposal. The doctoral committee must conditionally approve the dissertation proposal before the student takes the oral qualifying examination. Passing the oral examination signifies that the doctoral dissertation proposal is approved. A student may repeat each examination once.

Upon satisfactory completion of the oral examination and prescribed coursework, the student must make application to the Graduate Dean at UCSB for advancement to candidacy. Upon payment of the candidacy fee to UCSB, and after approval by the graduate deans of both campuses, students will be notified of their advancement to candidacy by the UCSB Graduate Dean.

Dissertation. Following the successful completion of all prescribed coursework and qualifying examinations, the major remaining requirement for the Ph.D. degree will be the satisfactory completion of a dissertation consisting of original research of publishable quality carried out under the guidance of the major professor. Approval of the completed dissertation by the joint doctoral committee implies that an organized investigation yielding substantial conclusions of interest which expand the frontiers of knowledge and understanding in the discipline has been carried out. Results must be reported in a manner demonstrating the ability of the candidate to effectively prosecute and report independent investigation.

The requirement for completing and filing the dissertation, including the number of copies required, will be decided jointly by the graduate deans and in accordance with regulations of the Graduate Divisions.

Final Examination. The final examination, organized and administered by the joint doctoral committee, shall consist of a dissertation defense, before the joint doctoral committee. Normally, a public lecture will precede this defense.

Award of the Degree. The Doctor of Philosophy degree in geography 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 Geography at SDSU has a number of research and teaching associateships available to support students admitted to the joint doctoral program. All students applying to admission to the joint doctoral program will be considered for financial support.

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

UPPER DIVISION COURSES

504. Coastal and Submarine Physiography (3)

Prerequisites: Geography 101 and Mathematics 121 or 150.

Analysis of marine waves, of their modification in shallow waters, of coastal currents and tides. Interpretation of coastal and submarine relief in relation to environmental processes and their modification by humans. Field trips may be arranged.

505. Geography of Soils (3) II

Prerequisite: Geography 101.

The nature, properties and distribution of soils and their relationships to the influence of climates, landforms, and human activity. 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. Environmental Climatology (3) I

Prerequisites: Geography 103; Mathematics 121 or 150.

Interaction between the atmosphere and earth surface. Solar and thermal radiation, turbulent heat transfer, soil heat transfer. Change in the atmosphere due to natural variations and human activity. Impacts on the environment.

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 and Mathematics 121 or 150.

Hydrologic 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.

545. Arid Lands (3)

Prerequisites: Geography 101 and 370; Biology 100 or 201.

Physical geography and human use of arid lands. Traditional and modern land use systems in context of technological and economic development. Environmental and social impacts of development including desertification.

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.

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. Environmental Perception and Behavioral Geography (3)

Prerequisite: Geography 102.

Contemporary perceptual and behavioral theories and methods in geography. Problems of empirical research and application in the built and natural environments.

570. Environmental Resource Conservation (3)

Prerequisite: Geography 370.

Management of environmental and natural resources. Effective programs and the institutional frameworks in which they occur. (Formerly numbered Geography 569.)

571. Energy Resources and the Environment (3)

Prerequisite: Geography 370. 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) II

Prerequisite: Geography 370.

Problems of maintaining environmental quality in the process of land conversion from rural to urban uses with emphasis on land capability and suitability studies. Field trips may be arranged.

573. Population and the Environment (3)

Prerequisite: Geography 102.

Population distribution, growth, and characteristics as they relate to environmental degradation, both as causes and consequences. Roles of women, sustainable development, carrying capacity, optimum population, and policy initiatives in relationships between population and environment.

- 574. Water Resources (3) I**
Prerequisite: Geography 370.
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.
- 577. Geography of the National Parks (3)**
Prerequisite: Geography 370.
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.
- 581. Cartographic Design (3)**
Two lectures and three hours of laboratory.
Prerequisite: Geography 381.
Computer-assisted map production techniques with emphasis on map design and color use.
- 582. Automated Cartography (3)**
Two lectures and three hours of laboratory.
Prerequisite: Geography 380, 381, or 484.
Computerized methods of graphically presenting and analyzing spatial data; examination of existing mapping software and digital data sources.
- 584. Geographic Information Systems Applications (3) II**
Two lectures and three hours of laboratory.
Prerequisite: Geography 484, 582, or 588.
Conceptualization, completion, and implementation of geographic information systems (GIS) at local, regional, national, and global levels. Spatial analysis and modeling with GIS. GIS in planning, management, and research.
- 585. Quantitative Methods in Geographic Research (3)**
Prerequisite: Geography 385.
Application of statistical techniques to geographic research including simple regression and correlation, multiple regression, classification, factor analysis, and computer applications.
- 586. Qualitative Methods in Geographic Research (3) II**
Prerequisite: Geography 102.
Application of qualitative techniques to geographic research including reflexive survey design and in-depth interviews, non-obtrusive methods, landscape interpretation, textual methods and discourse analysis, feminist criticism, and humanistic and historical materialist perspectives on measurement.
- 588. Intermediate Remote Sensing of Environment (4) II**
Three lectures and three hours of laboratory.
Prerequisites: Geography 385 and 488.
Multispectral remote sensor systems and interpretation of imagery from nonphotographic systems. Computer-assisted image processing. Geographic analysis of selected terrestrial, oceanographic, and atmospheric processes.
- 595. Geographic Internship (3) I, II**
Prerequisites: Six upper division units in geography and consent of instructor.
Students will be assigned to various government agencies and industry and will work under the joint supervision of agency heads and the course instructor. Maximum credit three units.
- 596. Advanced Topics in Geography (1-3)**
Prerequisite: Six upper division units in geography.
Advanced special topics in geography. See Class Schedule for spe-

cific 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 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

- 655. Urban Design and Preservation (3)**
Prerequisite: Geography 555.
Major theories of urban form and aesthetics with emphasis on preservation and rehabilitation.
- 658. Advanced Transportation Geography (3)**
Prerequisites: Geography 385 and 559.
Aggregate and disaggregate models of spatial interaction with emphasis on mobility in the urban context. Analytical behavioral models of movement systems.
- 670. Environmental and Resource Conservation Theory (3)**
Prerequisite: Graduate standing.
Theories and principles involved in natural and environmental resources management.
- 674. Advanced Water Resources (3)**
Prerequisite: Geography 574.
Water resource development, organization and utilization.
- 682. Advanced Automated Cartography (3)**
Prerequisite: Geography 581, 582, or 584.
Computer use for map production and geographic problem solving. Current cartographic research issues and methods.
- 682L. Advanced Automated Cartography Laboratory (1or2)**
Three to six hours of laboratory.
Prerequisite: Concurrent registration in Geography 682.
Use of mapping software and digital cartographic data. Research on improving map displays for geographic analysis and communication.
- 683. Advanced Geographic Information Systems (3)**
Prerequisite: Geography 484.
Geographic information systems in geographic problem solving including data structures, project designs, and vector graphics.
- 683L. Geographic Information Systems Laboratory (1or2) II**
Three to six hours of laboratory.
Prerequisite: Concurrent registration in Geography 683.
Data processing and analysis in geographic information systems. Applications of overlay functions in spatial analysis.
- 685. Advanced Quantitative Methods in Geography (3) I**
Prerequisite: Geography 585.
Statistical techniques and quantitative models applied to spatial problems. Multiple regression, discriminant analysis, factor analysis and spatial modeling.
- 688. Advanced Remote Sensing (3)**
Prerequisite: Geography 588.
Sensor systems, image interpretation and geographic applications in thermal infrared and microwave remote sensing. Principles of digital image processing.
- 688L. Advanced Remote Sensing Laboratory (1 or 2) II**
Two or four hours of laboratory.
Prerequisite: Concurrent registration in Geography 688.
Processing and analysis of remotely sensed data. Laboratory training in sensor systems and digital image-processing methods including

thermal infrared and microwave data analysis.

696. Advanced Special Topics in Geography (3)

Prerequisite: Consent of instructor.

Advanced special topics in geography. See Class Schedule for specific content. May be repeated with new content. Maximum combined credit of six units of 596 and 696 applicable to a graduate degree.

700. Seminar in Geographic Research Design (3)

Prerequisite: Graduate standing.

Definition of spatial problems, hypothesis formulation and testing, selection of appropriate methodology. Development of research proposals, conduct of research, written and oral presentations.

701. Seminar in Development of Geographic Thought (3)

Prerequisite: Graduate standing.

Evolution of concepts concerning the nature, scope, theories, and methodologies of geography.

710. Seminar in Physical Geography (3)

Prerequisite: Six units of upper division or graduate level courses in physical geography.

Intensive study of an aspect of physical geography. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

720. Seminar in Regional Geography (3)

Prerequisite: Six units of upper division or graduate level courses in the topical area under consideration.

Intensive study of a spatial system using the regional content or regionalization methods. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

740. Seminar in Human Geography (3)

Prerequisite: Six units of upper division or graduate level courses in human geography.

Intensive study of a spatial aspect of human geography. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

750. Seminar in Urban Geography (3)

Prerequisite: Six units of upper division or graduate level courses in urban geography.

Intensive study of a spatial aspect of urban geography. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

760. Seminar in Behavioral and Social Geography (3) II

Prerequisite: Six units of upper division or graduate level courses in behavioral or social geography.

Intensive study of a spatial aspect of behavioral or social geography. 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 Environmental and Resource Conservation (3)

Prerequisites: Geography 670 and six units of upper division or graduate level courses in environmental or resource conservation.

Natural and environmental resource conservation. 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 Techniques of Spatial Analysis (3)

Prerequisite: Six units of upper division or graduate level courses in spatial analytic techniques.

Spatial analytic techniques from image processing, remote sensing, geographic information systems, cartography or quantitative methods. 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

Research in one of the fields of geography. 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.

890. Independent Study for Doctoral Examination (1-9)

Prerequisite: Consent of instructor or graduate adviser.

Tutorial with student's major professor in preparation for qualifying examinations. No unit credit allowed toward advanced degree. Maximum credit nine units.

897. Doctoral Research (1-6)

Prerequisite: Admission to the doctoral program.

Independent investigation in the general field of the dissertation. A written proposal must be approved by the joint doctoral advising committee. Maximum credit six units applicable to a doctoral degree.

899. Doctoral Dissertation (1-6)

Prerequisites: Advancement to candidacy and an officially constituted dissertation committee.

Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved. No unit credit allowed toward advanced degree.

Geological Sciences

In the College of Sciences

OFFICE: Chemistry/Geology 205

TELEPHONE: (619) 594-5586

EMAIL: department.office@geology.sdsu.edu

Faculty

Kathe K. Bertine, Ph.D., Professor of Geological Sciences, Chair of Department

Patrick L. Abbott, Ph.D., Professor of Geological Sciences

Richard W. Berry, Ph.D., Professor of Geological Sciences

Steven M. Day, Ph.D., Professor of Geological Sciences, The Rollin and Caroline Eckis Chair in Seismology

Clive E. Dorman, Ph.D., Professor of Geological Sciences

Gary H. Girty, Ph.D., Professor of Geological Sciences (Graduate Adviser)

David Huntley, Ph.D., Professor of Geological Sciences

George R. Jiracek, Ph.D., Professor of Geological Sciences

C. Monte Marshall, Ph.D., Professor of Geological Sciences

Richard H. Miller, Ph.D., Professor of Geological Sciences

Gary L. Peterson, Ph.D., Professor of Geological Sciences

Thomas K. Rockwell, Ph.D., Professor of Geological Sciences

Eric G. Frost, Ph.D., Associate Professor of Geological Sciences

David L. Kimbrough, Ph.D., Associate Professor of Geological Sciences

William J. Wallace, Ph.D., Associate Professor of Geological Sciences and Physics

Kathryn W. Thorbjarnarson, Ph.D., Assistant Professor of Geological Sciences

Barry B. Hanan, Ph.D., Staff Scientist (equivalent rank of full professor)

Adjunct Faculty

Gary J. Axen, Ph.D., Geological Sciences

Ronald Blom, Ph.D., Geological Sciences

Robert Crippen, Ph.D., Geological Sciences

Thomas A. Demere, Ph.D., Geological Sciences

Ruth A. Harris, Ph.D., Geological Sciences

George L. Kennedy, Ph.D., Geological Sciences

Mark Legg, Ph.D., Geological Sciences

Andrew J. Magenheimer, Ph.D., Geological Sciences

Harold W. Magistrale, Ph.D., Geological Sciences

Donn L. Marrin, Ph.D., Geological Sciences

Mario Martinez, Ph.D., Geological Sciences

David Okaya, Ph.D., Geological Sciences

Andres Polit, Ph.D., Geological Sciences

Arthur P. Raiche, Ph.D., Geological Sciences

Lei Shi, Ph.D., Geological Sciences

Patrick R. Vaughan, Ph.D., Geological Sciences

Guang Yu, Ph.D., Geological Sciences

The Rollin and Caroline Eckis Chair in Seismology

A gift from Rollin and Caroline Eckis, combined with matching funds from the Atlantic Richfield Company and contributions from SDSU faculty and staff, established The Rollin and Caroline Eckis Chair in Seismology at SDSU. Rollin Eckis is former president of Richfield Oil Company and vice chairman of the board of Atlantic Richfield Company.

The first appointee to the Chair, Dr. Steven M. Day, conducts research on the mechanics of earthquakes and earthquake hazards.

Associateships

Graduate teaching associateships in geological sciences 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 integrated field and laboratory research. The department is equipped to support research in geophysics, groundwater hydrology, oceanography and geochemistry as well as the classic areas of mineralogy, petrology, structural geology, stratigraphy and paleontology. Laboratories devoted to geochronology, isotopes, clay mineral analysis, soils, paleomagnetism, and whole rock analysis, as well as the Allison Center (paleontology), support the graduate research program. Cooperation with Mexican scientists and institutions facilitates research at an international level.

The San Diego area enjoys a mild climate which permits year round field activity. An interesting and diverse geological environment provides many opportunities for research in the local area. Many graduate students are supported in their work by grants and contracts from government and industry.

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 grade point average of 3.0 in any courses taken as a postbaccalaureate student at San Diego State University.

5. 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. Geological 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. All students are required to complete Geological Sciences 601.

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 514.

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

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 105 and either Biology 100-

100L or 101-101L.

Principles and methods, exemplified by a study of the morphology, classification, habit, and geologic significance of fossil invertebrates.

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. Advanced Field Geology (4 or 6) S

One lecture and three hours of laboratory plus 24 days in the field. For the option with six units: two additional weeks of field or laboratory work. Summer session can be enrolled in during the Spring semester.

Prerequisites: Geological Sciences 308 and 524.

Investigation of individually assigned areas, preparation of geologic maps, geologic sections, and gathering other types of data, e.g., petrologic, geophysical, or paleontologic, as appropriate. Students are responsible for cost of food and transportation.

514. Process Geomorphology (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 305.

Processes shaping and affecting the earth's surface, and application of resultant land forms in interpretation of geologic structure, stratigraphy and neotectonics. (Formerly numbered Geological Sciences 314.)

516. Micropaleontology (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 506.

The morphology, classification and geologic significance of the various microfossils.

520. Ore Deposits (3) I

Prerequisites: Geological Sciences 224 and 305.

Geologic relations, origin, distribution, and economics 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.

530. Geochemistry (2) I

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.

530L. Geochemistry Laboratory (1) I

Prerequisite: Credit or concurrent registration in Geological Sciences 530.

Laboratory methods of analysis for determination of elemental concentrations in waters, sediments, and rocks, as well as x-ray diffraction methods for mineralogy.

532. Applied Hydrogeophysics (3) II

Two lectures and three hours of laboratory.

Prerequisites: Mathematics 150 and 250; two semesters of physics. Recommended: Geological Sciences 330 and 551.

Advanced applications of geophysical methods to hydrological investigations including d.c. resistivity, electromagnetics, radar, seismology, and magnetics.

533. Geophysical Analysis (3)

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 330, Mathematics 252, Physics 197. Recommended: Physics 195L, 196L, 197L.

Analog and digital data collection, processing, modeling and error estimation. Computer-aided examples and field tests from seismics, gravity, magnetics, and electromagnetics including magnetotellurics.

540. Marine Geology (3) I

Prerequisites: Geological Sciences 105, and either Geological Sciences 224, 502, 506, or 514.

Plate tectonic origin and history of the ocean basins. Formation and distribution of sediments in response to biological, chemical, and geological processes.

545. Descriptive Physical Oceanography (3) I

Prerequisites: Mathematics 121 and 122, or 150; Physics 180A or 195.

Physical environment of oceans including heat, water, and salt budgets, physical properties of sea water, sea ice, air-sea relationships, effects of light and sound, distribution of temperature, salinity, density, surface current, deep circulation, water mass formation, instruments and methods of study.

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, ground water flow, slopes stability, seismicity, land subsidence, and 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, sedimentary, volcanic, plutonic, and metamorphic terrains.

552. Field and Laboratory Techniques in Hydrogeology (5)

One lecture and twelve hours of laboratory.

Prerequisites: Geological Sciences 551 and credit or concurrent registration in Geological Sciences 530.

Use and application of common field and laboratory techniques in hydrogeology. Exercises include drilling, coring, and sediment sam-

pling, aquifer testing, unsaturated zone monitoring, fluid level measurement, tracer testing, laboratory measurement of permeability, capillarity, and analysis of inorganic and organic constituents in groundwater.

560. Earthquake Seismology (3)

Two lectures and three hours of laboratory

Prerequisite: Mathematics 252, Physics 197. Recommended: Mathematics 342A.

Theory of seismic wave excitation, propagation, and recording. Methods of seismogram interpretation and analysis. Applications to tectonics and earthquake hazard analysis.

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 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 (1-3)

Refer to Class Schedule for lecture/laboratory 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.

601. Investigations in Earth Science (3)

Prerequisites: Postbaccalaureate standing with B.S. or B.A. in geology or equivalent.

Review of major geologic concepts and processes. Relationships of research to advances in the understanding of modern earth processes and the geologic history of the earth.

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.

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)

Prerequisite: 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 514.

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.

Prerequisite: Geological Sciences 305 and 514.

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 terranes of California and adjacent states. Problem-oriented literature study will integrate structural, stratigraphic, 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.

652. Multiphase Flow (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 551.

Movement of water through the unsaturated zone and nonaqueous phase liquids (NAPL) through subsurface. Topics include vadose zone characterization, monitoring, and modeling; light and dense NAPL movement, monitoring, and remediation.

653. Ground Water Aquifer Testing (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 551.

Theory and practice of conducting and analyzing constant-rate aquifer tests, step-drawdown tests, and slug injection tests. Analysis of results for confined, unconfined, leaky-confined, and fractured aquifers.

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 mineralogy, and the geomagnetic field.

660. Isotope Geology (3)

Two lectures and three hours of laboratory.

A survey of isotopic and geochronologic topics with individual projects in isotopic analysis.

675. Groundwater Geochemistry (3)

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 530, 530L and 551.

Processes affecting organic solute acquisition and deposition in groundwater. Applications to radioactive and metal contaminant transport. (Formerly numbered Geological Sciences 675A.)

676. Solute Transport in Groundwater (3)

Prerequisite: Geological Sciences 551.

Theory of dissolved solute transport in groundwater. Applications to contaminant delineation, modeling and characterization of aquifer heterogeneities. Case studies of tracer tests and contaminant plumes. (Formerly numbered Geological Sciences 675B.)

677. Environmental Fate of Organic Contaminants (3)

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 551 and 530, 530L, or chemistry background.

Physical and chemical properties and processes affecting distribution of organic contaminants in the environment. Focus on subsurface environments with applications to surface waters.

680. Sedimentary Geochemistry (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 530.

Topics in low temperature geochemistry, in particular diagenesis.

685. 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

In the College of Arts and Letters

OFFICE: Business Administration 304
TELEPHONE: (619) 594-6313
FAX: (619) 594-8006
EMAIL: german.coord@sdsu.edu

Faculty

Edith J. Benkov, Ph.D., Professor of French, Acting Chair of
Department
Erich W. Skwara, Ph.D., Professor of German
Mary M. Wauchope, 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

501. Translation (3)

Prerequisite: German 301.

Translation of a variety of texts from German to English and English to German.

505. Applied German Linguistics (3)

Prerequisite: German 301 or consent of instructor.

Linguistic study of modern German; integration of modern linguistic theory with the language classroom.

520. Modern German Literature (3)

Prerequisite: German 310.

Major authors and genres since Sturm Und Drang.

530. Topics in German Literature (3)

Prerequisite: German 310.

Study of a movement, theme or genre of German literature, such as romanticism, literature and film, literature of the holocaust, women's literature, literature of the German democratic republic in retrospect. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

596. Topics in German Studies (3)

Prerequisite: German 310 (for literary topics) or 505 (for linguistic topics). **Proof of completion of prerequisite required:** Copy of transcript.

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, 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 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: 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.

History

In the College of Arts and Letters

OFFICE: Adams Humanities 4210

TELEPHONE: (619) 594-5262

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Faculty

David V. DuFault, Ph.D., Associate Professor of History, Chair of Department
Lawrence Baron, Ph.D., The Nasatir Professor of Modern Jewish History
William F. Cheek, Ph.D., Professor of History
Paochin Chu, Ph.D., Professor of History
Alvin D. Coox, Ph.D., Professor of History
Roger L. Cunniff, Ph.D., Professor of History
Thomas M. Davies, Jr., Ph.D., Professor of History
Ross E. Dunn, Ph.D., Professor of History (Graduate Adviser)
Joanne M. Ferraro, Ph.D., Professor of History
Charles D. Hamilton, Ph.D., Professor of History and Classics
Waldo Heinrichs, Ph.D., The Dwight E. Stanford Chair in American Foreign Relations
Neil M. Heyman, Ph.D., Professor of History
Oddvar K. Hoidal, Ph.D., Professor of History
Eve Kornfeld, Ph.D., Professor of History
Howard I. Kushner, Ph.D., Professor of History
Harry C. McDean, Ph.D., Professor of History
Albert C. O'Brien, Ph.D., Professor of History
Richard H. Peterson, Ph.D., Professor of History
Ray T. Smith, Jr., Ph.D., Professor of History
Raymond G. Starr, Ph.D., Professor of History
Francis N. Stites, Ph.D., Professor of History
Jess L. Stoddart, Ph.D., Professor of History
Pershing Vartanian, Ph.D., Professor of History
Francis M. Bartholomew, Jr., Ph.D., Associate Professor of History
Stephen A. Colston, Ph.D., Associate Professor of History
Elizabeth A. Colwill, Ph.D., Associate Professor of History
Philip F. Flemion, Ph.D., Associate Professor of History
Rizalino A. Oades, Ph.D., Associate Professor of History
Lissa Roberts, Ph.D., Associate Professor of History

The Nasatir Professor of Modern Jewish History

The Nasatir Professorship was established in honor of the late Professor Abraham Nasatir, a specialist in European colonial history in North America. Nasatir taught history at SDSU for 46 years and was active in the community as an advocate of Jewish education. The Professorship is now held by a distinguished scholar of European intellectual history and Holocaust studies, Lawrence Baron, director of SDSU's Lipinsky Institute for Judaic Studies.

The Dwight E. Stanford Chair in American Foreign Relations

A gift from alumnus Dwight E. Stanford, who earned a bachelor's degree in American history in 1936 from San Diego State College (now SDSU), established The Dwight E. Stanford Chair in American Foreign Relations. The first holder of the Chair is Waldo Heinrichs, an internationally distinguished scholar-teacher who is an expert in twentieth century American foreign relations with Pacific Rim coun-

tries, especially with those in Asia.

Master of Arts Degree in History

Scholarships

The Kenneth and Dorothy Stott Scholarship, in the amount of \$100, is awarded each June to a student who has attended San Diego State University for at least two years and who is being graduated or who has been graduated by San Diego State University with a major in history. The recipient must continue work at San Diego State University, or at any other accredited college or university, toward a higher degree or credential. The selection is made by the Department of History with approval of the committee on scholarships.

General Information

The Department of History, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in history.

The Master of Arts degree is designed to provide advanced training for (1) students who plan to terminate their graduate studies at the master's level, and (2) those who anticipate further study leading to a doctoral degree in history or related fields.

Research facilities include a substantial library of well over one million titles and an impressive periodical collection. The library is the depository for the documents of the United States and the state of California, and receives all publications of the United Nations and the Organization of American States. The library also houses 1,500 linear feet of manuscript materials as well as audiotapes, films, oral histories, and photographs of the greater San Diego area. The College of Arts and Letters houses the Social Science Research Laboratory which includes a well-equipped data processing center. The San Diego Historical Society and the San Diego Public Library contain many manuscript collections pertinent to local history. Located north of San Diego is the National Archives and Records Administration at Laguna Niguel.

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 undergraduate major in history or have taken enough units in history and related fields 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 (not necessarily history), plus a satisfactory score on the GRE General Test (minimum 500 verbal score). Candidates must also submit with their applications a statement of purpose of approximately 400 words. A candidate who is deficient in any of the requirements above may be considered for conditional admission. A candidate whose course preparation is deemed deficient will be required to complete specified courses in addition to the minimum 30 units required for the degree. Deficiencies must be corrected within a time period specified by the departmental graduate committee. Conditional admission is possible pending the taking of the GRE General

Test 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 in history from courses listed below as acceptable on the master's degree programs, at least 18 units of which must be in 600- and 700-numbered courses. Students may elect either Plan A, the normal option, requiring a thesis, or, in special circumstances and with the prior approval of the graduate adviser and the student's major professor, Plan B, requiring a comprehensive written and oral examination in both a major and minor field of history chosen in consultation with the graduate adviser. Required courses are History 601; six units selected from History 620, 630, 640, 650, or 680; three units selected from History 625, 635, 655; History 797; and History 799A for those students electing Plan A. Students approved for Plan B shall meet the same course requirements as those enrolling in Plan A, except that they must enroll in History 795 (three units) and one additional three-unit history course numbered from 620 to 680 in lieu of History 797 and 799A.

Candidates for this degree must demonstrate knowledge of either a relevant foreign language or an approved substitute in computer language or statistical methods. Other substitutes may be approved where the skills involved are directly related to the student's research interests. Course selection and programs must be approved by the graduate adviser prior to the student's registration.

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 Civilizations (3)

Major civilizations of Near East from the origin of civilization to Roman Conquest, including Egyptians, Babylonians, Hebrews and Persians. Social, political, and religious problems.

503A-503B. Europe in the Middle Ages (3-3)

European social, cultural, and political developments from the fall of Rome to the Renaissance.

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)

The formation and development of the Scandinavian kingdoms from the Viking Age to the end of the 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.

510. Europe's Age of Enlightenment (3)

Prerequisite: Upper division standing.

Selected problems in the social, cultural, and intellectual history of the eighteenth-century Enlightenment. (Formerly numbered History 510A-510B.)

511A. The Age of European Revolution (3)

Major economic, social, intellectual, and political changes in Europe from 1789 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, 1890-1919.

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 the present, with emphasis on contemporary society.

514A. The French Revolution and Napoleonic Era (3) I

Prerequisites: History 105 and 106.

France on the eve of the Revolution; the Great Revolution, 1789-1799, the Napoleonic Era.

514B. Modern France (3)

Prerequisites: History 105 and 106.

The development of France since 1815.

517A-517B. 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-518B. Russia and the Soviet Union (3-3)

Semester I: Political, social and economic development of Russia in Europe and Asia from the earliest times to the close of the nineteenth century. Semester II: Emphasis on the twentieth century.

519. Modern Italy (3)

The development of Italy from 1815 to the present.

522A-522B. Tudor and Stuart England (3-3)

Semester I: The Age of the Tudors. Semester II: England during the Stuart Dynasty, 1603-1714.

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.

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 1350 to the beginning of the Industrial Revolution.

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.

532. Topics in Early American History (3)

Prerequisites: Upper division standing and three units in history at the college level.

Variable topics in history of colonial America and the early republic. Possible topics include: Women and the Family; Race, Class and Labor; American Revolution; Religion and Politics; Immigrants' Experiences. See Class Schedule for topic. May be repeated with new content. Maximum credit six units. Not open to students with credit in History 531, "American Revolution."

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 nineteenth 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,

Major foreign and domestic issues confronting the United States, and the government policies and popular movements generated in response.

537A-537B. The Westward Movement (3-3)

The American frontier: Expansion, exploration, settlement and building of the new states, with emphasis on frontier problems of defense, communications, finance, development of cultural institutions. Causes, effects and results of frontier experiences of American people. History 537A: Frontier movement from Atlantic to Mississippi River. History 537B: The trans-Mississippi west. This year course satisfies the graduation requirement in American History.

538. The American Southwest (3)

Development of the Southwest from the Spanish colonial period to the present. Emphasis on social, economic, and cultural forces which have shaped the character of the border states.

540. Environmental History of the United States (3)

The relationship of Americans to their environment from colonial times to the present with emphasis on how attitudes and values have affected personal behavior and public policy toward the land.

541A-541B. California (3-3)

Political institutions; social, cultural, economic and intellectual development; international background. Semester I: To 1850; Spanish and Mexican heritage. Semester II: 1850 to the present. History 541B satisfies the graduation requirement in California State and Local Government.

543. American Involvement in Vietnam 1941-75 (3)

Prerequisites: Upper division standing and six units in history.

Causes and costs of America's longest war: the war's beginning, United States involvement, role of media and antiwar movement, United States withdrawal, impact of war on Southeast Asia and the United States.

544A-544B. American Foreign Policy (3-3)

History 544A: Development of American foreign policy from Colonial Period to the First World War. History 544B: Developments from First World War to present. This year course satisfies the graduation requirement in American History.

545A-545B. Constitutional History of the United States (3-3)

Development of American constitutional ideals and institutions. History 545A: Seventeenth century to 1861. History 545B: Since 1861. This year course satisfies the graduation requirement in American History or United States Constitution.

546A-546B. Development of American Capitalism (3-3)

The changes in agriculture, industry, labor, banking, transportation and commerce in a capitalist society with emphasis on the prominent personalities who made the changes possible.

547A-547B. Intellectual History of the American People (3-3)

American thought since colonial times, focusing on the ideas of individuals, groups and movements in religion, politics, society, the

arts and reform. Emphasis on liberal and conservative impulses and their role in the making of the modern American mind. History 547A: To 1865. History 547B: Since 1865. This year course satisfies the graduation requirement in American Institutions.

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.

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-Colombian 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 societies from the dual perspective of elites and the masses.

Popular culture—the Latin American self-image reflected in family relations, folklore, myth, legend, popular music and art and mass expression.

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

561. Asia and the West (3)

History of twentieth century Asian-Western relations with emphasis on China and Japan. (Formerly numbered History 561B.)

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 neo-colonialism. Topics include social structure, education, peasant movements, urbanization, search for cultural identity, and national integration.

566. Chinese Civilization: The Great Traditions (3)

China's institutional and cultural development from ancient to pre-modern times. Emphasis on traditional philosophy, religions, literature, and the arts.

567. China's Century of Modernization (3)

China's modernization process from the early nineteenth-century Opium War through the People's Republic of China.

569. Japanese Civilization (3)

Japanese internal history and institutions during the period of indigenous development and Chinese influence including religions, philosophy, literature, and the arts.

570. Modern Japan (3)

Japan's development as a modern state, particularly in the nineteenth and twentieth centuries.

Field (f). Africa and Middle East

UPPER DIVISION COURSES

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 or 105.

History of historical writing and works of major historians. Recommended for history and social science majors.

596. Selected Studies in History (1-4)

Topics in the various fields of history, such as biography, war, science, technology, urbanization, minority groups, immigration, and capitalism. See Class Schedule for specific content. 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

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 Methods (3)

Historical methodologies, historiography, and critical analysis.

620. Directed Readings in European History (3)

Prerequisite: Consent of instructor.

Selected readings in historical literature and primary sources 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; History 601; six units selected from History 620, 630, 640, 650, and 680, three units of which may be taken concurrently.

Directed research on topics selected from a designated area of European history. Maximum credit six units applicable to a master's degree.

630. Directed Readings in United States History (3)

Prerequisite: Consent of instructor.

Selected readings in historical literature and primary sources 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; History 601; six units selected from History 620, 630, 640, 650, and 680, three units of which may be taken concurrently.

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 Readings in Latin American History (3)

Prerequisite: Consent of instructor.

Selected readings in historical literature and primary sources 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 Readings in Asian History (3)

Prerequisite: Consent of instructor.

Selected readings in historical literature and primary sources 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; History 601; six units selected from History 620, 630, 640, 650, and 680, three units of which may be taken concurrently.

Directed research on topics selected from a designated area of Asian history. Maximum credit six units applicable to a master's degree.

680. Directed Reading in Selected Topics (3)

Prerequisite: Consent of the instructor.

Selected readings in source materials and historical literature of various fields of history such as war, science, technology, urbanization, minority groups, immigration, capitalism, conservation, and imperialism. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

795. Area Studies in History (1-3) Cr/NC

Prerequisite: Advancement to candidacy.

Preparation for the comprehensive examinations in the major and minor fields of history for those students taking the M.A. under Plan B. Maximum credit three units applicable to a master's degree.

797. Research (3) Cr/NC/SP

Prerequisite: Advancement to candidacy and written approval of the History Department graduate adviser.

Independent research in a specialized subject in history.

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.

Interdisciplinary Studies

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 Interdisciplinary Studies. 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 the Graduate Council.

The proposed program must be approved by the department chairs and deans concerned. It 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 a 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 this program 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, environmental economics, primitive Christianity, gerontology, and learning interface design.

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 satisfactory score on the verbal and quantitative sections. Normally, students applying to the University for the first time are not admitted directly into the Interdisciplinary Studies program. Contact 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 requirements for advancement defined by the supervisory committee in the official program of study. These requirements will include demonstrated proficiency in at least one appropriate research tool, ordinarily the reading knowledge of a foreign language, but for some programs, advanced statistics or computer programming may be more appropriate.

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 Interdisciplinary Studies program should complete and follow the instructions on the form, "Request for Permission to Pursue an Interdisciplinary Studies Master's Degree," which is available in the Graduate Division. 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 applicant and the proposed major adviser should be present at this meeting. Other proposed committee members are welcome to participate in these discussions.
3. Following this meeting and after making any modifications to the proposed program eventuating from it, the student must present for approval the "Request for Permission to Pursue an Interdisciplinary Studies Master's Degree" to the chairs of departments in which courses are being proposed and to the deans of colleges responsible for these academic units.
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 that committee, the "Request" will be forwarded to the graduate dean, whose final endorsement will certify that the "Request" has been approved as an official program of study, that the supervisory committee has been formally appointed, and that the student has been granted classified graduate standing for the purpose of pursuing the special major.

5. Virtually all other requirements for this 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

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 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.

Latin American Studies

In the College of Arts and Letters

OFFICE: Storm Hall 146
TELEPHONE: (619) 594-1103

Faculty Committee for Latin American Studies

Thomas M. Davies, Jr., Ph.D., Professor of History, Chair of Committee, Graduate Coordinator
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
Kathee M. Christensen, Ph.D., Professor of Communicative Disorders
Norris C. Clement, Ph.D., Professor of Economics
Roger L. Cunniff, Ph.D., Professor of History
Olivia M. Espín, Ph.D., Professor of Women's Studies
Janet B. Esser, Ph.D., Professor of Art
Barbara E. Fredrich, Ph.D., Professor of Geography
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 Communication, Executive Assistant to the President
Gerald L. Head, Ph.D., Professor of Spanish
Lawrence A. Herzog, Ph.D., Professor of Mexican American Studies
Theodore V. Higgs, Ph.D., Professor of Spanish
Joseph B. Kelley, D.S.W., Professor of Social Work
Lois K. Lippold, Ph.D., Professor of Anthropology

Brian E. Loveman, Ph.D., Professor of Political Science
José D. Rodríguez, Ph.D., Professor of Mexican American Studies
Gustavo V. Segade, Ph.D., Professor of Spanish
Malcolm N. Silverman, Ph.D., Professor of Spanish and Portuguese
José R. Villarino, Ph.D., Professor of Mexican American Studies
Maria-Barbara Watson, Ph.D., Professor of Women's Studies
John R. Weeks, Ph.D., Professor of Geography
Carlos G. Wilson, Ph.D., Professor of Spanish
Philip F. Flemion, Ph.D., Associate Professor of History
D. Emily Hicks, Ph.D., Associate Professor of English and Comparative Literature
Margarita G. Hidalgo, Ph.D., Associate Professor of Spanish
William A. Neruccio, Ph.D., Associate Professor of English and Comparative Literature
Ronald R. Young, Ph.D., Associate Professor of Spanish
David V. Carruthers, Ph.D., Assistant Professor of Political Science
Adelaida R. Del Castillo, M.A., Assistant Professor of Mexican American Studies
Paul Ganster, Ph.D., Director, Institute for Regional Studies of the Californias
Gail L. Robinson, Ph.D., Co-Director, Language Acquisition Resource Center
Wayne Stromberg, Ph.D., Co-Director, Language Acquisition Resource Center

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 administered by the center is an interdisciplinary program drawing on the expertise of an outstanding Latin Americanist faculty from the following departments: Anthropology, Art, Comparative Literature, Economics, Geography, History, Political Science, Public Administration and Urban Studies, Sociology, Spanish and Portuguese Languages and Literatures, Women's Studies, and the College of Business Administration. Emphasis in the program is placed on the central issue of "Modernization and Urbanization" in Latin America and offered through nine courses from nine different departments.

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 described in Part Two of this bulletin. Moreover, students must demonstrate an oral and reading proficiency in Spanish through either the satisfactory completion of an oral and a written examination, or: (1) satisfactory completion of Spanish 201 and 202, and a reading examination administered by the Department of Spanish and Portuguese Languages and Literatures, or (2) satisfactory completion of three units of 500-level or graduate coursework in Spanish. In addition, students must complete satisfactorily (with a grade of B or better) Portuguese 101. Coursework at or above the 500

level may be included as a part of the official program with the approval of the graduate coordinator.

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, including Latin American Studies 601, with not less than 24 units in courses of Latin American content selected from those listed below and distributed as follows:

	600- and 700-numbered Courses	500-, 600- and 700-numbered Courses
Department A.....	6 units	6 units
Department B.....	3 units	3 units
Department C.....	3 units	3 units
	12 units	12 units

The total program shall include a minimum of 18 units in 600- and 700-numbered courses. Students may select either Plan A or Plan B in consultation with the graduate adviser. In addition to meeting the distribution requirements given above, students electing Plan A must complete the 799A (Thesis) course. 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.

Master of Business Administration and Master of Arts in Latin American Studies Degrees

General Information

The College of Business Administration and the Center for Latin American Studies offer a three-year concurrent graduate program leading to a Master of Business Administration and a Master of Arts in Latin American Studies. The primary objective of the concurrent program is to offer preparation in the fields of business administration and Latin American studies for the purpose of providing the knowledge and skills necessary to promote and engage in business relationships within a Latin American historical, cultural, and linguistic milieu, in Latin America or in the United States.

For information, contact the Chair of the Latin American Studies Committee or the Associate Dean in the College of Business Administration.

Admission to Graduate Study

Since this program combines disparate disciplines, applicants are required to submit GMAT scores and should have substantial academic backgrounds in the humanities and social sciences. Applicants should also have a background in Spanish or Portuguese language and literature. It is expected that all students in the concurrent degree program will be full time, so that all requirements will be satisfied in an acceptable time period.

Specific Requirements for the MBA/MA Degree

(Major Code: 49061)

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 consisting of 70 units as outlined below.

- The college expects students entering the Master of Business Administration/MA in Latin American Studies program to be proficient in several areas. These include proficiency in statistics, mathematical skills, basic economics and in the use of personal computers, including spreadsheets and word processing. The students are responsible for insuring that they possess these skills before beginning the program.
- Complete the following core of nine courses (19 units):
 - BA 650 Financial Accounting (2)
 - BA 651 Organizational Behavior (2)
 - BA 652 Statistical Analysis (2)
 - BA 653 Managerial Economics (2)
 - BA 654 Managerial Communication (1)
 - BA 655 Marketing (3)
 - BA 660 Managerial Accounting (2)
 - BA 662 Operations Management (2)
 - BA 665 Financial Management I (3)

A student who has earned 12 or more undergraduate units in a specific field (finance, management, etc.) may substitute an advanced course for a core course in the same field with permission from the Director of Graduate Business Programs.

- Complete six units, one course from each of the themes listed below:

Interpersonal Skills Theme

- IDS 705 Communication Strategies (3)
- MGT 720 Seminar in Behavioral Science for Management (3)
- MGT 721 Seminar in Group Processes and Leadership (3)
- MGT 741 Seminar in Organization Power and Politics (3)

Environment Theme

- FIN 604 Legal Environment for Executives (3)
- FIN 655 Seminar in Financial Markets (3)
- FIN 780 Seminar in Land Markets and Urban Development Issues (3)
- MGT 626 Seminar in Policy Formulation (3)
- MGT 701 Organizational Theory and Design (3)
- MGT 722 Seminar in Business Ethics and Social Institutions (3)
- MGT 740 Seminar in Business Management and the Natural Environment (3)
- MGT 742 Seminar in Business and the Good Society (3)
- MKTG 760 Seminar in Consumer Behavior (3)

- Complete 15 units in Business Administration to include:
 - FIN 654 Seminar in International Business Finance (3)
 - MGT 710 Seminar in World Business Environment (3)
 - MGT 723 Seminar in International Strategic Management (3)
 - MGT 731 Strategic Management of Technology and Innovation (3)
 - MKTG 769 Seminar in International Marketing (3)
- Complete 24 units in courses of Latin American content, including the following required courses:
 - LATAM 696 Interdisciplinary Seminar (3)

- LATAM 798 Special Study (3) Cr/NC/SP
 HIST 640 Directed Readings in Latin American History (3)*
 POL S 661 Seminar in the Political Systems of the Developing Nations (3)*
 POL S 667 Seminar in Latin American Political Systems (3)*

The remaining nine units will be selected from the following list of courses, with at least one course from the California Western School of Law courses highly recommended:

Latin American Studies Courses

560. Latin America After World War II (3)
 798. Special Study (3) Cr/NC/SP

Economics Course

565. North American Mexico Economic Relations (3)

Geography Courses

654. Topics in Comparative Urbanization (3)**
 720. Seminar in Regional Geography (3)**

History Courses

- 551A-551B. Mexico (3-3)
 552. Brazil (3)
 554. The Andean Republics of South America (3)
 555. Modernization and Urbanization in Latin America (3)
 556. Guerrilla Movements in Latin America (3)
 558. Latin America in World Affairs (3)
 559. Central America (3)
 640. Directed Reading in Latin American History (3)
 795. Area Studies in History (3) Cr/NC**

Political Science Courses

566. Political Change in Latin America (3)
 567. Political Systems of Latin America (3)
 568. The Mexican Political System (3)
 655. Seminar in General Comparative Political Systems (3)**
 675. Seminar in International Relations (3)**
 795. Problem Analysis (3)**

California Western School of Law Courses***

498. Mexican Law
 610. Immigration Law
 625. International Business Transactions
 636. International Organizations
 643. Private International Law
 644. Public International Law
 703. Latin American Law

6. In addition, the student must complete MGT 797 (Research) and BA 799A (Thesis). The thesis in Business Administration will treat a Latin American related topic and will be supervised by a business faculty with international business expertise and at least one faculty member from the Latin American studies program.

If a student after entering the concurrent MBA/MA program returns to a single degree program, all the requirements for the single degree program must be met.

* Repeatable with new content and approval of advisory committee.

** Acceptable when of relevant content.

***These courses are not required. Students must apply to enroll under the provisions of the affiliation agreement with the California Western School of Law.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. In addition, 1) the student will be required to complete Spanish 302 (or its equivalent), or Portuguese 401 (or its equivalent), and pass an oral and written examination administered by the Department of Spanish and Portuguese Languages and Literatures; 2) all core courses in business and Latin American studies must be completed prior to advancement with a minimum grade point average of 3.0 and no grade less than a B- in any core course; 3) have been recommended for advancement by the combined advisory committee; 4) have a thesis proposal approved by the combined faculty advisory committee.

Upon advancement to candidacy, the student will enroll in Management 797 (Research) and BA 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 MBA and MA degrees.

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)

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.

580. Special Topics (1-4)

Prerequisite: Six upper division units in Latin American content courses.

Interdisciplinary study of selected Latin American topics. Credit will vary depending on the scope and nature of the topic. Whenever appropriate, the course will be taught by a team of instructors representing two or more disciplines. May be repeated with different content. See Class Schedule for specific content. Maximum credit eight units.

Anthropology Course

582. Regional Anthropology (3)*

Art Courses

561. Art of Pre-Hispanic America (3)
 596. Advanced Studies in Art and Art History (1-4)*

Communication Courses

591. International Telecommunications (3)
 596. Selected Topics (1-4)*

Economics Courses

565. U.S.-Mexico Economic Relations (3)
 592. International Monetary Theory and Policy (3)
 596. Experimental Topics (3)*

*Acceptable when of relevant content.

English Course (Comparative Literature)

596. Topics in Comparative Literature (3)*

Geography Course

596. Advanced Topics in Geography (1-3)*

History Courses

- 541A. California (3)
- 551A-551B. Mexico (3-3)
- 552. Brazil (3)
- 554. The Andean Republics of South America (3)
- 555. Modernization and Urbanization in Latin America (3)
- 556. Guerrilla Movements in Latin America (3)
- 557. History of Latin American Popular Culture and Social Thought (3)
- 558. Latin America in World Affairs (3)
- 559. Central America (3)
- 596. Selected Studies in History (1-4)*

Law

With the permission of the graduate adviser and the approval of the Graduate Division and Research, classified graduate students may take a maximum of nine units of law at California Western School of Law through an affiliation agreement between the two institutions. San Diego State students must be enrolled for graduate courses at San Diego State University in the semester they are taking courses at California Western School of Law.

Please consult with the graduate adviser for a listing of the specific law courses offered.

Political Science Courses

- 566. Political Change in Latin America (3)
- 567. Political Systems of Latin America (3)
- 568. The Mexican Political System (3)
- 577. Principles of International Law (3)

Portuguese Course

535. Brazilian Literature (3)

Public Administration Course

580. Comparative Public Administration (3)

Sociology Course

596. Current Topics in Sociology (1-3)*

Spanish Courses

- 515. Mexican Literature (3)
- 520. Caribbean Area Countries Literature (3)
- 522. Andean Countries Literature (3)
- 570. Spanish American Poetry (3)
- 571. Spanish American Short Story (3)
- 572. Spanish American Theater (3)
- 596. Selected Studies in Spanish (3)*

Television, Film, and New Media Course

562. Documentary and Propaganda Film/Television (3)

Women's Studies Courses

- 553. Women Writers (3)*
- 580. Women and International Development (3)
- 596. Topics in Women's Studies (3)*

GRADUATE COURSES

Latin American Studies Courses

601. Seminar on Methodology of Latin American Studies (3)

Prerequisite: Graduate standing.
Theories and methodologies of Latin American Studies.

696. Experimental Topics (3)

Prerequisite: Graduate standing.
Intensive study in specific areas of Latin American studies. May be repeated with new content. See Class Schedule for specific content. Maximum credit 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) 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.

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.

Anthropology Courses

- 600. Seminar (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

Communication Courses

- 770. Seminar in International Journalism (3)*
- 798. Special Study (1-3) Cr/NC/SP

Comparative Literature Courses

- 601. Literary Study in a Multicultural World (3)*
- 626. Comparative Literature (3)*
- 726. Seminar: Issues in Comparative Literature (3)*

Economics Courses

- 720. Seminar in Development and Planning (3)
- 730. Seminar in Macroeconomic Policy (3)
- 750. Seminar in Economic History and Institutions (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

*Acceptable when of relevant content.

English Course

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

Geography Courses

- 654. Topics in Comparative Urbanization (3)*
- 720. Seminar in Regional Geography (3)*
- 750. Seminar in Urban 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

History Courses

- 640. Directed Reading in Latin American History (3)
- 795. Area Studies in History (1-3) Cr/NC*
- 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

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)*
- 676. Seminar in International Political Economy (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

- 696. Experimental Topics (3)*
- 770. Seminar in Population and Demography (3)
- 798. Special Study (1-3) Cr/NC/SP

Spanish Courses

- 601. Seminar in Hispanic Literary Theory (3)
- 650. The Gaucho Epic (3)
- 660. Modernism (3)
- 695. Contemporary Spanish American Prose Fiction (3)
- 696. Selected Topics (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

Television, Film, and New Media 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.

Liberal Arts

In the College of Arts and Letters

OFFICE: Adams Humanities 3172
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Faculty

Howard I. Kushner, Ph.D., Professor of History, Director, MALA Program
Susan E. Cayleff, Ph.D., Professor of Women's Studies
Laurie D. Edson, Ph.D., Professor of English and Comparative Literature
Olíva M. Espín, Ph.D., Professor of Women's Studies
Janet Brody Esser, Ph.D., Professor of Art
Ricardo Griswold del Castillo, Ph.D., Professor of Mexican American Studies
Charles D. Hamilton, Ph.D., Professor of History and Classics
Anne-Charlotte Harvey, Ph.D., Professor of Drama
Marcia K. Hermansen, Ph.D., Professor of Religious Studies
Patricia Huckle, Ph.D., Professor of Women's Studies
Kathleen B. Jones, Ph.D., Professor of Women's Studies; Associate Dean, College of Arts and Letters
Peter F. Larlham, Ph.D., Professor of Drama
Fred S. Moramarco, Ph.D., Professor of English
José D. Rodríguez, Ph.D., Professor of Mexican American Studies
Stephen B.W. Roeder, Ph.D., Professor of Physics and Chemistry
William N. Rogers, II, Ph.D., Professor of English and Comparative Literature
Vivian J. Rohrl, Ph.D., Professor of Anthropology
Alan R. Sweedler, Ph.D., Professor of Physics
Stephen A. Colston, Ph.D., Associate Professor of History
Elizabeth A. Colwill, Ph.D., Associate Professor of History
JoAnne Cornwell, Ph.D., Associate Professor of French and African Studies
Alan E. Kilpatrick, Ph.D., Associate Professor of American Indian Studies
William A. Nericcio, Ph.D., Associate Professor of English and Comparative Literature

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 two in the western United States. The Master of Arts degree in Liberal Arts is an interdisciplinary program administered by the Graduate Liberal Arts Committee. Even though this approach to graduate education is over thirty years old in the United States, its interdisciplinary nature has kept it vital and flexible. Students are encouraged to customize their degree by selecting coursework relevant to their interests.

The Master of Liberal Arts degree is an interdisciplinary program intended to provide an alternative approach to continued adult learning by offering a program that crosses disciplinary 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 director of Graduate Liberal Arts Committee requesting appropriate application materials. Detailed information concerning application procedures will be sent to the applicant along with the 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 must: (1) have a grade point average of 3.0 or better on work completed during the last 60 units for the baccalaureate degree, (2) have a score of 1000 or better on the GRE General Test (combined verbal and quantitative), and (3) complete a statement of purpose essay. A personal interview with a member of the Graduate Liberal Arts Committee is recommended.

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 director and Graduate Liberal Arts 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 12 units, with a minimum grade point average of 3.0, including 9 units of core seminars as stipulated (MALA 600A, 600B, 600C, 600D) and (2) if selecting Plan A, have a thesis or project proposal which has received the approval of the Graduate Liberal Arts Committee and its director.

Specific Requirements for the Master of Arts Degree in Liberal Arts

(Major Code: 49017)

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 MALA 600A, 600B, 600C, or 600D for a total of nine units.
2. Three units of MALA 601.
3. A theme of study composed of 15 units of graduate coursework, selected with the approval of the MALA director which normally must be in at least two of the following areas: social sciences, humanities, natural sciences, and fine arts, with no more than six units in any given discipline. Some 500 level courses may be used in partial fulfillment of this requirement, if approved by the MALA director. MALA 798, where applicable, may be included as satisfying 3 of the 15 units for the thematic component. Under special circumstances, and with permission of the MALA director, a student may compose a theme that deviates in structure from the criteria stipulated above. This theme may include up to a maximum of 12 units of 600A, 600B, 600C, and 600D, in any combination.

Students may select either Plan A or Plan B in consultation with the MALA director. In addition to meeting the distribution requirements given above, students electing Plan A must complete MALA 799A (Thesis or Project). Students electing Plan B must complete MALA 795 (Studies in the Liberal Arts) and pass a written comprehensive examination in lieu of the thesis.

All programs must be approved by the MALA director in consultation with the Graduate Liberal Arts Committee.

GRADUATE COURSES

600A-600B-600C-600D. Interdisciplinary Study in the Liberal Arts (3-3-3-3)

Prerequisites: 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. Each course may be repeated with new content. See Class Schedule for specific content.

- 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)

Prerequisite: Admission to the Master of Arts degree in Liberal Arts program or graduate standing.

Issues in interdisciplinary studies. May be repeated with new con-

tent. See Class Schedule for specific content. Maximum credit three units applicable to a master's degree.

696. Advanced Topics in Liberal Arts (1-3)

Prerequisite: Admission to the Master of Arts degree in Liberal Arts program or graduate standing.

Intensive study in specific areas of liberal arts. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

795. Studies in the Liberal Arts (1-3) Cr/NC

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

Individual preparation for comprehensive examination for students taking the Master of Liberal Arts under Plan B. Maximum credit three units.

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

Prerequisite: Advancement to candidacy and consent of MALA director

Individual study on a given topic through interdisciplinary perspectives. Maximum credit 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 or Project 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in MALA 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.

Linguistics and Oriental Languages

In the College of Arts and Letters

OFFICE: Business Administration 327

TELEPHONE: (619) 594-5268

FAX: (619) 594-4877

Faculty

Robert Underhill, Ph.D., Professor of Linguistics, Chair of Department

Zev Bar-Lev, Ph.D., Professor of Linguistics

Thomas S. Donahue, Ph.D., Professor of Linguistics

Ann M. Johns, Ph.D., Professor of Linguistics

Gail L. Robinson, Ph.D., Professor of Linguistics

Soonja Choi, Ph.D., Associate Professor of Linguistics (Graduate Adviser)

Jeffrey P. Kaplan, Ph.D., Associate Professor of Linguistics

Deborah Poole, Ph.D., Associate Professor of Linguistics

Orin D. Seright, Ph.D., Associate Professor of Linguistics

Charlotte Webb, Ph.D., Associate Professor of Linguistics

Associateships

Graduate teaching associateships in linguistics are offered each semester to a limited number of qualified students to teach the composition courses for international students. Those interested should send a letter of application to the graduate adviser.

General Information

The Department of Linguistics and Oriental Languages, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in linguistics. The interdisciplinary program provides broad educational opportunities through two specializations: 1) General Linguistics, for those planning to pursue a doctorate in theoretical areas (e.g., syntax or phonology) or for those who plan to work in a language-related field in industry or education (e.g., computer programming); and 2) ESL/Applied, for students planning to pursue a doctorate in applied linguistics, or intending to teach or design curriculum for ESL/EFL classrooms. In addition to completing coursework for one of the specializations and demonstrating proficiency in a foreign language, students are required to submit a thesis (Plan A) or pass a comprehensive examination (Plan B).

All students who complete the required program will receive a Master of Arts degree in linguistics. If requested, the department will provide a letter designating a student's specialization for purposes of employment or application for further study. The specializations and language research interests of faculty members in this program are:

Zev Bar-Lev – ESL, discourse analysis, linguistics and computers; Hebrew, Arabic, and Russian.

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, and Chaucer.

Ann M. Johns – ESL methodology, materials development, teaching second language reading and writing, discourse and genre analysis; Arabic and Chinese.

Jeffrey P. Kaplan – Syntax, semantics, pragmatics, discourse, language and law; Swahili.

Deborah Poole – Classroom interaction, discourse analysis,

cross-cultural interaction, ESL methods and materials.

Gail L. Robinson – Second language methodology, second language and culture acquisition, psycholinguistics; Spanish.

Orin D. Seright – Comparative morphology, historical linguistics; Latin, Romance languages, Northern Germanic languages.

Robert Underhill – Descriptive linguistics, phonology, syntax, discourse; Turkish, Native American languages, Southeast Asian languages.

Charlotte Webb – Phonology, second Language acquisition, 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 have a Bachelor of Arts degree, 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/her 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. In addition to the requirements listed, students must demonstrate reading or speaking knowledge of at least one foreign language 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 a graduate program of at least 30 units of 500-, 600-, and 700-level courses including Linguistics 622 and 795. A minimum of 15 of the units taken must be from 600- or 700-level courses.

Students selecting the Specialization in General Linguistics must complete Linguistics 621 and six units from the following: Linguistics 610, 640, 651, 654, and 660.

Students selecting the ESL/Applied Specialization must complete either Linguistics 521 or 621, and at least six units from the following: Linguistics 623, 650, 652, 653. An internship, Linguistics 740, is required of all students selecting this specialization who have not taught ESL previously.

Students selecting one specialization may enroll in courses from the other specialization as electives.

Plan A or Plan B

With approval of the graduate adviser, a student may choose either Plan A, the normal option which requires a thesis, or in special circumstances and with the prior approval of the graduate adviser, Plan B, which requires a written comprehensive examination. Plan A students must select a committee of three faculty, two of whom are from the department, to supervise the thesis. In consultation with the graduate adviser, students select one of two options upon completion of an official program and advancement to candidacy.

Applied Linguistics and English as a Second Language (ESL) Certificate

The Department of Linguistics and Oriental Languages offers a Basic and an Advanced Certificate in Applied Linguistics and English as a Second Language (ESL). The Advanced Certificate requires 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.

524. American Dialectology (3) I, II

Prerequisite: Upper division standing.

Development of American English. Regional, social, and ethnic differences in pronunciation, grammar, and vocabulary. Differences in men's and women's language. Black English.

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) I

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.

Bilingual societies; language choice by bilinguals; bilingual language acquisition; effects of bilingualism on language structure and use.

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 of six units of 596 and 696 applicable to a 30-unit master's degree.

German Course

510. German Phonetics (3)

Russian Course

580. Russian Syntax and Stylistics (3)

GRADUATE COURSES**610. Topics in Historical Linguistics (3)**

Prerequisite: Three upper division units in linguistics, preferably Linguistics 410, 520, or 521.

Methods and principles used in historical study of language; processes of language change in phonology, syntax, and semantics; linguistics reconstruction; origin of language; language families; development of writing. Analysis of Indo-European, Old English, or Middle English. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

621. Advanced English Phonology (3)

Prerequisite: Linguistics 521.

English phonetics, phonemics, and phonological rules. Phonological differences among American English dialects. Survey of contemporary approaches to phonology.

622. Advanced Syntax (3)

Prerequisite: Linguistics 522.

Advanced study of linguistic theory and its application to the analysis of English.

623. Immigrant Languages (3)

Prerequisite: Linguistics 420 or 520.

Contrastive structure of selected languages representing significant immigrant populations in San Diego; emphasis on phonological, orthographic, morphological, lexical and syntactic features.

640. Field Methods in Linguistics (3)

Prerequisites: Linguistics 521 and credit or concurrent registration in Linguistics 622.

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.

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.

653. ESL Reading and Writing (3)

Prerequisite: Linguistics 550.

Application of discourse and reading theory to the teaching and testing of ESL reading and writing. Issues of coherence, process-product, genre studies.

654. Language and Cognition (3)

Prerequisite: Linguistics 552.

Language production, comprehension, and acquisition, as these relate to human cognition.

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

Prerequisite: Linguistics 550.

Internship in teaching English as a second language and English as a foreign language, offering work experience with practicing professionals.

750. Directed Language Study (3)

Prerequisite: Consent of instructor.

Directed independent study of a foreign language not offered at San Diego State University with aim of acquiring a developing competency in the language. May include speaking, listening, reading, writing, and grammar. May be repeated with approval of graduate adviser.

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 or 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

604. Seminar in Linguistics (3)

Russian Courses

610. History of the Russian Language (3)

650A-650B. Old Church Slavonic (3-3)

680. Seminar in Slavic Linguistics (3)

Spanish Courses

610. Seminar in Medieval Spanish (3)

770. Applied Spanish Linguistics for Teachers (3)

Mass Communication

Refer to “Communication” in this section of the bulletin.

The Master of Science degree in Mass Communication has been discontinued. However, it has been integrated into the newly created Master of Arts degree in Communication, in the School of Communication, beginning fall 1996. Current students officially enrolled in the mass communication degree may complete that degree or they may change to the new degree program. Please see a graduate adviser in the School of Communication.

Mathematical Sciences

In the College of Sciences

OFFICE: Business Administration/Mathematics 203
TELEPHONE: (619) 594-6191

Faculty

Mathematics and Applied Mathematics

John D. Elwin, Ph.D., Professor of Mathematical Sciences, Chair of Department

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

T. Marc Dunster, Ph.D., Professor of Mathematical Sciences

Betty B. Garrison, Ph.D., Professor of Mathematical Sciences

Tunc Geveci, Ph.D., Professor of Mathematical Sciences

Robert D. Grone, Ph.D., Professor of Mathematical Sciences

Richard A. Hager, Ph.D., Professor of Mathematical Sciences

Edgar J. Howard, Ph.D., Professor of Mathematical Sciences (M.A. Graduate Adviser)

Stefen Hui, Ph.D., Professor of Mathematical Sciences

(M.S. Applied Mathematical Sciences Graduate Adviser)

Frank D. Lesley, Ph.D., Professor of Mathematical Sciences

Donald A. Lutz, Ph.D., Professor of Mathematical Sciences

Joseph M. Mahaffy, Ph.D., Professor of Mathematical Sciences

Stephen J. Pierce, Ph.D., Professor of Mathematical Sciences

James E. Ross, Ph.D., Professor of Mathematical Sciences

Peter Salamon, Ph.D., Professor of Mathematical Sciences

Donald R. Short, Jr., Ph.D., Professor of Mathematical Sciences,

Dean of the College of Sciences

Arnold L. Villone, Ph.D., Professor of Mathematical Sciences

José Castillo, Ph.D., Associate Professor of Mathematical Sciences

William R. Hintzman, Ph.D., Associate Professor of Mathematical Sciences

Stephen J. Kirschvink, Ph.D., Associate Professor of Mathematical Sciences

Genovevo C. Lopez, Ph.D., Associate Professor of Mathematical Sciences

Bernard Marcus, Ph.D., Associate Professor of Mathematical Sciences

Arthur Springer, Ph.D., Associate Professor of Mathematical Sciences

David G. Whitman, Ph.D., Associate Professor of Mathematical Sciences

Mathematics Education

Nicholas A. Branca, Ed.D., Professor of Mathematical Sciences

Douglas B. McLeod, Ph.D., Professor of Mathematical Sciences (M.A.T.S. Graduate Adviser)

Judith T. Sowder, Ph.D., Professor of Mathematical Sciences

Larry K. Sowder, Ph.D., Professor of Mathematical Sciences

Alba G. Thompson, Ed.D., Associate Professor of Mathematical Sciences

Patrick W. Thompson, Ed.D., Professor of Mathematical Sciences

Associateships

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

General Information

The Department of Mathematical Sciences, in the College of Sciences, offers graduate study leading to the Master of Arts degree in mathematics, the Master of Arts degree for teaching service with a concentration in mathematics, the Master of Science degree in applied mathematics, the Master of Science degree in statistics (see the Statistics section of this bulletin for a description of the statistics program and courses), and the Master of Science degree in computer science. (See the Computer Science section of this bulletin for a description of the computer science program.)

Faculty active in research direct theses and research projects in most general areas of the mathematical sciences: in approximation theory, complex analysis, differential equations, differential geometry, graph theory, group theory, matrix theory, number theory, numerical analysis, operator theory and ring theory within mathematics; in cognitive science, computer education and problem solving within mathematics education; in control theory, mathematical physics, modeling and optimization within applied mathematics; in biostatistics, data analysis, inference, stochastic processes, survival analysis and time series within statistics; in algorithms, computability, formal

language, numerical analysis, and system software (artificial intelligence, database management, distributed processing, graphics and operating systems) within computer science.

Research facilities of the System Ecology Research Group provide opportunities for research in applied mathematics. Opportunities for research in mathematics education are available through research facilities in the Center for Research in Mathematics and Science Education. Research facilities of the department include the Robotics and Intelligent Machines Laboratory which provides opportunities for research in computer science (see Computer Science section).

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.

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 student must have passed a qualifying examination in some programs.

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 approved 500, 600, and 700 level courses, of which at least 24 units must be in mathematics (including computer science). 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 621, 622, 623, 624, and at least two courses in analysis chosen from courses 630A, 630B, 631A, 631B.
3. Before entering the program, students should have completed the following courses or their equivalents: Mathematics 521B, 524, 532, 534B. If a student has not had these courses before entering the program, they must be taken during the first year. (A maximum of two of these courses may be applicable toward the degree course requirements.)
4. With departmental approval, students may select Plan A and complete Mathematics 799A or Plan B requiring a written comprehensive examination based on material to be selected by the department from among Mathematics 621, 622, 623, 624, 630A, 630B, 631A, 631B.

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 described in Part Two 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, 534A, 534B, 541, 551A, and programming proficiency in a computer language. Admission to the program as conditionally classified may be granted without some of the coursework 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. Complete a minimum of 30 units of approved 500-, 600- and 700-numbered courses. All programs must include at least 21 units in mathematical sciences (with the possible exception of a student who shows an interest in mathematical modeling) and at least 18 units selected from 600- and 700-numbered courses. 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.
3. With departmental approval, the student may select Plan A, and complete Mathematics 799A, Thesis. The student must have an oral defense of their thesis or research, open to the public. If Plan B is elected, the student must complete three units of Mathematics 797, Research, and pass the written Comprehensive Examination in Applied Mathematics.

Courses Acceptable on Master's Degree Programs in Applied Mathematics, Computer Science, Mathematics, and Statistics

General

UPPER DIVISION COURSES

NOTE: Proof of completion of prerequisites required for all upper division courses: Copy of transcript.

509. Computers in Teaching Mathematics (3)

Two lectures and three hours of laboratory.

Prerequisite: Mathematics 252.

Solving mathematical tasks using an appropriate computer interface, and problem-based curricula. Intended for those interested in mathematics teaching.

510. Introduction to the Foundations of Geometry (3) I, II

Prerequisite: Mathematics 122 or 151.

The foundations of Euclidean and hyperbolic geometries. Highly recommended for all prospective teachers of high school geometry.

511. Projective Geometry (3)

Prerequisite: Mathematics 254.

Geometry emphasizing relationships between points, lines, and conics. Euclidean geometry and some non-Euclidean geometries as special cases of projective geometry.

512. Non-Euclidean Geometry (3)

Prerequisite: Mathematics 122 or 151.

History of attempts to prove the fifth postulate; emphasis on plane synthetic hyperbolic geometry; brief treatment of other types of non-Euclidean geometry.

521A. Abstract Algebra (3) I, II

Prerequisites: Mathematics 245 and 252.

Abstract algebra, including elementary number theory, groups, and rings.

521B. Abstract Algebra (3) II

Prerequisite: Mathematics 521A.

Continuation of Mathematics 521A. Rings, ideals, quotient rings, unique factorization, noncommutative rings, fields, quotient fields, and algebraic extensions.

522. Number Theory (3) I

Prerequisites: Mathematics 245 and 252.

Theory of numbers to include congruences, Diophantine equations, and a study of prime numbers.

523. Mathematical Logic (3)

Prerequisite: Mathematics 245.

Propositional logic and predicate calculus. Rules of proof and models. Completeness and the undecidability of arithmetic. Not open to students with credit in Philosophy 521.

524. Linear Algebra (3) I, II

Prerequisites: Mathematics 245 and 254; or 342A.

Vector spaces, linear transformations, orthogonality, eigenvalues and eigenvectors, normal forms for complex matrices, positive definite matrices and congruence.

525. Algebraic Coding Theory (3) II

Prerequisite: Mathematics 254.

Linear codes, perfect and related codes, cyclic linear codes, BCH codes, burst error-correcting codes.

531. Partial Differential Equations (3) I

Prerequisites: Mathematics 252 and 337.

Boundary value problems for heat and wave equations: eigenfunction expansions, Sturm-Liouville theory and Fourier series. D'Alembert's solution to wave equation; characteristics. Laplace's equation, maximum principles, Bessel functions. Not open to students with credit in Mathematics 340B.

532. Functions of a Complex Variable (3)

Prerequisite: Mathematics 252.

Analytic functions, Cauchy-Riemann equations, theorem of Cauchy, Laurent series, calculus of residues.

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.

534A. Advanced Calculus I (3) I, II, S

Prerequisites: Mathematics 245 and 254; or 342A.

Completeness of the real numbers and its consequences, sequences and series of real numbers, continuity, differentiability and integrability of functions of one real variable.

534B. Advanced Calculus II (3) I, II

Prerequisite: Mathematics 534A.

Series and sequences of functions and their applications, functions of several variables and their continuity, differentiability and integrability properties.

535. Introduction to Topology (3)

Prerequisite: Mathematics 534A.

Topological spaces. Functions, mappings, and homeomorphisms. Connectivity, compactness. Metric spaces.

536. Mathematical Modeling (3)

Prerequisites: Mathematics 254 and 337 or Mathematics 342A and 342B or Engineering 280.

Advanced models from the physical, natural, and social sciences. Emphasis on classes of models and corresponding mathematical structures. (Formerly numbered Mathematics 636.)

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 106 or 107 or Engineering 120.

Solution of equations of one variable, direct methods in numerical linear algebra, least squares approximation, interpolation and uniform approximation, quadrature.

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.

543. Numerical Matrix Analysis (3)

Prerequisite: Mathematics 541.

Gaussian elimination, LU factorizations and pivoting strategies. Direct and iterative methods for linear systems. Iterative methods for diagonalization and eigensystem computation. Tridiagonal, Hessenberg, and Householder matrices. The QR algorithm.

561. Applied Graph Theory (3)

Prerequisite: Mathematics 245 or 254.

Undirected and directed graphs, trees, Hamiltonian circuits, classical problems of graph theory including applications to linear systems.

562. Mathematical Methods of Operations Research (3) II

Prerequisites: Mathematics 252 and 254.

Theory and applications concerned with optimization of linear and non-linear functions of several variables subject to constraints, including simplex algorithms, duality, applications to game theory, and descent algorithms. Not open to students with credit in Mathematics 362.

579. Combinatorics (3)

Prerequisite: Mathematics 245.

Permutations, combinations, generating functions, recurrence relations, inclusion-exclusion counting. Polya's theory of counting, other topics and applications.

596. Advanced Topics in Mathematics (1-4) I, II

Prerequisite: Consent of instructor.

Selected topics in classical and modern mathematical sciences. 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.

**General
GRADUATE COURSES**

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.

630A-630B. Functions of a Real Variable (3-3)

Prerequisites: 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)

Prerequisites: Mathematics 532 and 534B. Mathematics 631A is

prerequisite to 631B.

Theory of analytic functions. Elementary functions and power series, Cauchy's theorem and its consequences. Entire functions, conformal mappings, Riemann mapping theorem. Harmonic functions.

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)

Prerequisites: Mathematics 531 and 663.

Elliptic boundary value problems; parabolic and hyperbolic initial boundary value problems. Nonlinear conservation laws.

662. Advanced Optimization Theory (3)

Prerequisites: Mathematics 524 and 562.

Formulating the optimization problem and constructing proper models. Sequential optimization: linear programming, integer programming, dynamic programming, nonlinear programming. Duality theory and sensitivity analysis. Sample applications and numerical implementation.

663. Methods of Applied Analysis (3)

Prerequisite: Mathematics 630A.

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.

Canonical forms, matrix groups, matrix inequalities, nonnegative matrices. Multilinear algebra, tensors. Group representations, characters, invariants. Coding theory.

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.

693A. Advanced Numerical Analysis (3)

Prerequisites: Mathematics 524 and 542.

Numerical optimization, Newton's methods for nonlinear equations and unconstrained minimization. Global methods, nonlinear least squares, integral equations.

693B. Advanced Numerical Analysis (3)

Prerequisites: Mathematics 531, 537, and 693A.

Methods for differential equations. Elliptic and parabolic partial differential equations. Stiff ordinary differential equations.

696. Selected Topics in Mathematical Sciences (3)

Prerequisite: Graduate standing.

Intensive study in specific areas of mathematical sciences. 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.

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

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 or Project 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.

Mathematics Education

GRADUATE COURSES

600. Geometrical Systems (3)

Prerequisites: Mathematics 521A and an upper division course in geometry.

Ordered and affine geometries, decompositions, dilations. Projectivities and projective space. Absolute geometry, isometrics, groups generated by inversions.

601. Topics in Algebra (3)

Prerequisites: Mathematics 521A and 534A.

Unique factorization domains, rings and ideals, groups, algebraic field extensions. A course designed for secondary school teachers.

602. Topics in Analysis (3)

Prerequisites: Mathematics 521A and 534A.

Topics in analysis, including the real number system, convergence, continuity, differentiation, the Riemann-Stieltjes integral, complex analysis, designed to give the secondary teacher a broad understanding of the fundamental concepts.

For additional courses useful to mathematicians see the sections under:

Computer Science
Mathematics and Science Education
Statistics

Mathematics and Science Education

In the College of Sciences and
In the College of Education

For further information regarding programs, consult the following:

Ph.D. Program..... CRMSE
6475 Alvarado Rd., #206
(619) 594-5090
email: mathsciphd@sciences.sdsu.edu
M.A. Program Mathematical Sciences
(619) 594-6191
Teacher Education
(619) 594-5777

Mathematics and Science Education Faculty

Patrick W. Thompson, Ed.D., Professor of Mathematical Sciences,
Coordinator for Ph.D. Program
Nicholas A. Branca, Ed.D., Professor of Mathematical Sciences
Elsa Feher, Ph.D., Professor of Physics
Kathleen M. Fisher, Ph.D., Professor of Biology
Fred M. Goldberg, Ph.D., Professor of Physics
Sandra P. Marshall, Ph.D., Professor of Psychology, Director, Center
for Research in Mathematics and Science Education
Douglas B. McLeod, Ph.D., Professor of Mathematical Sciences
Stephen K. Reed, Ph.D., Professor of Psychology
Judith T. Sowder, Ph.D., Professor of Mathematical Sciences
Larry K. Sowder, Ph.D., Professor of Mathematical Sciences
Alba G. Thompson, Ed.D., Professor of Mathematical Sciences
Barbara Armstrong, Ph.D., Associate Professor of Teacher Education
Nadine S. Bezuk, Ph.D., Associate Professor of Teacher Education
Cheryl L. Mason, Ph.D., Associate Professor of Teacher Education
Randolph A. Philipp, Ph.D., Associate Professor of Teacher
Education

Faculty Committee for Mathematics Education

Judith T. Sowder, Ph.D., Professor of Mathematical Sciences,
Committee Co-Chair
Nadine S. Bezuk, Ph.D., Associate Professor of Teacher Education,
Associate Director of the School of Teacher Education,
Committee Co-Chair
Nicholas A. Branca, Ed.D., Professor of Mathematical Sciences
Douglas B. McLeod, Ph.D., Professor of Mathematical Sciences
(M.A.T.S. Graduate Adviser)
Larry K. Sowder, Ph.D., Professor of Mathematical Sciences
Alba G. Thompson, Ed.D., Professor of Mathematical Sciences
Patrick W. Thompson, Ed.D., Professor of Mathematical Sciences
Barbara Armstrong, Ph.D., Associate Professor of Teacher Education
Randolph A. Philipp, Ph.D., Associate Professor of Teacher
Education
Rafaela Santa Cruz, Ph.D., Associate Professor of Teacher Education

Section I. Master's Degree Program

General Information

The Department of Mathematical Sciences in the College of Sciences offers two specializations in its program of graduate study leading to a Master of Arts degree for teaching service. The specialization for community college teaching offers candidates a program designed to provide them with the mathematical breadth necessary to teach a wide variety of lower-division collegiate mathematics courses, while also providing them with a better understanding of the issues involved in teaching and learning mathematics. The specialization for secondary teaching offers coursework designed to strengthen the mathematical background of secondary teachers, to provide teachers with a deeper understanding of learning and teaching mathematics in grades 7-12, and to allow teachers the opportunity to analyze curriculum and evaluation efforts in a manner that can lead them to make reasoned judgments about curricular, testing, and instructional issues in grades 7-12 mathematics.

Courses described in this section may also be of interest to students seeking the Master of Arts degree in education with concentrations in elementary curriculum and instruction or secondary curriculum and instruction, offered by the School of Teacher Education.

Associateships

Graduate associateships in mathematical sciences are available to qualified students. Support for qualified candidates may also be available through the School of Teacher Education, through the Center for Research in Mathematics and Science Education or through employment on faculty research grants. Applications are available from the appropriate campus offices.

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.

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 seeking the Master of Arts degree for teaching service in the Department of Mathematical Sciences must have passed a qualifying examination in mathematics education.

Specific Requirements for the Master of Arts Degree for Teaching Service in the Department of Mathematical Sciences

(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 students must complete a graduate program of at least 30 units, 24 of which must be from the

Department of Mathematical Sciences. At least 15 of the 24 must be 600- and 700-numbered courses. A student's program must be prepared in conference with and approved by the graduate adviser.

The two specializations leading to the Master of Arts for teaching service require completion of a specific pattern of graduate units described below.

Specialization in Mathematics for Community College Teaching. This specialization is designed to satisfy the requirements for teaching service at the community college level. Students must have completed a bachelor's degree in mathematics (or equivalent) before entering the program and must have completed six units selected from Mathematics 521A, 524, and 534A. The third course can be taken prior to entrance to the program or as part of the 30-unit degree requirements.

Plan A requires Mathematics 600, 601, 602, and Mathematics Education 603; six units selected from Mathematics 509, 720, Mathematics Education 604, 605, 606; nine units of electives selected with the approval of the adviser; and Mathematics 799A, Thesis.

Plan B requires Mathematics 600, 601, 602, and Mathematics Education 603; nine units selected from Mathematics 509, 720, Mathematics Education 604, 605, 606; and nine units of electives selected with the approval of the adviser. In addition, students must pass a comprehensive examination in mathematics education.

Specialization in Mathematics for Secondary Teaching. This specialization is designed to strengthen the mathematical background of secondary teachers, while providing coursework to better understand the learning and teaching of mathematics in grades 7-12. Students should have the equivalent of a bachelor's degree in mathematics before entering the program.

Plan A requires Mathematics 524; Mathematics Education 603; three units selected from Mathematics 510, 511, 512, or 600; three units selected from Mathematics 521A or 601; three units selected from Mathematics 534A or 602; six units selected from Mathematics 509, 720, Mathematics Education 604, 605, 606; six units of electives selected with the approval of the adviser; and Mathematics 799A, Thesis.

Plan B requires Mathematics 524; Mathematics Education 603; three units selected from Mathematics 510, 511, 512, or 600; three units selected from Mathematics 521A or 601; three units selected from Mathematics 534A or 602; nine units selected from Mathematics 509, 720, Mathematics Education 604, 605, 606; and six units of electives selected with the approval of the adviser. In addition, students must pass a comprehensive examination in mathematics education.

Section II. Doctoral Program

General Information

San Diego State University and the University of California, San Diego, offer jointly a doctoral program in mathematics and science education. The program faculty at SDSU are members of the College of Sciences or the College of Education and are affiliated with the Center for Research in Mathematics and Science Education (CRMSE). They represent a number of different disciplines, including biology, mathematics, natural science, physics, psychology, and teacher education. The program faculty at UCSD, also an interdisciplinary group, are members of the Division of Natural Sciences (biol-

ogy, chemistry, mathematics, and physics) or the Division of Social Sciences (cognitive science, philosophy, and sociology). The program is administered under the College of Sciences at SDSU and under the Division of Natural Sciences at UCSD.

The research interests of the participating faculty members cover a wide range of issues in the learning and teaching of mathematics and the sciences. Graduates of the program will be qualified to take a variety of professional positions, including faculty appointments in universities, colleges, and community colleges; specialist positions in public school districts; and extra-school employment in settings that require expertise in mathematics and science education.

Admission to Doctoral Study

Applicants for admission to the doctoral program in mathematics and science education must meet the general requirements for admission to both universities with classified graduate standing as outlined in the respective current catalogs. Applicants must also meet the special requirements of this program. These include: (a) an acceptable baccalaureate degree from an accredited institution; (b) a master's degree, or its equivalent, in biology, chemistry, physics, or mathematics; a GPA of at least 3.25 in the last 30 semester (or 45 quarter) units of upper division work and at least a 3.50 in the graduate work attempted; (d) good standing in the last institution attended; (e) suitable scores in both the quantitative and verbal sections of the Graduate Record Examinations. Applications from outstanding candidates who have not earned a master's degree may be accepted, under the condition that they spend the first year earning a master's degree in one of the disciplines listed above.

Application. Students seeking admission to the doctoral program should write directly to the Doctoral Program in Mathematics and Science Education, CRMSE, San Diego State University. A complete application requires that the following information be provided:

The appropriate application form, including a statement of purpose.

Transcripts of academic work already completed.

Results of the Graduate Record Examinations.

Three letters of recommendation (sent directly to the Doctoral Program Coordinator, Center for Research in Mathematics and Science Education (CRMSE), San Diego State University).

Specific Requirements for the Doctor of Philosophy Degree in Mathematics and Science Education

(Major Code: 08997)

Residency Requirements. After formal admission to the 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 San Diego State University and the University of California, San Diego.

Language Requirements. There is no formal language requirement for the program. If a student intends to pursue a course of study in which knowledge of another language is necessary, the Advisory Committees will impose the appropriate language requirement.

Course Requirements. All students admitted into the doctoral program will fulfill the following requirements:

- A. Four core courses at SDSU:
 - MSE 801
 - MSE 802
 - MSE 803
 - MSE 810 or PSY 778
- B. Four core courses at UCSD:
 - UCSD 296A
 - UCSD 296B
 - UCSD 296C
 - UCSD 500-level course in student's discipline
- C. One of the following statistics courses at SDSU:
 - PSY 670A
 - PSY 770A
- D. Two courses in cognitive psychology, taken either at SDSU or UCSD:
 - SDSU: PSY 587 and 800
 - UCSD: PSYCH 218A and 218B
- E. One of the following seminars in mathematics or science education at SDSU:
 - MTHED 603
 - N SCI 600
- F. At least one of the following courses at UCSD:
 - PHIL 113
 - PHIL 180
 - PHIL 181
 - PHIL 182
 - HISC 160
 - HISC 163
 - HISC 164
 - SOC 168J
- G. One of the following practicum courses:
 - SDSU MSE 805
 - SDSU MSE 806
 - SDSU MSE 807
 - UCSD TEP 290

Beyond these requirements, no specified number of courses is required for the doctoral degree. It is expected that all the doctoral students will supplement the requirements with electives that contribute to individual career objectives.

Examinations. Students in the doctoral program will be evaluated at the following levels:

(1) First Year Evaluation. The student's ability to master graduate level course material will be assessed after completion of no more than 24 semester units of coursework. This evaluation will take place no later than the third semester of the student's enrollment in the program. The evaluation will be based on the student's performance in coursework and on indicated research competence, and it will be undertaken by the student's Advisory Committee together with instructors from the student's first year courses.

(2) Comprehensive Examinations. At the end of the second year, the student will take an oral comprehensive examination in general cognition and issues of learning pertinent to the student's area of specialization.

(3) Oral Examination. During the third year in the program, the student will make an oral presentation to the Dissertation Committee to accompany a written proposal for the doctoral thesis. The student will be questioned on both the topic of the investigation and on the proposed research methodology. Upon successful completion of this presentation, the student will be recommended for advancement to candidacy for the doctoral degree.

(4) Dissertation Defense. After completion of the dissertation, the candidate will present a public defense of the doctoral dissertation. A copy of the dissertation must be made available to the doctoral faculty at both institutions four weeks prior to the defense. Copies of the abstract of the dissertation, along with the announcement of the defense, must be publicly available at least one week before the defense. The student's Dissertation Committee will make a recommendation to the Graduate Deans to pass or fail the student.

Faculty Adviser. Upon admission to the doctoral program, the program directors will assign each student a faculty adviser. The faculty adviser will serve as adviser until the student has completed the first year of coursework and has been favorably evaluated as described above in (1).

Advisory Committee. Following the first-year evaluation, a doctoral adviser will be selected who will serve as primary adviser for the student's program of study and for the dissertation study. The student and the doctoral adviser, in consultation with the program directors, will select one additional member from the cooperating faculty at each campus to serve on the Advisory Committee. In consultation with the student, the Advisory Committee will develop a course of study for the student. The Advisory Committee will be the official advising group for the student until a Dissertation Committee has been chosen and recommended to the Graduate Divisions of the two institutions by the Advisory Committee.

Dissertation Committee. The Dissertation Committee will be composed of five members with at least two faculty members from each campus. The student and the Advisory Committee will select members of the Dissertation Committee in consultation with program faculty and the program directors. Members of the student's Advisory Committee may serve on the Dissertation Committee or new members may be selected by the student or the program directors.

Dissertation. Following the successful completion of all prescribed coursework and qualifying examinations, the major remaining requirement for the Ph.D. degree will be the satisfactory completion of a dissertation consisting of original research carried out under the guidance of the major professor. Approval of the completed dissertation attests that an organized investigation that expands the frontiers of knowledge and understanding in mathematics and science education has been carried out.

Award of the Degree. The Doctor of Philosophy degree in Mathematics and Science Education 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 Center for Research in Mathematics and Science Education at SDSU has a number of research and teaching associateships available to support students admitted to the Joint Doctoral Program. All students applying to the program will be considered for financial support.

Courses Acceptable on the Master's and Doctoral Degree Programs in Mathematics and Science Education

**GRADUATE COURSES
IN MATHEMATICS EDUCATION**

603. Seminar on Research in Mathematics Learning and Instruction (3)

Prerequisite: Consent of instructor or graduate adviser.
The learning and teaching of mathematics, with emphasis on applications of current psychological theories to mathematics learning, and research on mathematics teaching.

604. Seminar on Curriculum and Evaluation Issues in Mathematics (3)

Prerequisite: Consent of instructor or graduate adviser.
Curriculum projects in mathematics, and evaluation as it pertains to mathematics curricula, to programs, and to mathematics students and teachers.

605. Algebra in the 7-14 Curriculum (3)

Prerequisite: Consent of instructor or graduate adviser.
Curricular change in algebra, with attention to experimental curricula, to research on learning of algebra, and to influences of technology. Implications for instruction.

606. Geometry in 7-14 Curriculum (3)

Prerequisite: Consent of instructor or graduate adviser.
Curricular change in geometry, with attention to experimental curricula, to research on learning and teaching of geometry, and to influences of technology. Implications for instruction.

**GRADUATE COURSES
IN MATHEMATICS AND SCIENCE EDUCATION**

801. Research in Learning (1) Cr/NC

Prerequisite: Admission to doctoral program in Mathematics and Science Education.
Issues of learning with reference to how they are addressed by ongoing projects at CRMSE. Faculty from both institutions will make presentations.

802. Orientation Practicum (1-3) Cr/NC

Prerequisite: Admission to doctoral program in Mathematics and Science Education.
Experience with research programs will introduce students to a variety of research questions and approaches. One research program per unit; minimum three units required in program.

803. Colloquium (1) Cr/NC

Prerequisite: Admission to doctoral program in Mathematics and Science Education.
Advances in research on learning mathematics and science, presented by visiting scholars and faculty from SDSU and UCSD. Maximum credit two units.

805. Supervised Teaching of Teacher Preparation Courses (3) Cr/NC/SP

Prerequisite: Admission to doctoral program in Mathematics and Science Education.
Students will plan and teach, under supervision, a course that prepares prospective teachers to teach mathematics or science at either the elementary or secondary level.

806. Supervised School Practicum (3) Cr/NC/SP

Prerequisite: Admission to doctoral program in Mathematics and Science Education.
School-based project focusing on inservice of teachers or on curriculum development, or work with a school district administrator or mathematics or science.

807. Specially Designed Practicum (3) Cr/NC/SP

Prerequisite: Admission to doctoral program in Mathematics and Science Education.
Practical experience to assist students in gaining experience in career they have selected.

810. Seminar in Research Design (3)

Prerequisite: Admission to doctoral program in Mathematics and Science Education; Psychology 670A, and consent of instructor.
Issues such as analysis of protocols, problems of measurement in evaluation of learning, development, and assessment of cognitive models in learning in mathematics and science.

820. Research Project (3-6) Cr/NC/SP

Prerequisite: Admission to doctoral program in Mathematics and Science Education.
Participation in an ongoing research project and development of a related study.

830. Research Seminar (3)

Prerequisite: Successful completion of qualifying examination.
Students and faculty present ongoing research for discussion and critique.

897. Doctoral Research (1-8) Cr/NC/SP

Prerequisite: An officially constituted doctoral committee and advancement to candidacy.
Independent investigation in general field of the dissertation.

898. Doctoral Special Study (1-8) Cr/NC/SP

Prerequisite: An officially constituted doctoral committee and advancement to candidacy.
Individual study in the field of specialization.

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.

For additional courses applicable to the Master of Arts degree for Teaching Service see:

- Mathematics 600: Geometrical Systems
- Mathematics 601: Topics in Algebra
- Mathematics 602: Topics in Analysis

For additional courses related to mathematics education see:

- Teacher Education 511: Diagnosis and Remediation of Difficulties in Mathematics
- Teacher Education 610A: Seminar in Mathematics Education—Elementary School
- Teacher Education 613: Seminar in Mathematics Education—Secondary School
- Teacher Education 625: Instruction in Mathematical Problem Solving

Music

In the College of Professional Studies and Fine Arts

OFFICE: Music 111
TELEPHONE: (619) 594-6031

Faculty

Martin J. Chambers, M.M., Professor of Music, Director of School of Music and Dance
Frank W. Almond, Ph.D., Professor of Music
Donald P. Barra, Ed.D., Professor of Music
Brenton P. Dutton, M.M., Professor of Music
Jane M. Kolar, Ph.D., Professor of Music
Marian Liebowitz, D.M.A., 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
Terry L. O'Donnell, D.M.A., Professor of Music
Lewis E. Peterman, Jr., Ph.D., Professor of Music
Thomas D. Stauffer, M.A., M.M., Professor of Music (Graduate Adviser)
David Ward-Steinman, D.M.A., Professor of Music
Bill Yeager, M.M., Professor of Music
Karen J. Follingstad, D.M.A., Associate Professor of Music
Howard Hill, M.A., Associate Professor of Music

Applied Music Instruction

Piano: Darby, Follingstad, Katz, Kolar
Harp: Paul
Organ: Plimpton, Spelman
Voice: Chambers, MacKenzie, Tweed, Westbrook
Flute: Buckley, Bursill-Hall
Oboe: Barrett, Michel
Clarinet: Liebowitz
Saxophone: Rekevics
Early Instruments: Peterman
Bassoon: Barrett, Michel
French Horn: Cable, Gref, Lorge
Trumpet: Price
Trombone: Emrich, Pringle, Yeager
Baritone Horn: Dutton
Tuba: Dutton
Percussion: Mitchell
Violin: Gruppman, Hill
Viola: Elaine
Cello: Stauffer
Contrabass: G. Biggs
Harp: Hays
Classical Guitar: Benedetti, Kilmer, Romero
Composition: Dutton, Stauffer, Ward-Steinman
Non-Western Instruments: Specialists from specific cultures as available each semester
Jazz Studies: Helzer, Yeager
Opera: Chambers

Scholarships

Information on music scholarships may be obtained by writing to the Chair, Music Scholarship Committee, School of Music and Dance, San Diego State University.

General Information

The School of Music and Dance, 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 school is a member of the National Association of Schools of Music.

With approval of the school, students electing to pursue the Master of Arts degree may specialize in one of the following fields: composition; ethnomusicology; music history and literature; musicology; piano/voice pedagogy and theory. Master of Music students may specialize in performance, composition, jazz and choral or instrumental conducting.

Specializations of the music faculty include:

Composition and theory: Aesthetics; comprehensive musicianship; contemporary music; relationships among the arts.

Conducting: Literature and score analysis, hand techniques, rehearsal techniques, general preparation and performance in both the choral and instrumental areas.

Ethnomusicology: African, African-American, American folk, East Asian, European, South Asian, and Southeast Asian musics. Students may elect research in other areas with approval of the faculty adviser.

Music history/literature, and musicology: Students may select (with the approval of the faculty) a topic in medieval, renaissance, baroque, classical, romantic, twentieth century music, or American music.

Performance: Performance studies are offered on all instruments.

Piano pedagogy: Techniques in training the piano teacher for the child, adolescent and adult.

Voice pedagogy: Training the singing teacher through physiological and empirical methods.

The 78,000 square-foot music building, completed 1970, includes a 200-seat recital hall, rehearsal rooms for instrumental and choral organizations, an inter-active audio production studio, three classroom piano rooms, a listening library with a collection of over 13,000 titles available for faculty/student study, 71 individual practice rooms, and approximately 160 pianos and 800 other musical instruments. The University library contains an extensive collection of over 75,000 music books and scores.

The School of Music and Dance has established a new 24 station student computer laboratory. This lab will provide facilities for computer assisted instruction in music theory and ear training, word processing programs for essays and term papers, programs for graphics and composing music, a program for a MIDI sequencer from an electric keyboard, and programs for printing music.

The inter-active audio production studio has been completely renovated and includes the latest electronic music equipment available.

The School of Music and Dance houses numerous ethnic instruments including Balinese and Javanese Gamelans and numerous other musical instruments of the world. The school's holdings also include an extensive collection of early Western musical instruments.

The School of Music and Dance has the following scholarship funds and endowments: Nadine Bolles Piano, Elsie Hiland Fox Memorial, M. H. Golden Memorial, Lois Greeno Memorial, Joseph E. Johnson, Kiwanis Club, Lieber-Flower, Jan Lowenbach Musicology, Music Fund, Bessie S. Purdy Memorial, Edith Savage Memorial, SDSU Opera Theatre, Sigma Alpha Iota Alumni, SPEBQSA, Christine Springston Memorial, Paul C. Stauffer Memorial, University Band, Marvin Yerkey Memorial.

Admission to Graduate Study in Music

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 admitted to the program will be accepted with conditional graduate standing. Placement examinations will be administered in Western music history, Western music theory, and performance studies. Normally one semester 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 and 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 placement examinations in Western theory, Western music history and literature, and performance. Details may be obtained from the School of Music and Dance.

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.

Admission to Master of Arts Degree in Music

In addition to meeting the admission requirements listed above, students who seek a specialization in music history and literature, piano or vocal pedagogy must pass an audition on an instrument or voice. The Master of Arts degree in music is available with the following specializations: composition, ethnomusicology, music history and literature, musicology, music theory, piano pedagogy, and vocal pedagogy.

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 of which at least 18 must be in 600- and 700-numbered courses and which includes the following core: Music 613,

652, and 690.

Plan A is required of those students electing programs in composition, music history and literature, theory, and musicology. Students are required to enroll in Music 799A, 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.

Students whose field is ethnomusicology, voice or piano pedagogy may choose either Plan A or Plan B. Students in Plan B are required to enroll in Music 766, Graduate Lecture Recital. A final oral comprehensive examination and written document are required of all students electing Plan B.

Master of Arts candidates in ethnomusicology, music history and literature, and musicology must have a reading ability in an approved foreign language. Students in vocal pedagogy must satisfy department requirements in French, German, and Italian.

In addition to the requirements stated above, students must complete requirements in the selected specialization.

Composition

Core: Music 613, 652, 690.

Program: Music 507, 590; six additional units of 613; 651 (6 units), 799A.

Electives: Two units.

Ethnomusicology

Core: Music 613H, 652H, 690.

Program: Music 561 (6 units), 610, 651 (6 units); 766 (Plan B) or 799A (Plan A).

Electives: Three units.

Music History and Literature

Core: Music 613, 652, 690.

Program: Music 554, 651 (4 units); nine units selected from 590, 613H, 652H, 660, 670; 799A.

Electives: Three units.

Musicology

Core: Music 613, 652, 690.

Program: Music 652H; three additional units from Music 652; nine units selected from Music 590, 613H, 660, 670; 799A.

Electives: Three units.

Music Theory

Core: Music 613, 652, 690.

Program: Six additional units selected from Music 613; nine units selected from Music 562, 569-589 (1-4 units), 590, 592, 613H, 652H; 799A.

Electives: Three units.

Piano Pedagogy

Core: Music 613, 652, 690.

Program: Music 541A, 542A, 554G, 554H, 641 or 642; 651 (4 units); 766 (Plan B) or 799A (Plan A).

Electives: Two units.

Vocal Pedagogy

Core: Music 613, 652, 690.

Program: Music 541C, 542C, 554, 643, 651 (4 units); 766 (Plan B) or 799A (Plan A).

Electives: Four units.

Refer to Music Graduate Student Handbook for further details.

Admission to Master of Music

In addition to meeting the admission requirements listed above, 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. The Master of Music is available with the following specializations: composition, instrumental and choral conducting, instrumental and vocal performance and jazz studies. Please consult the School of Music and Dance for further information concerning admission.

Specific Requirements for the Master of Music Degree

(Major Code: 10041)

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, of which at least 18 must be in 600- and 700-numbered courses.

In order to be advanced to candidacy, students in Vocal Performance must satisfy either a music foreign language examination or attain a satisfactory grade in an introductory college level course in French, German or Italian. A final oral comprehensive examination is required for all Master of Music candidates.

In addition to the requirements stated above, students must complete requirements in the specific program selected:

Composition

Core: Music 613, 652, 690.

Program: Music 507; three additional units from Music 613; three additional units from Music 613 or 652; 651 (9 units); 767.

Electives: Two units.

Conducting (Choral)

Core: Music 613, 652, 690.

Program: Music 554E, 586 (2 units), 600, 651 (9 units); 767.

Electives: Three units.

Conducting (Instrumental)

Core: Music 613, 652, 690.

Program: Music 554, 569-589 (2 units), 591, 651 (9 units); 767.

Electives: Three units.

Jazz Studies

Core: Music 613, 652, 690.

Program: Music 651 (9 units), 767, six units selected from Music 507, 566A-566B, 570-589 (1-3 units), 590.

Electives: Three units.

Performance (Instrumental)

Core: Music 613, 652, 690.

Program: Music 554, 569-589 (3 units), 651 (9 units); 767.

Electives: Four units.

Performance (Vocal)

Core: Music 613, 652, 690.

Program: Music 554, 569-589 (3 units), 651 (9 units), 767.

Electives: Four units.

Refer to Music Graduate Student Handbook for further details.

Courses Acceptable on Master's Degree Program in Music

UPPER DIVISION COURSES

507. Composition Laboratory (1)

Three hours of laboratory.

Prerequisites: Music 207 with a grade of C (2.0) or better and consent of instructor.

Continuation of Music 207. Maximum credit two units.

515. Professional Orientation for Music Performers (2)

One lecture and two hours of activity.

Prerequisites: Twelve units of upper division or graduate standing in B.M. or M.M. degree. Others by consent of instructor.

Conditions met in professional music world as well as opportunities available. Auditions, contracts, legal and tax responsibilities, media and press promotion, grants, professional management, apprenticeships.

541. 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 C. Voice

542. Performance Studies Laboratory (2)

One lecture and three hours of laboratory.

Prerequisites: For 542A: Music 541A with a grade of C (2.0) or better. For 542C: Music 541C with a grade of C (2.0) or better.

Practical experience in the teaching of individual or group lessons.

A. Piano C. Voice

543. Diction (1)

Principles of pronunciation and enunciation. Application to song and opera in English, Italian, German, and French.

554. Music Literature (2) I, II

Prerequisite: Music 255B.

A concentrated study of the literature in the several areas listed. Analysis of scores and recordings. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

- A. Chamber Music Literature
- B. Orchestral Literature
- C. Band Literature
- D. Song Literature
- E. Choral Literature
- G. Keyboard Literature (Seventeenth Century through Beethoven)
- H. Keyboard Literature (Schubert to the Present)

561. Area Studies: Ethnomusicology (3)

Prerequisite: Music 351E.

Music of a specific culture. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

562. World Music in Context (2)

One lecture and two hours of activity.

Prerequisites: Music 351E and consent of instructor.

Practical experience in the performance of specialized traditional genres of world music, social and environmental context in which they exist. Relationship of music, dance, and theater. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

566A-566B. Jazz Arranging and Composition (2-2)

Prerequisite: Music 255B.

Analysis of jazz compositions and arrangements; arranging and composing for large and small jazz ensembles.

569. Advanced Collegium Musicum (1) I, II

Prerequisite: Music 369.

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.

570. Advanced Chamber Music (1) I, II

Three hours.

Prerequisite: Consent of instructor.

Study and public performance of established repertory as well as new compositions. Sections for string, woodwind, brass, piano and mixed ensemble groups. May be repeated with new course content. See Class Schedule for specific content. Maximum credit four units.

576. Wind Symphony (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.

580. 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. (Formerly numbered Music 581.)

584. Opera Theatre (2)

Six or more hours per week.

Prerequisite: By audition.

Interpretation and characterization of light and grand opera. Specific work in coordination of opera ensemble. Maximum credit eight units of which six units are applicable to a master's degree. (Formerly numbered Music 553.)

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.

586. Chamber Singers (1) I, II

Five hours.

Prerequisite: Consent of instructor.

Study and public performance of representative literature for the ensemble. Practical experience in rehearsal technique. 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.

590. Advanced Practicum in Music (3)

Prerequisite: Consent of instructor in area of practicum.

Students will be assigned to appropriate class sections within selected undergraduate area as instructional assistants under staff supervision. (Formerly numbered Music 658.)

591. Theory and Practice of Musical Expression and Interpretation (2)

Prerequisite: Music 255B.

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 architectonic structure.

592. Analogs 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.

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 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 Choral and Vocal Techniques (3)**

Prerequisite: Consent of instructor.

Choral and vocal techniques in music education. (Formerly numbered Music 600B.)

610. Seminar in Ethnomusicology (3)

Prerequisite: Completion of undergraduate comprehensive musicianship core.

Ethnomusicology with emphasis on its relationship to research, field work, transportation and analysis, classification of instruments and musical styles, and cultural context.

613. Seminar in Music Theory (3)

Prerequisite: Music 455B is prerequisite to 613H.

Current advanced analytic techniques in various areas of music.

A. History and Development of Music Theory

B. Problems in Analysis

C. Functional Harmony and Schenkerian Analysis

G. Conceptual Analysis of the Jazz Idiom

H. Ancient and Modern Notational Systems of the World

641. Piano Pedagogy: The Adolescent (3)

Two lectures and three hours of laboratory.

Prerequisite: Music 542A.

Study of music through the piano for the adolescent with analysis and application of appropriate teaching procedures and learning theories. Analysis of literature with corresponding techniques, musical skills and creativity. Supervised teaching.

642. Piano 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. Analysis of solo and ensemble literature. Problem solving and practice. Supervised fieldwork.

643. Seminar: History of Vocal Pedagogy (3)

Prerequisite: Music 541C.

Techniques and practices used to train the human voice in music from the seventeenth century to the present.

651. Advanced Performance Studies (1-3)

Fifteen one-half hour private lessons (1 unit); fifteen one-hour private lessons (2 units); twenty-two hours private lessons (3 units).

Prerequisite: Audition before music faculty. Music 651B for one unit includes M.F.A. in drama students.

Advanced studies in technical, stylistic, and aesthetic elements of artistic performance culminating in a graduate recital. Maximum credit nine units, four of which are applicable to a master of arts degree. Music 651M will include regular ensemble conducting experience.

- | | |
|-------------------|---------------------------|
| A. Keyboard | H. Harp |
| B. Voice | I. Jazz Instrument |
| C. Woodwind | J. Medieval/Renaissance |
| D. Brass | Instrument |
| E. Percussion | K. Non-Western Instrument |
| F. Strings | L. Composition |
| G. Classic Guitar | M. Conducting |

652. Seminar in Music History (3)

Prerequisites: Music 457A and consent of instructor. Music 364A-364B and 452C are prerequisite to 652G. Music 455B is prerequisite to 652H.

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
- G. History of Jazz
- H. Interrelationships in World Music History

660. Seminar: A Major Composer (3)

Prerequisite: Music 457A. Completion of a seminar in Music 652 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.

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. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

766. Graduate Lecture Recital (3)

Prerequisites: Advancement to candidacy. Consent of school director.

For students in M.A. in Music, Plan B. Lecture and recital program for at least one hour in length based upon a written document dealing with a musical problem in history, theory, pedagogy or ethnomusicology showing evidence of original research. Public presentation and an examination before a graduate committee of music faculty.

767. Graduate Recital (3)

Prerequisites: Advancement to candidacy. Consent of school director.

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 before a graduate committee of music department faculty. Conductors must conduct a public performance.

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

Prerequisite: Consent of staff; to be arranged with school director 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 a master's degree.

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

Prerequisite: Prior registration in Thesis or Project 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

In the College of Sciences

OFFICE: Physics 131
TELEPHONE: (619) 594-6240

Program Coordinator: Phoebe E. Roeder, Ph.D.

Faculty

Elsa Feher, Ph.D., Professor of Physics
Kathleen M. Fisher, Ph.D., Professor of Biology
Fred M. Goldberg, Ph.D., Professor of Physics

Associateships

Graduate teaching associateships 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 Natural Science program, 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)

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 ten 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 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 Science Education (3)

An intensive study in advanced science education. 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 coordinator and instructor.

Individual study. Maximum credit six units applicable to a master's degree.

Nursing

In the College of Health and Human Services

OFFICE: Hardy Tower 58
TELEPHONE: (619) 594-5357
FAX: (619) 594-2765

Faculty

Patricia R. Wahl, Ph.D., F.A.A.N., Professor of Nursing, Director of School
Janet L. Blenner, Ph.D., F.A.A.N., Professor of Nursing
Janet R. Heineken, Ph.D., Professor of Nursing
John M. Lantz, Ph.D., Professor of Nursing
Martha J. Shively, Ph.D., Professor of Nursing
Carolyn L. Walker, Ph.D., Professor of Nursing (Graduate Adviser)
Dolores A. Wozniak, Ed.D., Professor of Nursing, Dean of the College of Health and Human Services
Betty L. Broom, 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, Associate Director of School
Sue A. Hadley, D.N.S., Associate Professor of Nursing
Catherine E. Loveridge, Ph.D., Associate Professor of Nursing
Rita I. Morris, Ph.D., Associate Professor of Nursing
Richard C. Reed, Ed.D., Associate Professor of Nursing
Barbara Jean Riegel, D.N.Sc., F.A.A.N., Associate Professor of Nursing
Lembi Saarmann, Ed.D., Associate Professor of Nursing
Myrna J. Moffett, 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 degree in nursing.

Graduates of the program will be prepared to function as middle or executive-level nursing administrators, clinical specialists, nurse midwives and/or nurse practitioners. There are three concentrations: Community Health Nursing, Advanced Practice Nursing of Adults and the Elderly, and Nursing Systems Administration. Students in the Community Health Nursing Concentration may specialize in Midwife and OB/GYN Nurse Practitioner, Family Nurse Practitioner, or School Nursing. Students in Advanced Practice Nursing of Adults and the Elderly are prepared as adult/geriatric nurse practitioners and clinical nurse specialists and may specialize in either Acute Care or Critical Care. The graduate program requires a minimum of 39 units. The program is designed for either full- or part-time study. All graduates of the program are prepared for beginning roles as nurse researchers and for further educational opportunities in doctoral studies.

A multitude of research opportunities are available to students in the program. The School of Nursing has clinical contracts with all of the leading research and clinical teaching health care agencies within the county. Furthermore, all graduate faculty are doctorally prepared, and students may have the opportunity to be involved in ongoing faculty research projects.

Application for Admission

Application materials to obtain tentative admission to the program leading to the Master of Science degree in nursing can be obtained by writing directly to the School of Nursing. Detailed instructions including information concerning application procedures will accompany the application form.

Students for the Family Nurse Practitioner and the Midwife and OB/GYN Nurse Practitioner programs are admitted for fall semester only and applications must be received by March 15 for fall admission.

Students for all other programs are admitted in the fall and spring semesters of each year. All applicants must file an Application for Admission to the San Diego State University Office of Admissions and Records and to the School of Nursing.

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 program accredited by the National League for Nursing. Graduates from baccalaureate programs 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 graduate courses beyond the minimum units necessary for advanced degrees.
2. Have a minimum cumulative grade point average of 3.0 on a 4.0 scale in undergraduate upper division courses.
3. Must have satisfactory score on GRE General Test.
4. Have a California 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. For Midwife and OB/GYN Nurse Practitioner applicants, the experience must be in labor and delivery.
6. Have satisfactorily completed Nursing 500, Advanced Health Assessment and Health Promotion, or equivalent with a grade of C or better. (N.S.A. students are exempt from this requirement). Students in the School Nursing Specialization must also have satisfactorily completed Communicative Disorders 540, Hearing Conservation and Audiometry for School Nurses.
7. Have satisfactorily completed a course in statistics. (Mathematics 250 or equivalent with a grade of C or better.)
8. Submit three letters of recommendation attesting to capability to do graduate work in nursing.
9. Submit a personal statement.

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 \$1,000,000) 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, 608, and 684) 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.

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 39-57.06 unit course of study. The program includes:

1. Twelve units of core courses to include Nursing 602, 604, 608, and 684.
2. A minimum of 18-45.06 units of graduate courses in the area of concentration or specialization.
3. Zero to six units of electives.
4. Nursing 799A, Thesis, *OR* Plan B Option, Comprehensive Examination.

Students in all concentrations may choose between Plan A, Thesis or Project, or Plan B, Comprehensive Examination. The choice of Plan A or Plan B should be made early in the program. Students should consult with the graduate adviser and the concentration chair for current policies. Up to 12 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:

Core Courses		<i>Units</i>
NURS 602	Issues, Ethics, and Politics in Health Care.....	3
NURS 604	Theoretical and Research Bases of Nursing	3
NURS 608	Nursing in the Health Care System.....	3
NURS 684	Information Systems for Nursing	3
		12

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Area of Concentration Courses

		<i>Units</i>
PH 601	Epidemiology	3
NURS 630	Community Health Nursing Theory	3
NURS 631	Community Health Nursing Practicum	3
NURS 730	Advanced Community Health Nursing	3
NURS 732	Advanced Community Health Nursing Practicum	3
NURS 736	Seminar in Community Health Problems.....	3
		18

Electives: Six units of electives selected at 600-level or above from Nursing, Anthropology,

	Public Health, or Sociology	6
NURS 799A	Thesis <i>OR</i>	3
NURS 798, Plan B Option,	Comprehensive Examination.....	3

Total Units 39

Specialization as a Midwife and OB/GYN Nurse Practitioner

Required courses for the collaborative San Diego State University and University of California, San Diego, School of Medicine, program of studies leading to a Master of Science degree with a specialization as an OB/GYN Nurse Practitioner/Nurse Midwife. Graduates meet all criteria for certification (licensure by examination) by the California Board of Registered Nursing (OB/GYN Nurse Practitioner, Nurse Midwife), Nurses Association of the American College of Obstetrics and Gynecology (OB/GYN Nurse Practitioner), and the American College of Nurse Midwives (CNM).

Core Courses (SDSU)

		<i>Units</i>
NURS 602	Issues, Ethics, and Politics in Health Care	3
NURS 604	Theoretical and Research Bases of Nursing	3
NURS 608	Nursing in the Health Care System	3
NURS 684	Information Systems for Nursing	3
		12

Community Health Nursing Concentration Courses (SDSU)

		<i>Units</i>
NURS 630	Community Health Nursing Theory	3
NURS 634	Physiology of Pregnancy and Fetal Development.....	3
NURS 730	Advanced Community Health Nursing	3
PH 651A	Contemporary Issues in Maternal and Child Health.....	3
PH 652	Maternal and Women's Health	3
PH 757	Seminar in Nutrition in Maternal and Child Health.....	3
		18

Area of Specialization Courses (UCSD)

		<i>Quarter Units</i>
Fall Quarter		
N222A	Principles of Nurse Midwifery	4
N240AC	Family Primary Care 1C.....	3
N241A	Collaborative Role Development	1
N404	Clinical Residency	6

Nursing

Winter Quarter

N222B	Nurse Midwifery Management	4
N232	Pharmacology.....	3
N258C	Family and Childbearing.....	3
N404	Clinical Residency	6

Spring Quarter

N222C	Complex Problems	4
N241B	Collaborative Role Development	1
N404	Clinical Residency	6

Quarter units converted to semester units 27.06

Specific prerequisites for admission into the UCSD part of the program: N237 Health Assessment, equivalency or exhibited competencies. (Note: N237 is offered in the Summer Session prior to the beginning of other courses.)

Specialization as a Family Nurse Practitioner

Required courses for the collaborative San Diego State University and University of California, San Diego, program of studies leading to a Master of Science degree with a specialization as a family nurse practitioner from San Diego State University and a Certificate as a Family Nurse Practitioner from the University of California, San Diego, School of Medicine are as follows:

Core Courses (SDSU)

		<i>Units</i>
NURS 602	Issues, Ethics, and Politics in Health Care	3
NURS 604	Theoretical and Research Bases of Nursing.....	3
NURS 608	Nursing in the Health Care System	3
NURS 684	Information Systems for Nursing.....	3
		12

Community Health Nursing Concentration Courses (SDSU)

		<i>Units</i>
NURS 630	Community Health Nursing Theory.....	3
NURS 730	Advanced Community Health Nursing	3
		6

Area of Specialization Courses (UCSD)

		<i>Quarter Units</i>
N 232	Pharmacology.....	3
N 240AC	Family Primary Care I-Core.....	3
N 240AS	Family Primary Care I-FNP Spec.....	2
N 240B	Family Primary Care II.....	4
N 240C	Family Primary Care III	4
N 241A	Collaborative Role Development A.....	1
N 241B	Collaborative Role Development B.....	1
N 279C	Behavioral and Cultural Issues in Family Health	2
N 404	Clinical Residency	6
N 404	Clinical Residency	6
N 404	Clinical Residency	6

Quarter units converted to semester units 25.08

NURS 799A	Thesis <i>OR</i>	
NURS 798, Plan B Option, Comprehensive Examination (SDSU) ...		3

Total Semester Units 46.08

Applicants to the Family Nurse Practitioner Specialization shall have completed Nursing 500, or equivalent course prior to beginning the UCSD specialization courses. Students accepted into the specialization have the option of taking Nursing PR 237 Health Assessment at UCSD.

Specialization in School Nursing

Students admitted to the School Nursing Specialization within the Community Health Nursing Concentration will pursue a program of studies leading to a Master of Science in Nursing degree and a Health Services Credential. Required courses are as follows:

Core Courses

		<i>Units</i>
NURS 602	Issues, Ethics, and Politics in Health Care	3
NURS 604	Theoretical and Research Bases of Nursing.....	3
NURS 608	Nursing in the Health Care System	3
NURS 684	Information Systems for Nursing.....	3
		12

Community Health Concentration Courses

		<i>Units</i>
NURS 630	Community Health Nursing Theory.....	3
NURS 631	Community Health Nursing Practicum	3
NURS 736	Seminar in Community Health Problems.....	3
PH 601	Epidemiology	3
		12

Area of Specialization Courses

		<i>Units</i>
NURS 670	School Nursing Management Practices.....	3
NURS 672	Primary Health Care of the School-Aged Child.....	3
NURS 674	Health Education for School Nurses	3
SPED 500	Human Exceptionality.....	3
		12
NURS 799A	Thesis <i>OR</i>	
NURS 798, Plan B Option, Comprehensive Examination.....		3
		Total Units 39

Advanced Practice Nursing of Adults and the Elderly Concentration (Joint Nurse Practitioner and Clinical Nurse Specialist Preparation)

Specialization in Critical Care Nursing

Required courses for the Master of Science degree with a concentration in advanced practice nursing of adults and the elderly and a specialization in critical care nursing are as follows:

Core Courses

		<i>Units</i>
NURS 602	Issues, Ethics, and Politics in Health Care	3
NURS 604	Theoretical and Research Bases of Nursing.....	3
NURS 608	Nursing in the Health Care System	3
NURS 684	Information Systems for Nursing.....	3
		12

Advanced Practice Nursing of Adults and the Elderly Concentration Courses

		<i>Units</i>
NURS 500	Advanced Health Assessment and Health Promotion	4
NURS 590	Pathophysiology in Adults and the Elderly	3
N 232	Pharmacology (UCSD)	2
NURS 654	Advanced Practice Nursing: Primary Care I	3
NURS 655	Advanced Practice Nursing: Primary Care Practicum I.....	6
NURS 656	Advanced Practice Nursing: Primary Care II.....	3

NURS 657	Advanced Practice Nursing: Primary Care Practicum II.....	6
	Prescribed Electives: Three units selected with the approval of the concentration chair	3
NURS 799A	Thesis OR	
NURS 798, Plan B Option,	Comprehensive Examination.....	3
		<u>33</u>

Area of Specialization Courses

		<i>Units</i>
NURS 752	Advanced Practice Nursing: Critical Care Theory and Technology	3
NURS 753	Advanced Practice Nursing: Acute and Critical Care Practicum.....	3
		<u>6</u>
	Total Units	51

Specialization in Acute Care Nursing

Required courses for the Master of Science degree with a concentration in advanced practice nursing of adults and the elderly and a specialization in acute care nursing are as follows:

Core Courses

		<i>Units</i>
NURS 602	Issues, Ethics, and Politics in Health Care	3
NURS 604	Theoretical and Research Bases of Nursing	3
NURS 608	Nursing in the Health Care System	3
NURS 684	Information Systems for Nursing.....	3
		<u>12</u>

Advanced Practice Nursing of Adults and the Elderly Concentration Courses

		<i>Units</i>
NURS 500	Advanced Health Assessment and Health Promotion 4	
NURS 590	Pathophysiology in Adults and the Elderly	3
N 232	Pharmacology (UCSD)	2
NURS 654	Advanced Practice Nursing: Primary Care I	3
NURS 655	Advanced Practice Nursing: Primary Care Practicum II.....	6
NURS 656	Advanced Practice Nursing: Primary Care II	3
NURS 657	Advanced Practice Nursing: Primary Care Practicum II.....	6
	Prescribed Electives: Three units selected with the approval of the concentration chair	3
NURS 799A	Thesis OR	
NURS 798, Plan B Option,	Comprehensive Examination.....	3
		<u>33</u>

Area of Specialization Courses

		<i>Units</i>
NURS 751	Advanced Practice Nursing: Acute Care Theory and Technology	3
NURS 753	Advanced Practice Nursing: Acute and Critical Care Practicum.....	3
		<u>6</u>
	Total Units	51

Nursing Systems Administration Concentration

Required courses for the Master of Science degree with a concentration in nursing systems administration are as follows:

Core Courses

		<i>Units</i>
NURS 602	Issues, Ethics, and Politics in Health Care	3
NURS 604	Theoretical and Research Bases of Nursing	3
NURS 608	Nursing in the Health Care System	3
NURS 684	Information Systems for Nursing.....	3
		<u>12</u>

Area of Concentration Courses

		<i>Units</i>
NURS 620	Foundations of Nursing Administration Practice	3
NURS 622	Quality Improvement and Program Evaluation in Nursing Systems Organization	3
NURS 624	Nursing Care Systems and Personnel Management..	3
NURS 724	Nursing Systems Administration Practicum	3
NURS 726	Advanced Nursing Systems Administration Practicum	3
NURS 797	Research.....	3
PH 645	Health Services Economics.....	3
PH 742A	Health Services Financial Management.....	3
		<u>24</u>
	Electives	3
NURS 799A	Thesis OR	
NURS 798, Plan B Option,	Comprehensive Examination.....	3
		<u>42</u>

Health Services Credential

(Credential Code: 00600)

San Diego State University offers curricula leading to the Health Services Credential. This authorizes the holder to serve as a school nurse. For information concerning the credential, the student is referred to the School of Nursing Office, HT-58.

The Health Services Credential has been approved by the Commission on Teacher Credentialing.

All applicants seeking admission to the Health Services Credential program must be admitted to the University and accepted as a classified postbaccalaureate student. Satisfactory completion of the program requires an overall GPA of 3.0 with individual course grades above 2.0.

Standards for Admission

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.

Program

The following program elements are required of all health services credential candidates: (31 units).

		<i>Units</i>
NURS 500	Advanced Health Assessment and Health Promotion 4	
NURS 670	School Nursing Management Practices.....	3
NURS 672	Primary Health Care of the School-Aged Child.....	3
NURS 674	Health Education for School Nurses	3

NURS 900	Current Concepts in Community Health Nursing.....	3
NURS 901	Family Health Theory and Nursing Practice	3
NURS 902	Primary Health Care School-Aged Child Practicum	3
C DIS 540	Hearing Conservation and Audiometry for School Nurses.....	3
SPED 500	Human Exceptionality.....	3
Electives:	Three units to be selected with approval of adviser.	

Courses Acceptable on Master's Degree Program in Nursing

UPPER DIVISION COURSES

500. Advanced Health Assessment and Health Promotion (4)

Three lectures and three hours of laboratory.
Prerequisite: Consent of graduate adviser.
Physical and psychosocial assessment techniques, health promotion strategies for select populations.

590. Pathophysiology in Adults and the Elderly (3)

Prerequisite: Consent of graduate adviser.
Physiologic alterations associated with acute and chronic illness in adults and the elderly as a basis for primary prevention and medical and nursing interventions.

596. Special Topics in Nursing (1-3)

Prerequisites: Completion of 30 upper division units in nursing or graduate status; 3.0 grade point average.
Selected topics in the practice of nursing. 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 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 COURSES

602. Issues, Ethics, and Politics in Health Care (3)

Current and evolving health care issues and policies. Ethical, political, and social forces underlying delivery of health care. Focus on professional nursing.

604. Theoretical and Research Bases of Nursing (3)

Integration of theory and research in nursing. Focus on theory, development, testing, and evaluation. Research process in nursing, including design, analysis, and utilization.

608. Nursing in the Health Care System (3)

Nursing in a changing health care delivery system. Organizational, economic, political, and professional concepts relevant to design and delivery of nursing care.

620. Foundations of Nursing Administration Practice (3)

Analysis of communication concepts appropriate to a variety of complex nursing and health care delivery systems.

622. Quality Improvement and Program Evaluation in Nursing Systems Organizations (3)

Evaluation theories and concepts within a nursing care delivery system and health care organization. Concepts of quality manage-

ment, consistent with accreditation criteria and professional standards of practice.

624. Nursing Care Systems and Personnel Management (3)

Prerequisites: Credit or concurrent registration in Nursing 604 and 608.
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)

Prerequisite: Nursing 604.
Family and systems theory, group dynamics, change process, application of ethnoscience to nursing process in the community setting.

631. Community Health Nursing Practicum (3)

Nine hours per week.
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.

634. Physiology of Pregnancy and Fetal Development (3)

Prerequisites: Nursing 602 and 604.
Analysis of physiologic alterations during pregnancy and fetal development as a basis for advanced health assessment and interventions in the childbearing population.

652. Critical Care Nursing (3)

Prerequisites: Nursing 590, 650 and 651. One year critical care nursing experience.
Care of clients experiencing acute alterations in cardiovascular, respiratory and renal function. Clinical decision making, variables altering client response to care. (This course to be offered for the last time 1996-97 academic year.)

653. Critical Care Nursing Practicum (3)

Nine hours of laboratory.
Prerequisite: Credit or concurrent registration in Nursing 652.
Guided clinical experiences specific to the advanced clinical practice role of critical care nurse specialist. (This course to be offered for the last time 1996-97 academic year.)

654. Advanced Practice Nursing: Primary Care I (3)

Prerequisites: Nursing 500, 590, 604, 608. Credit or concurrent registration in Nursing 602 and 684. Concurrent registration in Nursing 655.
Primary care management of adults and elderly with acute and chronic health problems. Role of advanced practice nurse in health promotion and treatment of illness in primary care and specialized settings.

655. Advanced Practice Nursing: Primary Care Practicum I (6)

Eighteen hours of laboratory per week.
Prerequisite: Concurrent registration in Nursing 654.
Supervised clinical experiences providing primary care to adults and elderly in diverse clinical settings.

656. Advanced Practice Nursing: Primary Care II (3)

Prerequisites: Nursing 654 and 655. Concurrent registration in Nursing 657.
Primary care management of adults and elderly with acute and chronic health problems. Contemporary role and psychosocial issues in advanced practice nursing of adults and elderly.

657. Advanced Practice Nursing: Primary Care Practicum II (6)

Eighteen hours of laboratory per week.

Prerequisites: Nursing 654 and 655. Concurrent registration in Nursing 656.

Supervised clinical experiences providing primary care to adults and elderly in diverse clinical settings.

670. School Nursing Management Practices (3)

Prerequisite: Admission to master's degree program in nursing or health services credential.

Management of school health services program; designed for school nurse with emphasis on professional and organizational systems.

672. Primary Health Care of the School Aged Child (3)

Prerequisite: Nursing 500.

Primary health care of the child and adolescent with emphasis on common health problems, chronic illness, drugs, behavioral problems, and the battered child.

674. Health Education for School Nurses (3)

Prerequisite: Nursing 672.

Prepares school nurse to be an active participant in school health education with emphasis on planning and presentation of health instructional material focused on disease prevention and health promotion. (Formerly numbered Health Science 521 and Nursing 521.)

684. Information Systems for Nursing (3)

Two lectures and three hours of laboratory.

Information systems and information management in all aspects of nursing practice including client care, administration, research and education. Ethics of computer use and influence of information technology on client care. User skills.

696. Seminar in Selected Topics in Nursing (1-3)

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. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

724. Nursing Systems Administration Practicum (3)

Nine hours of laboratory.

Prerequisites: Nursing 622 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 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.

Prerequisite: Nursing 724.

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 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)

Prerequisite: Nursing 630.

Nursing assessment and analysis of community characteristics, including social, cultural and economic factors. Design of programs which meet the needs of particular ethnic groups and health aggregates for health promotion and disease prevention.

732. Advanced Community Health Nursing Practicum (3)

Prerequisite: Concurrent registration in Nursing 730.

Leadership role and planning function of a community health nurse specialist in a selected community setting.

736. Seminar in Community Health Problems (3)

Prerequisite: Advancement to candidacy in health related disciplines

Interdisciplinary analysis of community based health practice problems.

740. Advanced Research Methods in Nursing (3)

Prerequisites: Nursing 604 and six units in area of concentration.

Utilization of research process in selected areas of nursing. Application of advanced design, measurement and data analysis technique to health care problems. (This course to be offered for the last time 1996-97 academic year.)

751. Advanced Practice Nursing: Acute Care Theory and Technology (3)

Prerequisites: Nursing 656 and 657. Concurrent registration in Nursing 753.

Role of advanced practice nurse in acute care. Health care problems and interventions with acutely ill adults and elderly. Emphasis on research based interventions, standards of practice, changing practice, expanding technologies, and continuation of care to the home.

752. Advanced Practice Nursing: Critical Care Theory and Technology (3)

Prerequisites: Nursing 656 and 657. Concurrent registration in Nursing 753.

Care of adult and elderly clients experiencing life-threatening alterations in physiologic function. Clinical decision-making, psychosocial responses. Clinical decision making, psychosocial responses, variables altering client response to care and use of advanced technology for care.

753. Advanced Practice Nursing: Acute and Critical Care Practicum (3)

Nine hours of laboratory.

Prerequisite: Concurrent registration in Nursing 751 or 752.

Care management activities of acute and critical care advanced practice nurse: research-based care of select adult and elderly clients and families; consultation in coordination of client care; interdisciplinary collaboration; evaluation of care based on standards of practice.

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. For students using Plan B, Comprehensive Examination is limited to three units.

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.

900. Current Concepts in Community Health Nursing (3)

Prerequisite: Consent of instructor.

Contemporary roles of community health nurse. Appropriate use of community resources for program development, strategies for interagency communication, networking, ethnic issues, family and systems theory, and major stressors affecting school community and families of the school-aged child and adolescent.

901. Family Health Theory and Nursing Practice (3)

Prerequisite: Admission to health services credential program and Nursing 900.

Nursing interventions within the school setting for complex families with school-aged children and adolescents.

902. Primary Health Care of School-Aged Child Practicum (3)

Twelve hours of practicum.

Prerequisites: Nursing 500 and 672.

Application of theory to a select population of school-aged children and adolescents. Provides direct experience in clinical nursing management of common health problems and developmental disabilities.

Nutritional Sciences

In the Department of Exercise and Nutritional Sciences
In the College of Professional Studies and Fine Arts

OFFICE: Physical Education 351

TELEPHONE: (619) 594-5541

Preprofessional Practice Program in Dietetics (AP4) is approved by the American Dietetic Association.

Faculty

B. Robert Carlson, Ph.D., Professor of Exercise and Nutritional Sciences, Chair of Department

Ronald V. Josephson, Ph.D., Professor of Exercise and Nutritional Sciences

Audrey A. Spindler, Ph.D., R.D., Professor of Exercise and Nutritional Sciences

Mark J. Kern, Ph.D., Assistant Professor of Exercise and Nutritional Sciences

Associateships

Graduate teaching associateships and graduate associateships in nutritional sciences are available to a limited number of qualified students by the Department of Exercise and Nutritional Sciences. Application forms and additional information may be obtained from the Department of Exercise and Nutritional Sciences.

General Information

The Department of Exercise and Nutritional Sciences, in the College of Professional Studies and Fine Arts, offers graduate study leading to the Master of Science degree in nutritional sciences. A limited number of graduate assistantships, primarily to aid instruction of the upper division, undergraduate laboratory courses and to facilitate faculty research efforts are available.

Master of Science Degree in Nutritional Sciences

General Information

For information regarding graduate coursework and research experience leading to a Master of Science degree in nutritional sciences, contact the adviser in the Department of Exercise and Nutritional Sciences. The general program of study may include coursework in nutrition or food science. Thesis research in nutrition may be conducted using human subjects or experimental animals. Research activity of the faculty currently includes: nutritional status of children, elders, and ethnic groups; metabolic studies on cholesterol and energy balance; and factors affecting human lactation, body composition and obesity, athletic performance and fitness, composition of human milk and composition and stability of foods. Laboratories, including animal facilities and equipment, at SDSU support research conducted under the direct supervision of the nutritional sciences graduate faculty. In addition, students may conduct research at other facilities in the community in conjunction with collaborative studies pursued by nutritional sciences faculty and researchers at other institutions in San Diego.

Graduates with the M.S. degree in nutritional sciences are employed as clinical and administrative dietitians, administrators or service providers of community nutrition programs, food service supervisors, and community college educators, as well as, in administrative, research, or quality control positions within industry and government.

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, students must have bachelor's degrees in foods and nutrition or related fields and satisfy the prerequisites of the courses selected. A course in computer and data processing (e.g., NUTR 207 or equivalent) taken as a part of the student's undergraduate work or demonstrated proof of competency in computers and data processing, as approved by the graduate adviser, is required as a prerequisite to taking program coursework. If students' undergraduate preparation is deemed insufficient, students will be required to complete specified courses in addition to the minimum of 30 units required for the master's degree in nutritional sciences. Students must have a grade point average of 3.0 in the last 60 semester units attempted, and a minimum score of 950 and not less than 450 on either verbal or quantitative sections of the GRE General Test. Applicants must submit letters stating reasons for choosing graduate work at San Diego State University, professional goals, special interests in the discipline, and background preparation. Students must be recommended for admission by faculty of the Department of Exercise and Nutritional Sciences and approved by the Dean of the Graduate Division and Research.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Two of this bulletin, have identified a thesis or project research adviser, taken Exercise and Nutritional Sciences 586 and 792, with a grade of B or better, and have had their research proposals approved by their committees.

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 Nutrition 606, 607, 608; Nutrition 600 and 700; Exercise and Nutritional Sciences 586 and 792. All course selections for the graduate program must be approved by the graduate adviser.

In Plan A, all students will include Nutrition 799A, Thesis.

The AP4, a post-baccalaureate certificate program, administered by SDSU's College of Extended Studies in collaboration with the Department of Exercise and Nutritional Sciences, is approved by the American Dietetic Association (ADA) and provides the supervised practice hours required to meet the performance criteria of entry-level dietitians. Those who successfully complete this program will be eligible to sit for the ADA Registration Examination – the third and final step towards becoming a Registered Dietitian, and an active member of ADA.

Students may be concurrently enrolled in the Graduate Program in Nutritional Sciences at SDSU, but must apply separately for admission to the Graduate School.

Courses Acceptable on Master's Degree Program in Nutritional Sciences

UPPER DIVISION COURSES

Nutrition Courses

510. Nutrition and Community Health (3) I, II

Two lectures and three hours of activity.

Prerequisites: Nutrition 302 and 302L.

Nutritional problems in the community with consideration of their resolution. Field placement experience required. (Formerly numbered Family Studies and Consumer Sciences 510.)

596. Advanced Studies in Nutrition (1-6)

Prerequisite: Nine upper division units in nutrition.

Advanced study of selected topics. 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 nine units of 596. No more than six units of 596 may be applied to either the bachelor's or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

Exercise and Nutritional Sciences Course

586. Experimental Methods in Physical Education (2)

GRADUATE COURSES

Nutrition Courses

600. Seminar: Foods and Nutrition (3)

Prerequisites: Nutrition 301 and 302.

Introductory seminar of research and research publications in foods and nutrition. (Formerly numbered Family Studies and Consumer Sciences 600.)

606. Physiological Bases of Diet Therapy (3)

Prerequisite: Nutrition 406. Recommended: Chemistry 361B or 560B.

Dietary modifications, adjunct to medical treatment, used to prevent and alleviate the biochemical and physiological symptoms of disease. (Formerly numbered Family Studies and Consumer Sciences 606.)

607. Child Nutrition (3)

Prerequisite: Nutrition 302.

Nutrition, health, and biochemical growth in children. Conditions leading to malnutrition, prevention, and correction. (Formerly numbered Family Studies and Consumer Sciences 607.)

608. Geriatric Nutrition (3)

Prerequisite: Nutrition 302.

Biomedical and psychosocial aspects of aging that affect food habits, nutritional status, and nutrient needs of elders. (Formerly numbered Family Studies and Consumer Sciences 608.)

610. Nutrition and Energy (3)

Prerequisites: Nutrition 302 and 309.

Methods for measurement of energy intake and expenditure assessment, factors which control food intake and energy expenditure, and examination of normal and specialized needs of energy requirements. (Formerly numbered Family Studies and Consumer Sciences 610.)

700. Seminar in Nutrition (3)

Prerequisite: Nutrition 302.

Reading and analyses of basic and applied research in nutrition. (Formerly numbered Family Studies and Consumer Sciences 700.)

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

Prerequisite: Consent of staff; to be arranged with the 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

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.

Exercise and Nutritional Sciences Course

792. Research Evaluation in Physical Education (2)

Oceanography and Marine Studies

OFFICE: Life Sciences Annex
TELEPHONE: (619) 594-7435

Administered by the Dean of the College of Sciences

Faculty Committee for Marine Studies

Clive E. Dorman, Ph.D., Professor of Geological Sciences (Co-Director of Coastal and Marine Institute)

Susan L. Williams, Ph.D., Professor of Biology (Co-Director of Coastal and Marine Institute)

Thomas A. Ebert, Ph.D., Professor of Biology

Richard F. Ford, Ph.D., Professor of Biology

Richard M. Gersberg, Ph.D., Professor of Public Health

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, and Public Health. 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).

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. The Graduate School of Public Health also offers a Master of Science degree with a concentration in Environmental Health Science and a concentration in Toxicology with focus on water and soil contamination and management of hazardous wastes. Marine-related coursework and research are offered in the Departments of Economics, Geography and in the College of Engineering. Students who require advising in these areas should inquire at the Coastal and Marine Institute or the appropriate department.

The Coastal and Marine Institute 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, and a boat operations and research diving program. The Director of the Coastal and Marine Institute reports to the Dean of the College of Sciences. 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.)

UPPER DIVISION COURSES

Oceanography Courses

541. Oceanography (3) I, II

Prerequisites: Biology 201, 202; Mathematics 121 and 122 or 150; Physics 180A or 195.

Multidisciplinary examination of physical, chemical, biological and geological aspects of marine environment and relationship of humans 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: S. Williams)

- 513. Marine Microbiology (2)
- 514. Marine Plant Biology (4)
- 515. Marine Invertebrate Biology (4)
- 517. Marine Ecology (4)
- 519. Aquaculture (3)
- 520. Ichthyology (4)
- 604. Seminar in Aquatic Ecology (2)
- 725. Aquatic Ecology (3)

Economics Course (Adviser: Hageman)

- 696. Experimental Topics (3)*

Civil Engineering Courses (Adviser: Noorany)

- 632. Computational Hydraulics and Hydrology (3)
- 641. Advanced Foundation Engineering (3)

Geography Courses (Adviser: Stow)

- 504. Coastal and Submarine Physiography (3)
- 508. Physical Climatology (3)
- 510. Advanced Meteorology (3)
- 588. Intermediate Remote Sensing of Environment (4)
- 670. Environmental and Resource Conservation Theory (3)
- 770. Seminar in Environmental and Resource Conservation (3)

Geological Sciences Courses (Adviser: Dorman)

- 540. Marine Geology (3)
- 545. Descriptive Physical Oceanography (3)
- 612. Carbonate Depositional Systems (3)
- 615. Geology of Clays (3)
- 625. Paleocology (3)
- 640. Geotectonics (3)
- 680. Sedimentary Geochemistry (3)

Public Health Courses (Adviser: Gersberg)

- 634. Environmental Protection (3)
- 637. Biological Mechanisms of Environmental Toxicants (3)
- 639. Water Quality Investigation (3)

* Acceptable when of relevant content.

Philosophy

In the College of Arts and Letters

OFFICE: Adams Humanities 4142
TELEPHONE: (619) 594-5263

Faculty

Thomas S. Weston, Ph.D., Professor of Philosophy, Chair of Department (Graduate Adviser)
Andrew L. Feenberg, Ph.D., Professor of Philosophy
Leon Rosenstein, Ph.D., Professor of Philosophy
Deborah G. Chaffin, Ph.D., Associate Professor of Philosophy
Eugene A. Troxell, Ph.D., Associate Professor of Philosophy
Mark R. Wheeler, M.A., Assistant 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 work and to meet the needs of students who plan to teach in colleges or hold other positions of leadership.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin. Students may be considered for admission 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 by completing sufficient units of upper division work in philosophy to yield a total, with previous work, of at least 24 such units. Units earned to complete this undergraduate requirement do not fulfill unit requirements for the master's degree. A minimum grade point average 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

(Major Code: 15091)

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)

Prerequisites: 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.

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.

An introduction to theories of meaning for natural languages and formal systems; concepts of truth, synonymy and analyticity; related epistemological and ontological problems.

532. Philosophy of History (3)

Prerequisite: Six units 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. Develop-

ments generated by works of such philosophers as Wittgenstein, Wisdom, 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.

543. Philosophy and Literary Theory (3)

Prerequisites: Three upper division units in philosophy and three upper division units in literature.

Relations between philosophy and literary discourse. Strategies of interpretation offered by major contemporary thinkers.

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 the major. Maximum credit six units applicable to a master's degree.

596. Selected Topics (3)

Prerequisite: Six upper division units in philosophy.

A critical analysis of a major problem or movement in philosophy. 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 the major in philosophy. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

599. Special Study (1-3)

Prerequisite: Upper division or graduate standing and consent of instructor.

Directed individual study in philosophy on a theme or topic chosen in consultation with the instructor. Maximum credit six units. Maximum combined credit six units of Philosophy 599 and 798 applicable to the M.A. degree in Philosophy.

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 Philosophical 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. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

796. Studies in Philosophy (1-3) Cr/NC

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

Preparation for the comprehensive examination for students taking the M.A. under Plan B. Maximum credit three units applicable to a master's degree.

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

Prerequisites: Twelve upper division units in philosophy and con-

sent 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.

Physical Education

In the Department of Exercise and Nutritional Sciences
In the College of Professional Studies and Fine Arts

OFFICE: Physical Education 351
TELEPHONE: (619) 594-5541

Faculty

B. Robert Carlson, Ph.D., Professor of Exercise and Nutritional Sciences, Chair of Department
Peter M. Aufsesser, Ph.D., Professor of Exercise and Nutritional Sciences
Michael J. Buono, Ph.D., Professor of Exercise and Nutritional Sciences
Peter R. Francis, Ph.D., Professor of Exercise and Nutritional Sciences
Harry A. King, Ph.D., Professor of Exercise and Nutritional Sciences
Thomas L. McKenzie, Ph.D., Professor of Exercise and Nutritional Sciences
Robert A. Mechikoff, Ph.D., Professor of Exercise and Nutritional Sciences
Robert Moore, Ph.D., Professor of Exercise and Nutritional Sciences
Jeanne F. Nichols-Bernhard, Ph.D., Professor of Exercise and Nutritional Sciences, Graduate Adviser
Patricia Patterson, Ph.D., Professor of Exercise and Nutritional Sciences
Brent S. Rushall, Ph.D., Professor of Exercise and Nutritional Sciences
Dennis J. Selder, Ph.D., Professor of Exercise and Nutritional Sciences
Roger Simmons, Ph.D., Professor of Exercise and Nutritional Sciences
David A. Sleet, Ph.D., Professor of Exercise and Nutritional Sciences
Anthony A. Sucec, Ed.D., Professor of Exercise and Nutritional Sciences
Larry S. Verity, Ph.D., Professor of Exercise and Nutritional Sciences
Denise A. Wiksten, Ph.D., Assistant Professor of Exercise and Nutritional Sciences

Associateships

Graduate teaching associateships in exercise and nutritional sciences 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 Exercise and Nutritional Sciences, in the College of Professional Studies and Fine Arts, offers graduate study leading to the Master of Arts degree in physical education and the Master of Science degree in exercise physiology.

The Master of Arts degree permits the selection, under advisement, of a program of study which may be oriented either towards a generalist approach or with a specialization in one of three areas. The generalist approach encompasses theoretical foundations provided by various relevant disciplines and their application to professional aspects of contemporary physical education. This program is appropriate for individuals who require a broad theoretical foundation that might be applied to teaching, coaching, and administration in fields that involve the acquisition of gross motor skills and the enhancement of physical

fitness. The three areas of specialization offered by the department are Biomechanics and Athletic Training, Instructional Effectiveness, and Sports Psychology. Each specialization has a strong theoretical component that provides a basis for students who anticipate employment in the academic, public, or private sectors, or who intend to pursue a doctoral degree within the area of specialization.

The faculty includes researchers who are professionally active in each of the areas of specialization. The department also has several clinical facilities that provide the opportunity for students and faculty to work with students, patients and subjects. In addition, newly renovated facilities for biomechanics, motor control, teaching and coaching, and kinanthropometry are available for teaching and for student and faculty research. A variety of other health and education-related projects are routinely conducted in conjunction with local educational and medical institutions.

The Master of Science degree in exercise physiology has strong theoretical and practical components that provide a basis for students who anticipate employment in the field of rehabilitative and/or preventive exercise, as well as for those who intend to pursue a doctoral degree in exercise science. The faculty includes researchers who are professionally active in areas of study such as thermoregulation, nutrition and metabolism, exercise and aging, cardiac and metabolic pathophysiology, and environmental physiology. The department also has an adult fitness program which provides the students an opportunity to gain exercise-related experience with apparently healthy adults of all ages. Moreover, under the close supervision of faculty, graduate students learn pragmatic skills, such as comprehensive physiological testing, exercise training, and participant education in the field of preventive and clinical exercise programming.

Master of Arts Degree in Physical Education

Admission to Graduate Study

Students will be admitted to the graduate program in physical education only after careful consideration of their qualifications by the physical education graduate adviser.

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 physical education must meet the following requirements:

1. A bachelor's degree in physical education. Applicants who do not have an undergraduate major in physical education may be admitted to conditionally classified graduate standing on the recommendation of the departmental graduate adviser. They will be required to complete the minimum requirements for an undergraduate major in physical education (i.e. up to 18 units of upper division exercise and nutritional sciences coursework) in addition to the minimum of 30 units required for the master's degree.
2. A grade point average of not less than 3.0 in the last 60 units attempted.
3. A minimum score of 475 on each of the verbal and quantitative

sections of the Graduate Record Examination (General Aptitude Test).

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 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 exercise and nutritional sciences 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. Exercise and Nutritional Sciences 585, 586, 684, 792, and 799 are required.

Students seeking a Master of Arts 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 be developed in consultation with a faculty member who teaches graduate coursework of interest to the student.

The generalist program allows students to combine courses that best fit their interests. The department's graduate coordinator counsels students in the general degree program before suggesting a program adviser. Students are required to take mandated core courses as well as being able to select a number of electives. The offerings in a specialization allow a student to identify certain curricula and competencies that have been achieved once the degree has been completed.

Specialization in Biomechanics and Athletic Training

Anatomy, mechanics, and neuromotor control of normal and abnormal movements, as well as injury and rehabilitation, are studied with an emphasis on scientific bases of body structure and function. Attention is given to health related concerns and prevention of injuries in sport and exercise.

Required courses (12 units):

ENS 630 Advanced Biomechanics: Human Motion Analysis (3)

ENS 644 Scientific Basis of Therapeutic Exercise (3)

ENS 660 Advanced Kinesiology (3)

ENS 673 Advanced Principles of Motor Control (3)

Electives: Nine units to be chosen in consultation with a specialization adviser.

Specialization in Instructional Effectiveness

This specialization is designed to increase a practitioner's pedagogical knowledge and effectiveness for teaching in diverse physical activity settings. Students who have experience in pedagogy will find the program particularly relevant.

Required courses (9 units):

ENS 667 Seminar in Adapted Physical Education (3)

ENS 685 Seminar in Evaluating Teaching and Coaching Effectiveness (3)

ENS 691 Application of Movement Instruction for Children (3)

Electives: Twelve units to be chosen in consultation with a specialization adviser.

Specialization in Sports Psychology

Students may take coursework that will develop competence as a sports psychology consultant in sport and exercise settings. Students with previous experience in coaching will find the program of particular interest.

Required courses (9 units):

ENS 671 Seminar in Advanced Sport Psychology (3)

ENS 688 Applied Psychology of Effective Coaching (3)

ENS 689 Applied Psychology for Superior Performance (3)

Electives: Twelve units to be chosen in consultation with a specialization adviser.

Master of Science Degree in Exercise Physiology

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, a student applying for admission to the graduate program in exercise physiology must meet the following requirements.

1. A bachelor's degree in physical education. Applicants who do not have an undergraduate major in physical education may be admitted to conditionally classified graduate standing on the recommendation of the departmental graduate adviser. Students will be required to complete or have equivalent preparation in Biology 150, 336, Exercise and Nutritional Sciences 303, 304, and 314 in addition to the minimum 36 units required for the Master of Science degree.
2. A grade point average (GPA) of at least 3.0 in the last 60 units of coursework.
3. A minimum score of 475 on each of the verbal and quantitative sections of the GRE General Test.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Two of this bulletin. Nine units of coursework in the official program must remain after advancement to candidacy.

Specific Requirements for the Master of Science Degree

(Major Code: 08355)

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 36-unit program includes a minimum of 30 units in Exercise and Nutritional Sciences. The remaining units must be selected from courses listed in this bulletin as acceptable on master's degree programs. At least 27 units of the 36-unit program must be in 600- and 700- numbered courses.

Students must develop and sign a formal plan of study which must be approved by both a faculty adviser and the graduate adviser. This official program of study is developed when the student has completed between 12 and 21 units of study, and must be filed with the Graduate Division and Research as a prerequisite for advancement to candidacy.

Required courses (30 units):

ENS 585 Quantitative and Computer Methods in Physical Education (2)

ENS 586 Experimental Methods in Physical Education (2)

ENS 632 Physiological Chemistry of Exercise (3)

ENS 659 Exercise Cardiology and Pathology (3)

ENS 661 Seminar in Advanced Physiology of Exercise (3)

ENS 662 Advanced Exercise Physiology Laboratory (3)

ENS 666 Adult Fitness: Exercise Prescription (3)

ENS 668 Adult Fitness: Exercise Leadership and Administration (3)

ENS 792 Research Evaluation in Physical Education (2)

ENS 796 Exercise Specialist Internship (3) Cr/NC

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

Electives (6 units): Electives to be selected with approval of graduate 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 instructor, and 3) exercise 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 in physical activity programs. Applications should be made to the director of the certificate program.

Thirty units are required to include Biology 590, Exercise and Nutritional Sciences 659, 661, 666, 668, 796 (6 units with SDSU Adult Fitness Program), and 798 (6 units). With the approval of the graduate adviser the units may be applied to a graduate degree program in physical education.

Recommendations for application to the American College of Sports Medicine for ACSM certifications will be made based on completion of coursework with a grade point average of 3.0 or better and fulfilling basic requirements for specific certification set by ACSM.

Adapted Physical Education Credential

(Credential Code: 00980)

Admission Categories

Level I: Physical Education major with an interest in adapted physical education, completion of a minimum of 45 units with a grade point average of 2.5 or better, and official application to the coordinator of Adapted Physical Education.

Level II: Physical Education major with a minimum of 2.75 after 90 units including the completion of Exercise and Nutritional Sciences 301, 303, 304, 348, 363, and at least one unit of Exercise and Nutritional Sciences 388, 135 hours of practicum in school and community settings and official application to the coordinator of Adapted Physical Education.

Level III: Certified. Completion of all courses required for physical education major in the single subject teaching credential major, all classes for the certification including completion of the entire student teaching experience. (Preliminary credential.) The student must have a 3.0 average and no grade lower than C in all the academic classes required to be certified. A required course in which a grade lower than C is earned may be repeated only with prior approval of the coordinator.

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 16 units.
Exercise and Nutritional Sciences 398* (1 unit), 348, 363, 667, 672, and Special Education 501.
2. **Practical Experience and Student Teaching:** The candidate must complete one unit of Exercise and Nutritional Sciences 388, 135 hours of practicum in school and community settings, 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 16 units.
Exercise and Nutritional Sciences 398* (1 unit), 348, 363, 667, 672, 684.
2. **Practical Experience and Student Teaching:** The candidate must complete one unit of Exercise and Nutritional Sciences 388, 135 hours of practicum in school and community settings, 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

585. Quantitative and Computer Methods in Physical Education (2) I, II

Prerequisite: Biology 215, Economics 201, Mathematics 119, Psychology 270, or Sociology 201.

Analysis of large physical education and exercise science data sets. Methods for understanding characteristics of data sets. (Formerly numbered Physical Education 585.)

586. Experimental Methods in Physical Education (2) I, II

Prerequisite: Exercise and Nutritional Sciences 585.

Experimental methods and designs in research literature of physical education. (Formerly numbered Physical Education 586.)

596. Selected Topics in Exercise and Nutritional Sciences (1-3) I, II

Selected topics in exercise and nutritional sciences. May be repeated with new content and approval 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 bachelor's or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

630. Advanced Biomechanics: Human Motion Analysis (3)

Prerequisites: Exercise and Nutritional Sciences 303 and 306.

Kinematic analysis of human movement using photo-optical systems including high speed cinematography and videography, together with automated data reduction procedures. (Formerly numbered Physical Education 630.)

631. Advanced Biomechanics: Kinetics of Human Movement (3)

Prerequisites: Exercise and Nutritional Sciences 303 and 306.

Kinetic analysis of human movement. Forces exerted on human body during execution of gross motor skills. (Formerly numbered Physical Education 631.)

632. Physiological Chemistry of Exercise (3)

Prerequisites: Exercise and Nutritional Sciences 661 and Chemistry 160.

Biochemical and metabolic responses of the human body to acute and chronic exercise. Neuroendocrine control of fuel regulation during exercise. (Formerly numbered Physical Education 632.)

640. Clinical Practices in Adapted Physical Education (3)

Two lectures and two hours of activity.

Prerequisites: Exercise and Nutritional Sciences 363 and at least one unit in Exercise and Nutritional Sciences 388 in a clinical setting.

Theory and practical skills in adapted and corrective exercises for individuals with physical disabilities. Assessment and exercise prescription. (Formerly numbered Physical Education 640.)

644. Scientific Basis of Therapeutic Exercise (3)

Prerequisite: Exercise and Nutritional Sciences 463.

Mechanical and neurophysiological principles related to application of therapeutic exercise techniques. (Formerly numbered Physical Education 644.)

659. Exercise Cardiology and Pathology (3)

Prerequisites: Exercise and Nutritional Sciences 304 and 314.

Interpretation of resting and exercise electrocardiograms with cardiopulmonary pathologies that skew interpretations. (Formerly numbered Physical Education 659.)

660. Advanced Kinesiology (3)

Prerequisites: Exercise and Nutritional Sciences 303 and 306.

Recommended: Biology 580.

Tissue structure, neuromuscular function and performance. Electromyography and movement analysis. (Formerly numbered Physical Education 660.)

661. Seminar in Advanced Physiology of Exercise (3)

Prerequisites: Exercise and Nutritional Sciences 303 and 304.

Advanced aspects of the physiology of exercise. Effects of exercise on human beings in relation to health, longevity, morphology and performance. (Formerly numbered Physical Education 661.)

662. Advanced Exercise Physiology Laboratory (3)

Nine hours of laboratory.

Prerequisites: Exercise and Nutritional Sciences 304, 314, and admission to program in Exercise Physiology.

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. (Formerly numbered Physical Education 662.)

664. Seminar in Anthropometry and Motor Performance (3)

Prerequisites: Exercise and Nutritional Sciences 301 and 303.

Relationships between body structure and motor performance as compared through the techniques of anthropometry, somatotyping and body composition. (Formerly numbered Physical Education 664.)

665. Advanced Sports Medicine (3)

Prerequisite: Exercise and Nutritional Sciences 365 or a physical therapy major.

Clinical sports medicine. Relationship of biomechanics, nutrition, environment and conditioning to medical problems of athletes. (Formerly numbered Physical Education 665.)

666. Adult Fitness: Exercise Prescription (3)

Prerequisites: Exercise and Nutritional Sciences 304 and 314.

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. (Formerly numbered Physical Education 666.)

667. Seminar in Adapted Physical Education (3)

Prerequisites: Exercise and Nutritional Sciences 348 and 363.

Trends, programs and crucial problem areas in adapted physical education as they relate to the organization, planning and implementation of these programs. (Formerly numbered Physical Education 667.)

668. Adult Fitness: Exercise Leadership and Administration (3)

One lecture and six hours of laboratory.

Prerequisite: Exercise and Nutritional Sciences 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. (Formerly numbered Phys-

ical Education 668.)

671. Seminar in Advanced Sport Psychology (3)

Prerequisite: Exercise and Nutritional Sciences 461.

Research and theory of psychological behavior in sport and physical activity. Theoretical models, research issues, and applications. (Formerly numbered Physical Education 671.)

672. Perceptual Motor Learning (3)

Prerequisite: Exercise and Nutritional Sciences 307.

Basic psychological parameters underlying perceptual motor impairment. Emphasis on utilizing these concepts to evaluate and remediate perceptual motor problems in the young child. (Formerly numbered Physical Education 672.)

673. Advanced Principles of Motor Control (3)

Prerequisite: Exercise and Nutritional Sciences 307.

Investigation of the control of human movement using electromyography, biomechanics, and neurophysiology. (Formerly numbered Physical Education 673.)

684. Behavior Change in Sport and Physical Education (3)

Prerequisite: Exercise and Nutritional Sciences 307.

Principles and applications of operant psychology to the development and maintenance of behavior in physical education and sport environments. Behavioral techniques to manage and motivate learners in diverse physical activity settings. (Formerly numbered Physical Education 684.)

685. Seminar in Evaluating Teaching and Coaching Effectiveness (3)

Prerequisites: Exercise and Nutritional Sciences 347A and 347B.

Coaching and teaching in physical activity settings. Research and systematic observation techniques for analyzing leader effectiveness. Teaching and coaching behavior. (Formerly numbered Physical Education 685.)

688. Applied Psychology of Effective Coaching (3)

Controlling physical performance in training and competitions. Psychological procedures which improve sporting performances. (Formerly numbered Physical Education 688.)

689. Applied Psychology for Superior Performance (3)

Prerequisite: Exercise and Nutritional Sciences 688.

Psychological factors for preparing superior athletes to compete, with particular emphasis on the day of competition. (Formerly numbered Physical Education 689.)

691. Application of Movement Instruction for Children (3)

Two lectures and three hours of laboratory.

Prerequisite: Exercise and Nutritional Sciences 684.

Application of the movement education approach to teaching children's physical education. (Formerly numbered Physical Education 691.)

696. Advanced Topics in Exercise and Nutritional Sciences (3)

Intensive study in specific areas of exercise and nutritional sciences. 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 696.)

792. Research Evaluation in Physical Education (2)

Prerequisite: Exercise and Nutritional Sciences 586.

Techniques in designing, conducting, and reporting research in physical education. Qualitative and quantitative paradigms examined. Ethical considerations in human research. (Formerly numbered Physical Education 792.)

796. Exercise Specialist Internship (1-3) Cr/NC

Three hours of laboratory per unit.

Prerequisites: Exercise and Nutritional Sciences 659, 662, 666.

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. (Formerly numbered Physical Education 796.)

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

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 or Project 799A with an assigned grade symbol of SP.

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

Physics

In the College of Sciences

OFFICE: Physics 131
TELEPHONE: (619) 594-6240

Faculty

Roger A. Lilly, Ph.D., Professor of Physics, Chair of Department
Lowell J. Burnett, Ph.D., Professor of Physics
Don M. Cottrell, Ph.D., Professor of Physics
Jeffrey A. Davis, Ph.D., Professor of Physics, Director of Electro-Optics Program
Elsa Feher, Ph.D., Professor of Physics
Fred M. Goldberg, Ph.D., Professor of Physics
Richard H. Morris, Ph.D., Professor of Physics
Saul B. Oseroff, Ph.D., Professor of Physics
Patrick J. Papin, Ph.D., Professor of Physics, Director and Graduate Adviser for Radiological Health Physics
Robert J. Piserchio, Ph.D., Professor of Physics
Donald E. Reh fuss, Ph.D., Professor of Physics
Stephen B. W. Roeder, Ph.D., Professor of Physics and Chemistry
Herbert B. Shore, Ph.D., Professor of Physics
Alan R. Sweedler, Ph.D., Professor of Physics, Director of Center for Energy Studies
Jacques D. Templin, Ph.D., Professor of Physics (Graduate Adviser)
Milton S. Torikachvili, Ph.D., Professor of Physics
William J. Wallace, Ph.D., Associate Professor of Physics

Associateships

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

General Information

The Department of Physics, in the College of Sciences, offers graduate study leading to the Master of Arts degree in physics, the Master of Science degree in physics, and the Master of Science degree in radiological health physics.

The Master of Arts degree emphasizes broad training and intensive coursework. This is a non-thesis program designed to lead the student to a comprehensive final examination. Specific courses, in both pure and applied physics, are chosen to complement the background of the individual student and achieve the desired educational goals.

The Master of Science degree emphasizes research experience in a chosen specialty. It is designed to augment the student's undergraduate training with a core curriculum of advanced courses, then followed by a period of research and preparation of a thesis. Thesis topics are encouraged in both pure and applied areas of physics.

Modern experimental laboratories are available for student and faculty research in the areas of acoustics, modern optics, holography, optical properties of solids, laser physics, solid-state physics, nuclear magnetic resonance, electron paramagnetic resonance, atomic physics, solar energy, nuclear, medical and health physics, microprocessor instrumentation, and image processing. Theoretical programs are available in condensed matter physics, electricity and magnetism, laser physics, gravitation, relativity, and mathematical physics.

The Master of Science degree in radiological health physics is

designed to train health physicists in the use of radioactive materials and radiation-producing devices such as those used in hospitals and related medical facilities, colleges and universities, industry, public health services, nuclear power installations, the military, the Department of Energy, the Environmental Protection Agency, and the Nuclear Regulatory Commission. The program emphasizes techniques of radiation dosimetry, and instrumentation in addition to the fundamental physics of radiation production and protection.

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.

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 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, 608, and 610A-610B. Twelve additional units of 500-, 600- or 700-numbered electives must be selected with the approval of the Physics Department graduate adviser. Physics 606 is recommended. The Master of Arts degree in physics requires the completion of Plan B, a comprehensive written examination. 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.

The student must complete a graduate program to include Physics 602A, 604A-604B, 797 (3 units) and 799A. Fifteen additional units of 500-, 600-, or 700-numbered electives must be selected with the approval of the Physics Department graduate adviser. The student is required to pass a final oral examination on the thesis.

Master of Science Degree in Radiological Health Physics

Admission to Graduate Study

All students must satisfy the general requirements for admission to the Graduate Division with classified graduate standing, as described in Part Two of this bulletin under Admission to the Graduate Division. In addition, the undergraduate preparation in biology, chemistry, mathematics, and physics must have substantially satisfied the undergraduate requirements for a baccalaureate degree in the life sciences or the physical sciences so that satisfactory progress can be made toward the master's degree. If the student's undergraduate preparation is deficient, he will be required to take courses for the removal of the deficiency. These courses, taken by the student as an unclassified graduate, are in addition to the minimum of 30 units for the master's degree.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part 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 of which at least 15 units must be in the 600- and 700-numbered courses and which includes the following:

	<i>Units</i>
Biology 561 Radiation Biology	3
Physics 560 Radiological Physics and Dosimetry	3
Physics 561 Nuclear Instrumentation	3
Physics 564 Nuclear and Elementary Particle Physics.....	3
Physics 660 Radiological Health Physics	3
Physics 661 Advanced Nuclear Instrumentation	3
Physics 662 Colloquium in Radiological Sciences.....	1

Total units 19

The remaining eleven units must be selected from 500-, 600- or 700-numbered courses 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 350, 354B, and Mathematics 342B.

The mathematical and physical foundations of the quantum theory in terms of Schroedinger's wave mechanics. Applications to the properties of atoms, quantum chemistry, and nuclei.

513. Electronic Instrumentation (3)

One lecture and six hours of laboratory.

Prerequisites: Physics 311. Recommended: Credit or concurrent registration in Physics 516.

Computer data acquisition and control, modern signal detection and enhancement techniques; transducer principles and applications; noise and the enhancement of the signal-to-noise ratio.

516. Theory of Scientific Instrumentation (3)

Prerequisites: Physics 311 and Mathematics 342B.

Fourier analysis with applications to scientific instrumentation, spectroscopy, and image processing; Z transforms and digital filtering; detection systems and their optimization of the signal-to-noise ratio. (Formerly numbered Physics 516A.)

532. Solid State Physics (3)

Prerequisites: Physics 350, 354B, and Mathematics 342B.

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. Colloquium in Condensed Matter Physics (1) Cr/NC

Prerequisite: Credit or concurrent registration in Physics 532.

Student and faculty research project presentations. Maximum credit three units.

542. Acoustics (3)

Prerequisites: Physics 350 and Mathematics 342B.

Wave motion, production, reception, transmission and analysis of sound. Special applications such as environmental noise, underwater and seismic waves.

552. Modern Optics and Lasers (3)

Prerequisites: Physics 406 with minimum grade of C; credit or concurrent registration in Physics 400B; Mathematics 342B.

Electromagnetic theory, matrix methods of optics, propagation of Gaussian beams, optical resonators, interaction of radiation and atomic systems, theory of laser oscillation, nonlinear optics, specific laser systems, optical detectors, applications of lasers in physics.

553. Modern Optics Laboratory (3)

One lecture and six hours of laboratory.

Prerequisites: Physics 357 with minimum grade of C; Physics 406 with minimum grade of C; credit or concurrent registration in Physics 552.

Experiments in various fields of modern optics such as holography, physics of lasers, Fourier transform spectroscopy, Raman spectroscopy, light modulation techniques, fiber optics, spatial filtering, diffraction grating spectroscopy, radiometry, and nonlinear optics.

554. Colloquium in Optics Research (1) Cr/NC I, II

Prerequisites: Concurrent registration in Physics 498A or 498B or 797 and consent of instructor.

Student and faculty research project presentations. Maximum credit three units.

560. Radiological Physics and Dosimetry (3)

Prerequisite: Credit or concurrent registration in Physics 354A.

Ionizing radiation fields, interactions of radiation with matter, cavity theory, external radiation dosimetry.

561. Nuclear Instrumentation (3)

Two lectures and three hours of laboratory.

Prerequisites: Credit or concurrent registration in Physics 311 and 560.

Electronics of nuclear instrumentation. Radiation detection and measurement using ionization chambers, GM and proportional counters, and scintillation dosimetry. Practices of current use in the radiation protection field.

564. Nuclear and Elementary Particle Physics (3)

Prerequisite: Physics 354B.

Nuclear and elementary particle phenomena including nuclear structure of reactions, nuclear devices, elementary particle symmetry and structure, and experimental methods.

570. Relativity (3)

Prerequisites: Physics 354A, 400B, and Mathematics 342B.

Relative coordinates, Lorentz transformation, covariant formulation of the laws of physics, applications of special relativity, introduction to curved space time, cosmology.

580. Computational Physics (3)

Prerequisites: Physics 354B, 400A, Computer Science 106, Mathematics 342B.

Computer programming for the numerical solution of problems in classical mechanics, electromagnetism, optics, and quantum mechanics. Use of Unix operating system and Fortran programming language. Incorporation of standard subroutines for linear algebra and differential equations into student written programs

596. Special Topics in Physics (1-4) I, II

Prerequisite: Consent of instructor.

Selected topics in classical and modern physics. May be repeated with the consent of the instructor. See Class Schedule for specific content. 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 (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)

Prerequisite: Mathematics 342B. Physics 602A is prerequisite to 602B.

Topics from matrix theory, vector and tensor analysis, orthogonal function theory, calculus of variations and probability theory with particular emphasis on applications to physical theory.

604A-604B. Electromagnetic Theory (3-3)

Prerequisite: Physics 400B. Physics 604A is prerequisite to 604B.

Boundary value problems; time varying electric and magnetic fields; propagation of radiation; antennas, wave guides.

606. Statistical Mechanics (3)

Prerequisites: Physics 460 and 510.

Classical and quantum statistics, kinetic theory, low-pressure phenomena, Boltzmann transport equation, irreversible processes.

608. Classical Mechanics (3)

Prerequisite: Physics 350.

Vector and tensor methods, motion of rigid bodies, vibration, coupled circuits, Lagrange's and Hamilton's equations, principle of least action.

610A-610B. Quantum Mechanics (3-3)

Prerequisite: Physics 510.

Physical and mathematical basis of quantum mechanics. Wave mechanics and the Schroedinger Equation, matrices and Hilbert space, angular momentum and spin, atomic structure, bound-state perturbation theory, many particle systems, transition rates and time-dependent perturbation theory, scattering, and relativistic 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, lasers, nonlinear optics and applications of Fourier analysis to optical systems and information processing.

654. Gravitation (3)

Prerequisite: Physics 570.

Differential geometry, metric geodesics. Equivalence principle, collapsed objects, black holes, gravitational waves, evolution of the universe.

660. Radiological Health Physics (3)

Prerequisite: Physics 560.

Radiation protection guides, internal, and external radiation protection and dosimetry. Radiological risk assessment.

661. Advanced Nuclear Instrumentation (3)

One lecture and 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.

662. Colloquium in Radiological Sciences (1) Cr/NC

Prerequisite: Consent of instructor.

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 two units applicable to a master's degree.

670. Medical Health Physics (2)

Prerequisites: Physics 660 and 661.

Radiation protection and dosimetry in medical environments including diagnostic radiology, nuclear medicine, and radiation oncology.

680. Reactor Health Physics (2)

Prerequisites: Physics 660 and 661.

Nuclear reactor systems, core physics, operating theory, and basic power plant systems. Reactor components affecting health physics practice, monitoring and regulations.

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

In the College of Arts and Letters

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Faculty

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Charles F. Andrain, Ph.D., Professor of Political Science (Graduate Adviser)
James J. Conniff, 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
Brian E. Loveman, Ph.D., Professor of Political Science
William A. Schultze, Ph.D., Professor of Political Science
John W. Soule, Ph.D., Professor of Political Science
Paul J. Strand, Ph.D., Professor of Political Science, Dean of the College of Arts and Letters
Louis M. Terrell, Ph.D., Professor of Political Science
Lyndelle D. 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. Lewin, Ph.D., Associate Professor of Political Science
David V. Carruthers, Ph.D., Assistant Professor of Political Science

General Information

The Master of Arts degree in political science is designed to meet several objectives: (1) The general master's degree provides the fundamental theoretical and analytical skills for those students planning to continue on for a doctoral degree in political science or placement in an academic setting. (2) The specialization in public policy also prepares students for further graduate work toward a doctoral degree, as well as trains students with skills for placement in nonacademic careers in both the public and private sectors. Areas covered in the public policy specialization include American public policy, U.S. foreign policy, and national security policy. Research facilities available to the Political Science Department are the Social Science Research Laboratory, and the Social Science Statistics Laboratory. The Department of Political Science is an associate member of the Inter-University Consortium for Political and Social 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, students seeking the Master of Arts degree in political science must attain a score of 500 or above on the verbal and 500 or above on the quantitative portions of the GRE General Test. Students must have completed 30 units of social science, including at least 12 upper division units in political science, as approved by the department, and must have earned a grade point average of 3.0 for the last 60 semester units of undergraduate work, a 3.0 grade point average for upper division courses in political science, and a 3.0 grade point average for all work taken in political science.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as stated in Part Two of this bulletin. In addition, students must complete Political Science 515A.

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.

Students must complete a minimum of 24 units in political science from courses listed below as acceptable on master's degree programs. Students must take Political Science 515A and at least 21 units in 600- and 700-numbered courses, including Political Science 601.

The Master of Arts degree in political science includes three foci: general political science, a public policy specialization, and an international relations/cross-national specialization.

To fulfill the requirements for the general political science focus, students may choose either Plan A or Plan B. Plan A requires Political Science 515A, 601, five additional graduate seminars in political science, and the writing of a thesis under Political Science 799A. Plan B requires Political Science 515A, 601, six additional graduate seminars in political science, and the completion of a comprehensive written examination. The examination committee shall consist of a chairperson and two other faculty members selected by the graduate adviser. The committee shall prepare and grade the examination, which tests the students' general knowledge in their program of study in the department.

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. Seminar in 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 646. 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 (6)
8. Political Science 799A. Thesis (3) Cr/NC/SP. Thesis must be in the public policy area.

Specific requirements for students selecting the international relations/cross-national politics specialization are:

1. Political Science 515A. Research Methods in Political Science (3)
2. Political Science 601. Seminar in the Scope and Method of Political Science (3)
3. Political Science 655. Seminar in General Comparative Political Systems (3)
4. Political Science 675. Seminar in International Relations (3)
5. Political Science 676. Seminar in International Political Economy (3)
6. Six additional units selected from Political Science 658, 661, and 667.
7. Six units in international relations or cross-national politics chosen from (a) 500- or 600-numbered political science courses, (b) Political Science 795, 797, and 798, (c) courses outside the political science department, e.g., history, economics, language, and area studies.
8. Political Science 799A, Thesis, which must be in the international relations or cross-national politics area.

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.

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.

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 from: education, health, nutrition, crime, transportation, housing, energy, population control, poverty, unemployment, inflation.

562. Government and Politics of Japan (3)

Prerequisite: Political Science 103 or 362.

Governmental structures, political processes, and public policies of Japanese political system. Recent political history and cultural factors which shape Japanese politics. Japanese foreign policies, 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 566.

Domestic and international politics of selected Latin American states.

568. The Mexican Political System (3)

Prerequisite: Political Science 101 or 103.

Principal factors in Mexican governmental decision making. Ideology, political groups, tactics of leaders and governmental structure.

575. International Relations of the Pacific Rim (3)

Prerequisite: Political Science 362 or 375 or 482.

Dynamics of conflict and cooperation among nations of the Pacific Rim. Stress on political and economics factors that shape interstate relations.

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. Seminar in 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, 422 through 436, 530 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 Post-Communist Political Systems (3)

Prerequisite: Graduate standing.

Nature of Communist political systems and processes of transition to post-communist forms of government. Possibilities for development of democratic institutions examined theoretically and empirically.

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.

676. Seminar in International Political Economy (3)

Prerequisite: Six upper division political science units in international relations.

Major theoretical approaches applied to various interstate issues of the world economy.

795. Problem Analysis (3)

Analytical treatment of selected problems in political science. Review of methods for investigation and reporting of data. Consideration of problems in preparation of project or thesis.

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 experience and required readings, and extensive paper relating internship experience to 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

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

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

799B. Thesis Extension (0) Cr/NC

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

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

Psychology

In the College of Sciences

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Faculty

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Catherine J. Atkins-Kaplan, Ph.D., Professor of Psychology, Assistant Dean for Student Affairs of the College of Sciences
Marilyn A. Borges, Ph.D., Professor of Psychology
Jeff B. Bryson, Ph.D., Professor of Psychology
Rebecca B. Bryson, Ph.D., Professor of Psychology, Associate Dean of the College of Sciences (Graduate Adviser)
Thereasa A. Cronan, Ph.D., Professor of Psychology
Roger M. Dunn, Ph.D., Professor of Psychology
Larry Fenson, Ph.D., Professor of Psychology
Louis R. Franzini, Ph.D., Professor of Psychology
Philip S. Gallo, Jr., Ph.D., Professor of Psychology
Richard G. Graf, Ph.D., Professor of Psychology
William K. Graham, Ph.D., Professor of Psychology
Ronald H. Hopkins, Ph.D., Professor of Psychology, Vice President for Academic Affairs
Rick E. Ingram, Ph.D., Professor of Psychology
Norman Kass, Ph.D., Professor of Psychology
Philip J. Langlais, Ph.D., Professor of Psychology
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Sandra P. Marshall, Ph.D., Professor of Psychology
John E. Martin, Ph.D., Professor of Psychology
Robert F. McGivern, Ph.D., Professor of Psychology
Sandra O. Mollenauer, Ph.D., Professor of Psychology

Claire Murphy, Ph.D., Professor of Psychology
Rod Plotnik, Ph.D., Professor of Psychology
Robert Radlow, Ph.D., Professor of Psychology
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Judy S. Reilly, Ph.D., Professor of Psychology
Edward P. Riley, Ph.D., Professor of Psychology
Miriam J. Rodin, Ph.D., Professor of Psychology
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Richard H. Schulte, Ph.D., Professor of Psychology, Director, Psychology Clinic, Coordinator of Clinical Training, Acting Doctoral Program Director
John P. Sheposh, Ph.D., Professor of Psychology
John J. Spinetta, Ph.D., Professor of Psychology
Robert M. Yaremko, Ph.D., Professor of Psychology
Richard H. Defran, Ph.D., Associate Professor of Psychology
Georg E. Matt, Ph.D., Associate Professor of Psychology
Sharon M. McCordick, Ph.D., Associate Professor of Psychology
Joseph M. Price, Ph.D., Associate Professor of Psychology
Judy M. Price, Ph.D., Associate Professor of Psychology
Patricia A. Scollay, Ph.D., Associate Professor of Psychology
Roberto J. Velasquez, Ph.D., Associate Professor of Psychology
Donna Castañeda, Ph.D., Assistant Professor of Psychology
Keith Hattrup, Ph.D., Assistant Professor of Psychology
Vanessa L. Malcarne, Ph.D., Assistant Professor of Psychology
Denise E. Wilfley, Ph.D., Assistant Professor of Psychology

Associateships

Graduate teaching associateships and graduate nonteaching associateships in psychology are available to a limited number of qualified students. Application forms and further information may be obtained from the Chair, Graduate Associateships Committee, Department of Psychology.

General Information

A Master of Science degree with a concentration in clinical psychology is offered, as well as the Master of Arts degree in 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 choose appropriate electives from preclinical courses in the Master of Arts program. In addition, the Department of Psychology, jointly with the Department of Psychiatry, University of California, San Diego, School of Medicine, offers an APA-accredited 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 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 engage in research and a series of clinical practica. In the last year of the program all students must complete a 12-month APA-accredited 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. A substantial proportion of the graduates who apply go on to enroll in doctoral work at well-known universities. For a broader education we encourage SDSU graduates to do doctoral work at other institutions, and in turn we tend to favor selection of extramural students for the Ph.D. program.

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.

Both master's and doctoral students play a large role in faculty research. The department has about \$4,000,000 per year in extramural grant support. Current research includes studies of fetal alcohol syndrome, facial expressions and affect in normal, deaf, and brain-damaged infants, animal and human models of memory disorders (e.g., Korsakoff's), child health promotion, intervention strategies in diabe-

tes and arthritis, interdisciplinary approaches to child abuse treatment, biochemical substrates of anxiety, ethological studies of cetacean behavior, therapeutic interventions in postpartum depression, giftedness, cultural differences, and learning disabilities.

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 92120-4913. 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 master's degree programs.

Concurrent with application to the department, the student must file an application for admission to San Diego State University with the Office of Graduate Admissions. Acceptance by the University does not guarantee acceptance to the psychology program.

To be considered for admission to the graduate programs in psychology, all students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin. In addition, applicants must submit a copy of all transcripts of previous college work, three letters of recommendation from persons familiar with their academic performance, and score reports for the GRE General Test and the GRE Subject (Advanced) Test in Psychology. **These materials must be submitted to the Department of Psychology by February 1 and are in addition to any materials requested by the Graduate Division or the Admissions Office.**

Students are advised to take the necessary examinations by October of the year prior to the year in which they are seeking enrollment.

To qualify for admission to the master's programs in psychology, the student must have:

1. An undergraduate major in psychology consisting of at least 24 upper division units with a grade point average of at least 3.0. The major must include work in general psychology, physiological psychology, statistical methods, psychological testing, abnormal psychology, and at least two laboratory courses or their equivalent in psychology. At San Diego State University these specific course requirements are met by Psychology 101, 211, 260, 270, 350, 370, 410, and one course from 412, 415, 416, 417, 418 or 419.
2. A grade point average of not less than 3.0 in the last 60 semester units of the undergraduate program.
3. A total scale score of 950 or above on the GRE General Test (verbal and quantitative portions only).

4. A score above the 50th percentile rank on the GRE Subject (Advanced) Test in Psychology. The student should take this test as well as the GRE General Test in sufficient time so that the results will be available prior to the application deadline. It should be requested by the student that the score reports for these tests be forwarded directly to the SDSU Office of Admissions and Records and the Department of Psychology.

Meeting all of the indicated criteria does not guarantee admission to the program, since admission is also dependent on the facilities and resources available in the department.

Advancement to Candidacy

The student must satisfy the general requirements for advancement to candidacy as stated in Part Two of this bulletin. Having obtained three grades of C or lower in graduate courses automatically precludes advancement to candidacy.

In addition, students must have an approved thesis proposal prior to advancement to candidacy.

General Requirements for all Master's Degree Programs

In addition to meeting the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units (36-38 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 670A-670B or 770A-770B, in addition to 600 (Research Orientation), 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 four units credit in Psychology 600 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), 670A-670B or 770A-770B, 4 units of 600 (Research Orientation), 605, one course selected from 732, 745, 760, 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 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 two units of 600 (Research Orientation) during their first semester and another two units during their second semester.

Specific Requirements for the Master of Science Degree

(Major Code: 20011)

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 or equivalent (Research Orientation, 4 units), 650, 651 or 652, 654, 655, 770A-770B, 896 (Clinical Practicum, 6 units), and 799A (Thesis). Registration for six units of Psychology 896 (Clinical Practicum) is contingent upon prior cooperative arrangement by the student and the Department of Psychology Practicum Committee, and is exempt from the University's requirement that courses graded Cr/NC be limited to 30 percent of units for the master's degree.

2. **The Applied Psychology program has two specializations: Program Evaluation and Industrial and Organizational Psychology.**

Specific requirements for students selecting the Program Evaluation specialization are: A minimum of 38 units, 32 of which must be completed in psychology, to include Psychology 670A-670B or 770A-770B, 600 (Research Orientation, 2 units), 622, 630, 675, 730, 791 (Internship in Applied Psychology, 6 units), 799A (Thesis). Nine units of graduate electives may be selected from psychology, or with prior approval of applied psychology coordinator, from other departments.

Specific requirements for students selecting the Industrial and Organizational specialization are: A minimum of 38 units, 32 of which must be completed in psychology, to include Psychology 670A-670B or 770A-770B, 600 (Research Orientation, 2 units), 621, 622, 630, 675, 721 or 722, 792 (Internship in Industrial and Organizational Psychology, 6 units), 799A (Thesis). With prior approval of the applied psychology coordinator, six units of graduate electives may be selected from psychology with prior approval of applied psychology coordinator or from other departments.

Section II. 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 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 Divisions; (b) a minimum overall grade point average of 3.0; (c) a grade point average of at least 3.25 in the last 60 semester (90 quarter) units attempted; (d) good standing at the last institution attended; and (e) a minimum score of 550 verbal and 550 quantitative on the GRE Aptitude Test and a score above the 85th percentile on the GRE Advanced Test in Psychology. However, given the large number of applicants in the field of clinical psychology, the selection process is designed to identify the best from among many highly qualified applicants. Thus no minimum set of qualifications in any way guarantees admission. Personal interviews will be conducted with the most promising appli-

cants. Admission of any candidate who deviates from the minimum standards can only be granted with special permission from both graduate divisions. No faculty member has authority to make an offer of a position in the program to any applicant, implied or otherwise, without final approval of the program directors and ultimately, the graduate deans.

Applicants must submit a copy of all transcripts of previous college work, three letters of recommendation, and score reports for the Graduate Record Examination General Test and Graduate Record Examination Advanced Test in Psychology. Although an undergraduate psychology major is not mandatory for admission, applicants should have completed a minimum of 18 semester units (27 quarter units) in psychology including courses in physiological psychology, statistical methods, psychological testing, abnormal psychology, personality, social psychology, and an experimental laboratory in psychology. Advanced courses in perception and learning are desirable as are courses in biology, mathematics, linguistics, and other related areas (e.g., medical physics, computer sciences). The joint doctoral program is a year around program.

Students will be admitted to graduate programs in psychology only in the fall semester and applications must be received by the doctoral program office and the SDSU Graduate Admissions office not later than December 15 for the Ph.D. program. All other supporting materials must be received by the doctoral program by January 10.

Specific Degree Requirements for the Doctor of Philosophy Degree in Clinical Psychology

(Major Code: 20031)

The student is guided by requirements for the doctoral degree program given in Part Two of this Bulletin. The core curriculum will normally be completed during the first two years. Completion of this core insures that students have a general background in empirical psychology (e.g., physiological, social, cognitive-affective, and individual bases of behavior); knowledge of conceptualizations of personality and psychopathology; an awareness and 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 1,000 hours of supervised clinical experience; and competence in research methods. Specific courses providing this background at SDSU include Psychology 650, 654, 655, 770A-770B, 801, 840, 850, 860, 896, and Clinical Psychology 295 at UCSD.

During the second year, students will select a research topic for a second year project, which is similar to a master's thesis. Students are responsible for conducting all phases of this project under the supervision of their joint guidance committee. Students may also elect to obtain a master's degree by completing requirements for the Master of Science degree.

After completing the basic two-year core, work in subsequent years will diverge for students in each of the three specialty areas: behavioral medicine, experimental psychopathology, and neuropsychology. All students must take the one-unit seminar in neuropsychology.

Students specializing in behavioral medicine are required to take Psychology 842, Behavioral Medicine Seminar: Assessment, in the fall and Psychology 843, Behavioral Medicine Seminar: Intervention, in the spring of the third year. Students taking experimental psychopathology are required to take Psychology 852, Seminar in Experimental Psychopathology Research, in the fall of the third or fourth year, and Psychology 853, Advanced Seminar in Experimental Psychopathology, in the spring of the third or fourth year. Students in neuropsychology are required to take Clinical Psychology 205, Neuroanatomy, Clinical Psychology 294, Seminar in Neuropsychology, and School of Medicine 202E, Psychopathology, offered at UCSD.

In the fourth year, students are expected to submit and defend a dissertation proposal. Many students will also collect the data for and begin writing the dissertation during this year.

The fifth year is reserved for the completion of a doctoral dissertation and a full-time clinical internship that is identified by the student and the joint guidance committee.

Students are expected to maintain the highest standards of academic performance. Students must maintain a minimum 3.0 grade point average. According to doctoral program policy, falling below a 3.0 GPA automatically places a student on academic probation. A student may not remain on academic probation for more than one year. In addition, three grades below a B (i.e., a B- or lower or No Credit) are grounds for dismissal from the program without further qualification regardless of a student's overall GPA.

In clinical psychology, adherence to the Ethical Principles of Psychologists (APA, Amended, 1992) is a mandatory requirement. Students who knowingly or unknowingly violate any part of the ethical code may be dismissed from the program without further qualification regardless of coursework, research, or other academic achievement. A copy of the ethical code is distributed to students at their initial orientation.

Prior to advancement to candidacy, students will be required to sign a statement of understanding that 1) the doctoral faculty will communicate with the clinical internship agency all information relevant to the student's academic and professional qualifications for placement and continuation in the internship and 2) the student understands that the clinical internship must be satisfactorily completed before graduation.

Faculty

The following faculty members of the cooperating institutions participate in the joint doctoral program in clinical psychology and are available for direction of research and as members of joint doctoral committees.

San Diego State University:

Acting Program Director: Schulte

Committee Members: R. Bryson, Cronan, Franzini, Grossberg, Hornbeck, Ingram, Langlais, Litrownik, Malcarne, Marshall, Martin, Matt, Murphy, Joseph Price, Reilly, Riley, Rosenbaum, Saccuzzo, Salis, Sattler, Spinetta, Velasquez, Wilfley

University of California, San Diego:

Program Director: Heaton

Committee Members: Ancoli-Israel, Atkinson, Birchler, Bondi, Braff, Britton, G. Brown, S. Brown, Clementz, Courchesne, Delis, Dimsdale, Geyer, Gillin, Granholm, Grant, Groves, Irwin, Jernigan, Jeste, L. Judd, P. Judd, Kaplan, Kelsoe, Kripke, Kulik, Matloff, McQuaid, Myers, Ostergaard, Patterson, Paulsen, Penn, Rapaport, Salmon, Schreibman, Schuckit, Segal, Shuchter, Sparta, Squire, Storms, Trauner, Varni, Zisook

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

UPPER DIVISION COURSES

501. History of Psychology (3)

Limited to graduate students or psychology majors with senior standing.

The historical background of modern psychology.

532. Theories and Methods in Developmental Psychology (3)

Prerequisite: Psychology 230. **Proof of completion of prerequisite required:** Copy of transcript.

Overview of developmental psychology from its origins in philosophy and biology to an examination of processes that shape perception, language acquisition, socialization, and cognition.

551. Clinical Psychology: Theory and Practice (4)

Two lectures and six hours of laboratory.

Prerequisite: Psychology 350. **Proof of completion of prerequisite required:** Copy of transcript.

Clinical assessment, theory and practice of behavior change, and professional ethics.

552. Psychology of Obesity and Weight Management (3)

Prerequisite: Senior or graduate standing in psychology or related fields.

Theory and current research issues on psychology of obesity, weight control, and eating disorders. Social, personality, cognitive, and physiological influences. Use of cognitive behavior modification for weight control.

587. Advanced Principles of Learning and Cognition (3)

Prerequisites: Psychology 211, 270, and 380.

Empirical data, basic principles and theoretical positions of major theorists in learning and cognitive psychology.

596. Selected Topics in Psychology (1-3)

Prerequisites: Psychology 101 and consent of instructor.

Intensive study in specific areas of psychology. 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

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 (2) Cr/NC

Prerequisite: Admission to the master's degree program.

Research in psychology. All masters students are required to enroll in this course. Maximum credit four units.

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 320 and consent of graduate adviser.

Problems and procedures in selection, classification, and performance appraisal, focusing on testing in industry, the interview, and other selection and assessment devices. Criterion development and measurement methods.

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.

630. Seminar in Program Evaluation (3)

Prerequisite: Graduate standing in psychology.

Theory and practice of program evaluation. Surveys concepts, issues, and methods relevant to evaluating programs, services, and interventions in the public and private sectors.

650. Seminar and Laboratory in Counseling and Psychotherapy (4)

Two lectures and six hours of laboratory.

Prerequisite: Consent of graduate adviser.

Supervised practice in the application of psychotherapeutic and counseling techniques from selected cognitive, dynamic, interpersonal, and behavioral approaches.

Open only to students accepted in the doctoral program.

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, 370, and consent of graduate adviser.

Theory and practice in assessment of intelligence and special abilities.

Open only to students accepted in the doctoral program.

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.

Open only to students accepted in the doctoral program.

670A-670B. Advanced Statistics in Psychology (3-3)

Two lectures and two hours of activity.

Prerequisites: Psychology 370, 410, a passing score on the departmental statistics placement test, and consent of graduate adviser.

Fundamentals of multiple regression and correlation. Principles of experimental design. Analysis of variance including factorial and repeated-measures designs and *a priori* and *post hoc* comparisons including trend analysis. Computer-based statistical packages in the analysis of data from psychological research. (Formerly numbered Psychology 570 and 571.)

675. Seminar in Psychological Measurement (3)

Prerequisites: Psychology 370 and consent of graduate adviser. Recommended: Psychology 770A-770B.

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 techniques. 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.

730. Advanced Seminar in Program Evaluation (3)

Prerequisite: Psychology 630.

Examines intellectual foundations, current debates, and innovative methods in program evaluation and their impact on planning, conducting, and using evaluations.

732. Seminar in Developmental Psychology (3)

Prerequisite: Psychology 532.

In-depth examination of a selected aspect of development, such as cognition, social, perceptual or language development or the neural substrates of development.

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 (1-3)

Prerequisite: Consent of graduate adviser.

Advanced study of such 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.

760. Seminar in Physiological Correlates of Behavior (3)

Prerequisites: Psychology 260 or six units of biology; and consent of graduate adviser.

An exploration of current research and theory in physiological psychology with emphasis on behavioral correlates and psychophysiology.

Course may be repeated 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.

761. Seminar in Ethology and Comparative Psychology (3)

Prerequisites: Psychology 417 or Biology 354, or Biology 527, and consent of graduate adviser.

Current problems in ethology and comparative animal behavior. Course may be repeated provided it is offered by a different instructor and the subject matter is substantially different. Maximum credit six units applicable to a master's degree.

764. Seminar in Psychopharmacology and Behavioral Disorders (3)

Prerequisites: Psychology 260 and consent of graduate adviser.

Drugs as cause and cure of behavioral problems. A review of drugs commonly used to change behavior in primary schools, psychiatric centers, in-home programs and mental hospitals.

770A-770B. Experimental Design and Data Analysis in Behavioral Research (3-3)

Two lectures and two hours of activity.

Prerequisites: Psychology 370, 410, a passing score on the departmental statistics placement test, and consent of graduate adviser.

Principles and methods of behavioral research stressing interdependence of experimental design and statistical evaluation of results. General linear model in its regression and ANOVA formulations. Advanced multiple regression and multiple correlation techniques using computer-based statistical packages. (Formerly numbered Psychology 670 and 671.)

775. Multivariate Statistics in Psychology (3)

Two lectures and two hours of activity.

Prerequisites: Psychology 670A-670B or 770A-770B and consent of instructor.

Introduction to multivariate techniques. Latent structure models with attention to relationship between latent constructs and observable data. Includes causal models, factor analysis (both exploratory and confirmatory), canonical correlation, path analysis, discriminant function analysis, and loglinear analysis.

778. Special Topics in Research Design and Data Analysis in Psychology (1-3)

Prerequisites: Psychology 670A-670B or 770A-770B and consent of instructor.

Advanced, specialized statistical topics for psychological

researchers. Examples include clustering (cluster analysis, multi-dimensional scaling), causal modelling (using LISREL or EQS), analysis of categorical data (emphasizing loglinear and logit models), nonparametric statistics, or analysis of quasi-experimental designs.

790. Practicum in the Teaching of Psychology (1) Cr/NC

Prerequisite: Award of a graduate teaching associateship in psychology.

Supervision in the teaching of psychology, covering lecture writing, style of lecture presentation, in-class demonstration and exercise, test and syllabi construction, and grading system. Not applicable to an advanced degree.

791. Internship in Program Evaluation (1-6) Cr/NC/SP

Up to 20 hours of supervised work per week in a program approved internship setting.

Prerequisites: Psychology 630, and consent of instructor.

Supervised training in program evaluation in a program approved internship setting. Maximum credit six units.

792. Internship in Industrial and Organizational Psychology (1-6) Cr/NC/SP

Up to 20 hours of supervised work per week in a program approved internship setting.

Prerequisite: Consent of instructor. Credit or concurrent registration in Psychology 621 and 622.

Supervised training in industrial and organizational psychology in a program approved internship setting. Maximum credit six units.

796. Clinical Practicum (3 or 6) Cr/NC/SP

Prerequisites: Psychology 650 and 654 and consent of the Department of Psychology practicum committee.

The students must arrange their practicum settings in cooperation with the chair of the psychology department practicum committee and with the express approval of that committee during the semester prior to enrolling for credit in this course. Maximum credit six units applicable to a master's degree.

This course is open only to students accepted in the doctoral program.

797. Research (1-3) Cr/NC/SP

Prerequisite: Consent of graduate adviser.

Research in one of the fields of psychology. Maximum credit six units of 797 and 798 combined applicable to a master's degree.

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

Prerequisite: Consent of graduate adviser.

Individual projects involving library or laboratory research in any area of psychological investigation or interest. Maximum credit of six units of 797 and 798 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. Credit is contingent upon acceptance of the completed thesis by the Department of Psychology.

799B. Thesis Extension (0) Cr/NC

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

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

800. Seminar (1-8)

Prerequisite: Admission to the doctoral program.

Investigation of a particular topic or issue, emphasis on empirical research. See Class Schedule for specific content. Maximum credit eight units applicable to a doctoral degree.

801. Seminar in History and Ethics in Psychology (3)

Prerequisite: Admission to doctoral program in clinical psychology.

Historical background of modern psychology; in-depth examination of the American Psychological Association code of ethics and its application to the conduct of clinical psychologists.

840. Seminar in Personality and Social Psychology (3)

Prerequisite: Admission to doctoral program in clinical psychology.

Research and theory in personality and social psychology. Theories of personality and individual differences, group processes, sex roles, social perception, and cross-cultural issues.

841. Seminar in Biobehavioral Foundations in Behavioral Medicine (3)

Prerequisite: Admission to doctoral program in clinical psychology or approval by instructor and program director.

Basic physiological and learning processes in health and disease to develop understanding related to clinical and research practice in field. Preparation for Psychology 842.

842. Behavioral Medicine Seminar: Assessment (3)

Prerequisites: Admission to the doctoral program, or approval by instructor and program director, and Psychology 841.

Assessment methods and issues in behavioral medicine. Development and implementation of assessment plans. Theoretical and practical aspects of psychological, behavioral, and physiological assessment methods for various health issues.

843. Behavioral Medicine Seminar: Intervention (3)

Prerequisites: Admission to the doctoral program and Psychology 842.

Design and implement interventions by stressing empirically supported approaches to improve health and change health behaviors. Strengths and weaknesses of clinical community interventions.

850. Seminar in Theory and Practice in Clinical Interventions (3)

Prerequisite: Admission to doctoral program in clinical psychology.

Theory and application of clinical interventions, advanced study of interviewing techniques, behavioral interventions, cognitive/behavioral interventions, and family/child interventions.

852. Seminar in Experimental Psychopathology Research (4)

Prerequisites: Admission to the doctoral program in clinical psychology.

Analysis of experimental and theoretical literature as it pertains to research methodology for the study of disordered behavior.

853. Advanced Seminar in Experimental Psychopathology (4)

Prerequisite: Admission to the doctoral program in clinical psychology.

Research design paradigms and methodological considerations

used in conducting research in psychologically disordered groups. Strategies in the assessment of disordered groups.

860. Seminar in Physiological Foundations of Behavior (3)

Prerequisite: Admission to doctoral program in clinical psychology.

Research and theory in physiological psychology. Advanced study of biological rhythms, sleep and waking, stress responses, the neurophysiology of learning and memory, and research methods in physiological psychology.

894. Clinical Internship (3)

Prerequisites: Completion of coursework, second year project, and advancement to candidacy.

Clinical training in an APA-approved internship setting.

895. Practicum in the Teaching of Psychology (1-6) Cr/NC

Prerequisite: Admission to doctoral program in clinical psychology.

Supervision in the teaching of psychology, covering lecture writing, style of lecture presentation, in-class demonstration and exercises, test and syllabi construction, and grading systems.

896. Clinical Practicum (1-12)

Prerequisite: Admission to the doctoral program.

Supervision of advanced intervention strategies applied to clinical populations.

897. Doctoral Research (1-8) Cr/NC/SP

Prerequisite: Admission to the doctoral program.

Independent investigation in the general field of the dissertation.

898. 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.

899. Doctoral Dissertation (1-6) 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

In the College of Professional Studies and Fine Arts

OFFICE: Professional Studies and Fine Arts 105
TELEPHONE: (619) 594-6224

Faculty

- Louis M. Rea, Ph.D., Professor of Public Administration and Urban Studies, Director of School
- Ronald L. Boostrom, D. Crim., Professor of Public Administration and Urban Studies
- Nico Calavita, Ph.D., Professor of Public Administration and Urban Studies
- Roger W. Caves, Ph.D., Professor of Public Administration and Urban Studies (M.C.P. Graduate Adviser)
- James A. Clapp, Ph.D., Professor of Public Administration and Urban Studies
- James A. Gazell, Ph.D., Professor of Public Administration and Urban Studies
- 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
- Darrell L. Pugh, Ph.D., Professor of Public Administration and Urban Studies (M.P.A. Graduate Adviser)
- Glen W. Sparrow, Ph.D., Professor of Public Administration and Urban Studies
- L. Paul Sutton, Ph.D., Professor of Public Administration and Urban Studies
- Matti F. Dobbs, Ph.D., Associate Professor of Public Administration and Urban Studies
- Dalton S. Lee, D.P.A., Associate Professor of Public Administration and Urban Studies
- Robert L. Stock, Ph.D., Associate Professor of Public Administration and Urban Studies
- Marco G. Walshok, Ph.D., Assistant Professor of Public Administration and Urban Studies
- Patricia A. Wilson, D.P.A., 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.

The Public Administration and Urban Studies' M.P.A. 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, fiscal policy and administration, recreation 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 600, 604, 605 or 606, 630, 642, 650 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 530, 531, 632, 633, and 643.

Concentration in Criminal Justice Administration (Major Code: 21051)

Students must complete 15 units from the following courses as part of the M.P.A. degree:

- CJA 601 Seminar in the Administration of Criminal Justice (3)
- CJA 602 Seminar in the Criminal Justice System as a Social Institution (3)
- CJA 604 Seminar in Criminal Justice and Urban Administration (3)
- CJA 791 Seminar in Readings in Criminal Justice Administration (3)
- CJA 797 Research in Criminal Justice Administration (3) Cr/NC/SP

Concentration in Public Telecommunications Administration (Major Code: 21021)

Students must complete 12 units from the following courses as part of the M.P.A. degree: Six units from:

- COMM 575 Technological Trends in Telecommunication (3)
- COMM 762 Seminar: Public Telecommunications (3)
- COMM 766 Seminar: Telecommunication Issues and Trends (3)

and six units from:

- COMM 505 Government and Telecommunications (3)
- COMM 575 Technological Trends in Telecommunication (3)
- COMM 591 International Telecommunications (3)
- COMM 700 Seminar: Telecommunications Management (3)
- COMM 705 Seminar: Communication Policy and Regulation (3)
- COMM 762 Seminar: Public Telecommunications (3)
- COMM 766 Seminar: Telecommunication Issues and Trends (3)
- TFM 562 Documentary and Propaganda Film/Television (3)

Concentration in City Planning (Major Code: 02061)

Students must complete the following courses as part of the M.P.A. degree:

- PA 525 The U.S. City Planning Process (3)
- CP 630 Seminar in Urban Planning Implementation (3)
- CP 640 Seminar in Urban Planning Theory (3)
- CP 670 History of Urban Planning (3)
- CP 690 Seminar in Land Use Planning Principles and Techniques (3)

Master of City Planning Degree

Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. The student must possess a bachelor's or higher degree in sociology, geography, political science, economics, architecture, or landscape architecture, or any fields related to planning (students with degrees other than those listed may be allowed to enter the program under appropriate conditions). In the event that deficiencies occur in a student's background and training, the graduate committee will examine the student's past record and recommend a program to make up the deficiencies.

Students seeking admission to the graduate program in urban planning which leads to the Master of City Planning degree should address their inquiries to the director of the program. Detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms. As there are specific requirements for the program it is not sufficient merely to file the general university admission forms. Students are admitted to the program in the fall and spring semesters of each year.

Upon admission to the program, the student must meet with the graduate adviser to determine the number of units of internship needed to satisfy the degree requirements.

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 faculty. In order to be recommended for advancement, a student must have (1) achieved a grade point average of 3.0 in 15 units of city planning courses, or (2) passed satisfactorily a written examination in areas of deficiency. The examination will be offered at the end of the spring semester for all students who have completed 12 or more units of study toward the master's degree.

Specific Requirements for the Master of City Planning Degree

(Major Code: 02061)

In addition to meeting the requirements for classified graduate standing for the purpose of pursuing the Master of City Planning degree, the student must complete an approved program of studies consisting of at least 57 units of approved 500-, 600-, and 700-numbered courses, with no more than 9 units of 500-level courses, to include:

1. Public Administration 525, the U.S. City Planning Process (3)
City Planning 625, Quantitative Techniques in Urban Planning (6)
City Planning 630, Seminar in Urban Planning Implementation (3)
City Planning 640, Seminar in Urban Planning Theory (3)
City Planning 650, Seminar in Urban Theory (3)
City Planning 670, History of Urban Planning (3)
City Planning 690, Seminar in Land Use Planning Principles and Techniques (3)
City Planning 700, Urban Design and Land Use Planning Studio (6)
2. Nine units of 600- and 700-numbered courses in planning elective courses, readings and research.
3. City Planning 796, Internship in Urban Planning (6-12) 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

Criminal Justice Administration

UPPER DIVISION COURSES

- 502. Juvenile Deviance and the Administration Process (3)**
Prerequisite: Criminal Justice Administration 321.
Problems of implementing and evaluating policies and programs for prevention of juvenile delinquency and treatment of juvenile offenders; an assessment of the proposed standards and goals for juvenile justice administration.
- 510. Contemporary Issues in Law Enforcement Administration (3)**
Prerequisite: Criminal Justice Administration 310.
Assessment of problems confronting administrators of law enforcement agencies and of recent efforts to enhance the capability of agencies to control criminal activity while guarding individual liberties.
- 520. Prosecutorial Function in Administration of Justice (3)**
Prerequisite: Criminal Justice Administration 301.
Analysis of prosecutor's function at local, state and federal levels and in selected foreign nations, including appraisal of proposed national standards and goals for prosecutors.
- 531. Probation and Parole (3)**
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.

Public Administration

UPPER DIVISION COURSES

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.

The 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.

Public Administration

GRADUATE COURSES

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 and 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.

621. Seminar in the Metropolitan Area (3)

Prerequisite: Public Administration 310, 512 or 520.

Selected problems in the government and administration of the world's major metropolitan areas.

630. Seminar in Public Personnel Administration (3)

Prerequisite: Public Administration 600.

Analysis of selected problems in personnel administration; special emphasis on organizational development and consultation skills as emerging personnel functions. Maximum credit six units applicable to a master's degree.

632. Seminar of Organization Development in the Public Sector (3)

Prerequisite: Public Administration 600.

Organization development theory and practice. Emphasis on organizational diagnosis, intervention theory, team building and process consultation skills as they apply to public sector organizations.

633. Collective Bargaining in the Public Sector (3)

Prerequisite: Public Administration 530 or 531.

Simulation of public sector collective bargaining. Students will participate in all facets of the bargaining process including data col-

lection, proposal preparation, formal and informal negotiation, fact-finding and mediation. Videotape feedback will be used extensively.

640. Seminar in Public Administration (3)

Selected topics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable 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.

Economics and politics of the public sector. Theories of public expenditure analysis and revenue generation. Issues of ethics and efficiency in government financial policy.

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 and problems of administration at the federal, state, and local levels.

791. 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)

Analytical treatment of selected problems in Public Administration. Review of methods for investigation and reporting of data. Consideration of problems in preparation of projects or thesis.

796. Internship in Public Administration (3-12) Cr/NC

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.

797. Research in Public Administration (3) Cr/NC/SP

Prerequisite: Consent of director of public administration and urban studies.

Research in one of the areas of public 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 the director and instructor.

Individual study. Maximum credit six units applicable to a mas-

ter'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.

City Planning

GRADUATE COURSES

615. Graphics and Presentation Techniques in City Planning (3)

One lecture and six hours of laboratory.

Maps, scales, representational and graphic communication techniques and materials, computer mapping. How to organize effective planning and design presentations.

620. Seminar in Urban Planning Methodologies (3)

Procedures and analytical techniques for advanced urban planning analysis.

625. Quantitative Techniques in Urban Planning (6)

Three lectures and nine hours of laboratory.

Prerequisite: 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 transaction 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.

675. Seminar in Environmental Policy and Planning in the U.S. (3)

Prerequisite: Public Administration 525.

Concepts and analytical approaches geared to environmental policy planning and decision-making. Public regulatory programs and environmental protection organizations; relationship between science and policy-making; environmental issues which require binational management.

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.

685. Seminar in International Environmental Planning (3)

Prerequisite: Public Administration 525.

Relationship between economic development and environmental protection policies in developing nations. Role of environmental issues in development and planning decisions. Emphasis on Mexican experience and its relevance to San Diego region.

690. Seminar in Land Use Planning Principles and Techniques (3)

Two lectures and three hours of laboratory.

Prerequisite: City Planning 630.

Land-use and physical planning principles and techniques at the regional, community, specific and subdivision planning levels.

700. Urban Design and Land Use Planning Studio (6)

One lecture and ten hours of laboratory.

Prerequisite: City Planning 690.

Preparation of land-use plans and planning reports at the regional, community and subdivision levels.

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 (6-12) Cr/NC

Students will be assigned to various government agencies and will work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences. Maximum credit twelve 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.

Criminal Justice Administration

GRADUATE COURSES

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

In the College of Health and Human Services

OFFICE: Hardy Tower 119
TELEPHONE: (619) 594-6317

Faculty

Stephen J. Bender, H.S.D., M.P.H., Professor of Public Health, Acting Director of the Graduate School of Public Health
Kevin M. Patrick, M.D., Director of the General Preventive Medicine Residency Program, Adjunct Faculty in Public Health

Epidemiology and Biostatistics

Craig A. Molgaard, Ph.D., M.P.H., Professor of Public Health, Division Head
Stephen J. Bender, H.S.D., M.P.H., Professor of Public Health
Donald J. Slymen, Ph.D., Professor of Public Health, Coordinator of Biometry Program
Elena S. H. Yu, Ph.D., M.P.H., Professor of Public Health
Louise K. Hofherr, M.P.H., Ph.D., Associate Professor of Public Health, Coordinator of Ph.D. Program
John E. Alcaraz, Ph.D., Research Professor of Public Health
Stephanie K. Brodine, M.D., Adjunct Professor of Public Health
Elizabeth R. Ledbetter, M.D., M.P.H., Adjunct Professor of Public Health

Health Promotion

John P. Elder, Ph.D., M.P.H., Professor of Public Health, Division Head
Melbourne F. Hovell, Ph.D., M.P.H., Professor of Public Health
Joni A. Mayer, Ph.D., Professor of Public Health
Gregory A. Talavera, M.D., Research Professor of Public Health

Health Services Administration

Stephen J. Williams, S.M., Sc.D., Professor of Public Health, Division Head
Alma L. Koch, Ph.D., M.P.H., Professor of Public Health
K. Michael Peddecord, Dr.P.H., Professor of Public Health
Dennis D. Pointer, Ph.D., Professor of Public Health, The John J. Hanlon Chair in Health Services Research and Policy
F. Douglas Scutchfield, M.D., Professor of Public Health
Robert L. Seidman, Ph.D., Associate Professor of Public Health and Economics

Maternal and Child Health

Winnie O. Willis, R.N., Sc.D., Associate Professor of Public Health, Division Head
Albert Chang, M.D., M.P.H., Professor of Public Health

Occupational and Environmental Health

Behzad S. Samimi, M.S.P.H., Ph.D., C.I.H., Professor of Public Health, Division Head
Ann de Peyster, Ph.D., Professor of Public Health
Richard M. Gersberg, Ph.D., Professor of Public Health
P.J.E. (Jenny) Quintana, Ph.D., M.P.H., Assistant Professor of Public Health

The John J. Hanlon Chair in Health Services Research and Policy

Alvarado Hospital Medical Center has joined with SDSU's faculty and staff to create The John J. Hanlon Chair in Health Services Research and Policy in the Graduate School of Public Health. The chair is named in honor of the late Dr. John J. Hanlon, former assistant surgeon general for the U.S. Public Health Service. Dr. Hanlon coordinated the planning and development of SDSU's Graduate School of Public Health.

The first appointee to the Chair, Dr. Dennis Pointer, is a national authority on health care delivery systems and the changing professional relationships between hospitals and physicians.

General Information

APPLICATION DEADLINES: For students applying for the MPH, MS, MSW/MPH and MD/MPH, both the GSPH and SDSU applications must be *postmarked* by July 1 for fall semester admission, or December 1 for spring semester admission (transcripts, letters of recommendation, and GRE scores can arrive after these dates). Students applying for the Ph.D. must submit *all* application materials (applications, transcripts, letters of recommendation, and GRE scores) by February 1, for fall admission only.

The Graduate School of Public Health in the College of Health and Human Services offers graduate study leading to the degrees of Doctor of Philosophy in public health, Master of Public Health, Master of Science, and a concurrent program leading to a Master of Public Health and a Master of Social Work.

The curriculum enables students to prepare for careers in academic teaching and research, as well as health services and research in public and private agencies and organizations. The Doctor of Philosophy is offered in public health, with a concentration in epidemiology. The Master of Public Health (MPH) is awarded in the concentration areas of biometry, environmental health, epidemiology, health promotion, health services administration, maternal and child health and occupational health. An MPH specialization in occupational health promotion is offered jointly by the division of health promotion and the division of occupational and environmental health. The Master of Science degree is awarded in the concentration areas of environmental health science, industrial hygiene and toxicology. A preventive medicine residency program is offered which enables qualified physicians to sit for the American Board of Preventive Medicine certificate examination as well as receive the MPH degree upon completion of preventive medicine residency requirements. The Graduate School of Public Health is nationally accredited by the Council on Education in Public Health (CEPH). In addition, the program in health services administration is accredited by the Accrediting Commission on Education for Health Services Administration (ACEHSA), and the preventive medi-

cine residency program is accredited by the Accrediting Committee for Graduate Medical Education (ACGME).

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 proximity to the Mexican border has promoted the development of strong professional ties between the Graduate School of 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. The following general description of faculty and student research being conducted in each of the concentration areas illustrates the role of each specialty area within the broad, interdisciplinary field of public health:

Biometry: Development and application of statistical methods and models in the fields of public health, medicine and biology.

Environmental Health Science: Isolation and identification of chemical and microbiological disease agents in air, water, soil, hazardous and other solid wastes. The M.S. program in environmental health science offers greater technical laboratory focus than the environmental health M.P.H.

Epidemiology: Identification of biological, environmental, social and behavioral risk factors for human disease; determination of the distribution and etiology of disease in human populations, particularly infectious and chronic diseases.

Health Promotion: 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 of health care facilities, services, and organizations; planning and evaluation of public and private sector programs; administration and operations in specialty services, hospitals, ambulatory care, insurance companies, and other health related organizations.

Industrial Hygiene: Recognition, evaluation and control of chemical, physical, and biological hazards in the work place; current emphasis on studies of airborne contaminants and respiratory protection.

Maternal and Child Health: Application of the core public health functions to the development of health services for women, mothers, children, and families. Emphasis is on women's issues, perinatal care, health services for children, program planning, implementation, evaluation and health policy.

Occupational Health: Development of innovative approaches to the provision of occupational health services for the working population; establishment and management of occupational health programs.

Toxicology: Study of toxicity, biologic mechanisms of action, and human health risk of exposure to chemicals in the environment.

Section I. Master's Degree Programs

Master of Public Health Degree

Admission to Graduate Study

Applicants seeking admission to public health concentration areas leading to either the Master of Public Health or Master of Science 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 Instructions for Applicants; (2) submit three letters of recommendation (preferably academic); (3) present additional evidence of promise of success in academic and professional activities; and (4) document competence or prior academic preparation in the biological sciences, social sciences, and quantitative methods. Applicants for the biometry concentration are required to have successfully completed undergraduate courses in single and multivariable calculus. A personal interview is desired when feasible.

Normally, to be considered for admission to the Master of Science degree, students must have successfully completed lecture and laboratory course requirements for an undergraduate degree (BA or BS) in biology, chemistry, engineering, or other basic or applied natural science. The Graduate School of Public Health should be consulted for specific course preparation recommended for each of the concentrations. In some cases, if an applicant is deficient in certain select areas, some remedial coursework can be completed while the student is on unclassified graduate status. However, credits earned by remedial courses cannot be applied toward the required number of units for the master's degree.

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 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 644A for Public Health 605 and students in health promotion will substitute Public Health 661 and 662 for Public Health 603); have 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 biometry, health promotion, health services administration and maternal and child health concentrations where the student may select the Plan B option, with a comprehensive written examination in lieu of the thesis or project when approved by the graduate adviser.

In the environmental health and occupational health concentrations, students registering for 799A may complete a major project or thesis. Up to six units of graduate credit may be accepted in transfer, with the approval of the graduate adviser.

*Students in Health Promotion will take Public Health 661 and 662 in lieu of Public Health 603.

**Students in Health Services Administration will take Public Health 641 and Public Health 644A in lieu of Public Health 605.

Concentration in Biometry

Courses required for the concentration:

PH 623	Epidemiological Methods (3)
PH 627	Advanced Statistical Methods in Public Health (3)
PH 628	Applications of Multivariate Statistics in Public Health
MATH 551A	Mathematical Statistics (3)
MATH 551B	Mathematical Statistics (3)
MATH 673	Sample Surveys (3)

Prescribed Electives: Three units selected from the following Public Health courses:

PH 622	Epidemiology of Chronic Diseases (3)
PH 649	Public Health Data Organization and Management (3)
PH 700	Seminar in Public Health (1-3)

Prescribed Electives: Nine units selected with the approval of the adviser from the following Mathematics courses:

MATH 553	Stochastic Processes (3)
MATH 554A	Computer Oriented Statistical Analysis (3)
MATH 554B	Advanced Computer Oriented Statistical Analysis (3)
MATH 555	Multivariate Statistical Methods in Biology (3)
MATH 670A	Advanced Mathematical Statistics (3)
MATH 670B	Advanced Mathematical Statistics (3)
MATH 671	Statistical Computing (3)
MATH 672	Nonparametric Statistics (3)
MATH 674	Multivariate Analysis (3)
MATH 675	Linear Statistical Hypothesis Testing (3)
MATH 677	Design of Experiments (3)
MATH 678	Survival Analysis (3)
MATH 679	Discrete Data (3)
MATH 680A-680B	Advanced Biostatistical Methods (3-3)

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)

Prescribed electives (a minimum of six additional units selected with the approval of the adviser from):

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 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 628	Applications of Multivariate Statistics in Public Health (3)
PH 649	Public Health Data Organization and Management (3)
PH 700A	Seminar in Public Health: Epidemiology (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, 585, 586, 588, 592
Mathematics	550, 551A, 554A, 672, 673, 674, 677
Nutrition	600, 606, 607, 700
Sociology	770

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 667	Prevention and Control of Chronic Diseases (3)
PH 668	Seminar in Health Promotion Research (3)
PH 669	Health Risk Appraisal (3)
PH 700	Seminar in Public Health (1-3)
PH 761	Programming Health Promotion (3)

- PH 762 Behavioral Medicine (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 Community Health Education 573, 574).

Concentration in Health Services Administration

Courses prerequisite to this concentration are Accountancy 600 and Public Health 640 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)
PH 640 Public Issues in Financing Health Care (3)

Courses required for the concentration:

- PH 641 Health Care Delivery Systems (3)
PH 644A Health Services Organizations Structure and Functioning (3)
PH 644B Organizational Behavior in Health Services Organizations (3)
PH 645 Health Services Economics (3)
PH 646 Legal and Ethical Aspects of Health Care (3)
PH 647 Quantitative Methods (3)
PH 742A Health Services Financial Management (3)
PH 742B Health Services Financial Management (3)
PH 748 Competitive Strategies and Tactics in Health Services Delivery (3)

Prescribed electives (nine units selected with approval of adviser):

- PH 642 Professional Development of the Health Services Administrator (2)
PH 649 Public Health Data Organization and Management (3)
PH 650 Field Practice (3) Cr/NC
PH 700E Seminar in Public Health: Health Services Administration (1-3)
PH 741 Health Policy and Politics (3)
PH 743 Hospital Administration (3)
PH 744 Ambulatory Care Management (3)
PH 745 Seminar in Health Economics (3)
PH 746 Quality of Care Assessment and Assurance (3)
PH 750 Advanced Field Placement (3)
PH 798 Special Study (1-3) Cr/NC/SP

The remaining elective units may be selected with the approval of the adviser.

Concentration in Maternal and Child Health

Courses required for the concentration:

- PH 651A Contemporary Issues in Maternal and Child Health (3)
PH 651B Advanced Issues in Problems and Programs in Maternal and Child Health (3)
PH 652 Maternal and Women's Health (3)
PH 655 Child Health (3)
PH 658 Program and Data Management in Maternal and 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. The remaining elective units may be selected from any public health courses or graduate level courses offered in other departments with the approval of the faculty adviser.

- PH 653 Family Planning (3)
PH 656 Seminar in International Maternal and Child Health (3)
PH 700 Seminar in Public Health (3)
PH 752 Seminar in Adolescent Health and Social Issues (3)
PH 754 Seminar: Children with Special Health Needs (3)
PH 757 Seminar in Nutrition in Maternal and Child Health (3)
PH 758 Seminar in Issues of Women in Public Health (3)
PH 759 Seminar in Advanced Issues in Public Health Nutrition (3)

Students with a nutrition background who have met the ADA Plan IV or V course requirements can apply for the AP4 Program while working on their MPH. This is a ten month internship program with Childrens Hospital in Los Angeles. Upon completion of the internship, students are eligible to become Registered Dietitians (R.D.).

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)

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 638A Principles of Toxicology (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 733 Principles of Industrial Safety (3)
PH 735 Industrial Ventilation (3)
PH 737 Advanced Industrial Hygiene (4)

Specialization in Occupational Health Promotion

Courses required for the specialization (22-23 units):

- 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 732 Principles of Industrial Hygiene (4)

And one of the following two courses:

- PH 731 Environmental and Occupational Health Policy (3)
PH 737 Advanced Industrial Hygiene (4)

Prescribed electives (six units selected from Group A and six to seven units selected from Group B for a total of 12-13 units):

Group A:

PH 661	Theoretical Foundations of Health Promotion (3)
PH 663	Health Promotion Communications Theory and Design (3)
PH 666	Health Promotion Program Planning and Assessment (3)
PH 669	Health Risk Appraisal (3)
PH 762	Behavioral Medicine (3)

Group B:

PH 637	Biological Mechanisms of Environmental Toxicants (3)
PH 638A	Principles of Toxicology (3)
PH 721	Environmental Epidemiology (3)
PH 733	Principles of Industrial Safety (3)
PH 737	Advanced Industrial Hygiene (4)

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 Science Degree in Public Health

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 seeking admission to the Graduate School of Public Health master of science programs must (1) submit a narrative statement as described in Instructions to Applicants; (2) provide three letters of recommendation preferably academic; (3) document competence or prior academic preparation in laboratory sciences. Normally, to be considered for admission to these programs, a student must have successfully completed lecture and laboratory course requirements for an undergraduate degree (BA or BS) in biology, chemistry, engineering, or other basic or applied natural science. The Graduate School of Public Health should be consulted for specific course preparation recommended for each of the concentrations. In some cases, if an applicant is deficient in certain basic or applied science areas, some remedial coursework can be completed as an unclassified graduate student. However, credits earned by remedial courses cannot be applied toward the required number of units for the master's degree. The student must also have successfully completed PH601 and PH602 or their equivalents with a minimum grade of B- in both courses in order to become fully classified in the programs. (PH601 and PH602 will not count toward the 36 unit master of science degree requirements.) 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 admissions committee and the graduate adviser. Students so admitted will be advised as to remedial steps to take to satisfy the requirement to achieve full classified graduate standing.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. Students completing master of science degree concentrations must (1) have satisfactorily completed at least 12 units of coursework of the 36-unit official program including at least two courses chosen from the list of courses required for the student's concentration, with a minimum grade point average of 3.0 (B) and no grade less than a B-; (2) have a

thesis proposal which has received the approval of the Graduate School of Public Health faculty.

General Requirements for the Master of Science 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 36 units in the area of concentration or related disciplines as listed below. Up to six units may be accepted in transfer, with the approval of the graduate adviser. Requirements vary depending on the area of concentration and are as shown below:

	Environmental Health Science	Industrial Hygiene	Toxicology
Required	18	20	18
Prescribed Electives	12	7	12
Research/Thesis (PH 797, 799A)	6	6	6
Field Practice* (PH 650)	—	3	—
Total units:	36	36	36

* A 3-unit field practice is mandatory for industrial hygiene students and may be taken as an elective by students in the environmental health science and toxicology concentrations with approval of the academic adviser.

Specific Requirements for Master of Science Degree Programs

Concentration in Environmental Health Science

Courses required for the concentration (18 units):

PH 632	Air Quality (3)
PH 634	Environmental Protection (3)
PH 636	Hazardous Waste Management (3)
PH 638A	Principles of Toxicology (3)
PH 639	Water Quality Investigation (3)
PH 700	Seminar in Public Health (3)

Prescribed electives (a minimum of 12 units of coursework selected from the following with the approval of the faculty adviser):

GEOL 551	Hydrogeology (3)
CE 635	Water Quality Engineering (3)
CE 636	Water Quality Processes (3)
PH 623	Epidemiological Methods (3)
PH 637	Biological Mechanisms of Environmental Toxicants (3)
PH 650	Field Practice (3) Cr/NC
PH 721	Environmental Epidemiology (3)
PH 731	Environmental and Occupational Health Policy (3)
PH 738	Topics in Toxicology (3)
PH 798	Special Study (1-3) Cr/NC/SP

Concentration in Industrial Hygiene

Courses required for the concentration (20 units):

PH 636	Hazardous Waste Management (3)
PH 638A	Principles of Toxicology (3)
PH 700	Seminar in Public Health (3)
PH 732	Principles of Industrial Hygiene (4)
PH 735	Industrial Ventilation (3)
PH 737	Advanced Industrial Hygiene (4)

Prescribed electives (a minimum of seven units of coursework selected from the following list with the approval of the faculty adviser):

PH 604	Environmental Determinants of Human Health (2)
PH 632	Air Quality (3)
PH 634	Environmental Protection (3)
PH 635	Occupational Medicine (3)
PH 639	Water Quality Investigation (3)
PH 731	Environmental and Occupational Health Policy (3)
PH 733	Principles of Industrial Safety (3)
PH 798	Special Study (1-3) Cr/NC/SP

Concentration in Toxicology

Courses required for the concentration (18 units):

PH 636	Hazardous Waste Management (3)
PH 637	Biological Mechanisms of Environmental Toxicants (3)
PH 638A	Principles of Toxicology (3)
PH 638B	Methods in Toxicity Testing (3)
PH 700	Seminar in Public Health (3)
PH 738	Topics in Toxicology (3)

Prescribed electives (a minimum of 12 units of coursework selected from the following list with the approval of the faculty adviser):

BIOL 561	Radiation Biology (3)
BIOL 561L	Radiation Biology Laboratory (2)
BIOL 569	Molecular Pharmacology (3)
CHEM 550	Instrumental Methods of Chemical Analysis (2)
PH 627	Advanced Statistical Methods in Public Health (3)
PH 632	Air Quality (3)
PH 635	Occupational Medicine (3)
PH 639	Water Quality Investigation (3)
PH 650	Field Practice (3) Cr/NC
PH 721	Environmental Epidemiology (3)
PH 731	Environmental and Occupational Health Policy (3)
PH 732	Principles of Industrial Hygiene (4)
PH 798	Special Study (1-3) Cr/NC/SP

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 promote health, prevent disease, and enhance the delivery of social and health services in the community. The student will select one of two practice contexts: social work with a 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

(Major Code: 12991)

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 83 units as outlined below.

Option A: Social Work/Public Health – Maternal and Child Health

SWORK 601	Seminar in Social Welfare Policy and Services (3)
SWORK 602C	Seminar in Social Welfare and Policy Services: Health (3)
SWORK 619	Human Behavior in the Social Environment (3)
SWORK 620B	Seminar in Human Behavior and Social Environment: Administration (3)
SWORK 630	Social Work Practice: A Generalist Perspective (3)
SWORK 631	Social Work Practice: Individuals, Families, and Groups (3)
SWORK 632	Social Work Practice: Organizations and Communities (3)
SWORK 650*	Field Practicum: Health (8) Cr/NC
SWORK 690	Seminar in Social Work Research Methods (3)
SWORK 740	Advanced Seminar in Social Work Administration (3)
SWORK 745	Advanced Seminar in Selected Topics in Social Work Administration (3)
SWORK 750B*	Advanced Field Practicum: Social Work Administration (8) Cr/NC
SWORK 797	Research (3) Cr/NC/SP
PH 601	Epidemiology (3)

- PH 602 Biostatistics (3)
- PH 604 Environmental Determinants of Human Health (2)
- PH 651A Contemporary Issues in Maternal and Child Health (3)
- PH 651B Advanced Issues in Problems and Programs in Maternal and Child Health (3)
- PH 652 Maternal Health (3)
- PH 655 Child Health (3)
- PH 658 Program and Data Management in Maternal and Child Health (3)
- PH 747 Program Evaluation in Health Services (3)
- PH 797 Research (3) Cr/NC/SP
- PH 799A Thesis (3) Cr/NC/SP
- Elective, acceptable to faculty advisory committee (3)

Option B: Social Work/Public Health – Health Services Administration

- SWORK 601 Seminar in Social Welfare Policy and Services (3)
- SWORK 602C Seminar in Social Welfare and Policy Services: Health (3)
- SWORK 619 Human Behavior and Social Environment (3)
- SWORK 620B Seminar in Human Behavior and Social Environment: Administration (3)
- SWORK 630 Social Work Practice: A Generalist Perspective (3)
- SWORK 631 Social Work Practice: Individuals, Families, and Groups (3)
- SWORK 632 Social Work Practice: Organizations and Communities (3)
- SWORK 650* Field Practicum: Health (7) Cr/NC
- SWORK 690 Seminar in Social Work Research Methods (3)
- SWORK 740 Advanced Seminar in Social Work Administration (3)
- SWORK 745 Advanced Seminar in Selected Topics in Social Work Administration (3)
- SWORK 750B* Advanced Field Practicum: Social Work Administration (8) Cr/NC
- SWORK 797 Research (3) Cr/NC/SP
- PH 601 Epidemiology (3)
- PH 602 Biostatistics (3)
- PH 604 Environmental Determinants of Human Health (2)
- PH 641 Health Care Delivery Systems (3)
- PH 644A Health Services Organizations Structure and Functioning (3)
- PH 644B Organizational Behavior in Health Services Organizations (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)
- PH 797 Research (3) Cr/NC/SP
- PH 799A Thesis (3) Cr/NC/SP

*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. Graduate study or degrees obtained previously will not be accepted toward meeting the unit requirements of 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), 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.

**Section II.
Doctoral Program**

(Major Code: 12141)

Ph.D. in Public Health with a Concentration in Epidemiology

The cooperating faculties of the Division of Epidemiology and Biostatistics, Graduate School of Public Health at San Diego State University and the Department of Community and Family Medicine at the University of California, San Diego offer a joint doctoral program leading to a Ph.D. in public health, with a concentration in epidemiology. The research interests of the participating faculty members cover a wide range of public health problems which represent the interdisciplinary nature of modern public health.

Admission to Doctoral Study

Applicants for admission to the doctoral program must present evidence of capacity for graduate study in public health. A multidisciplinary field such as public health draws from a wide variety of undergraduate majors, but the student is expected to have a strong grounding in the quantitative and biological sciences. The applicant must have a bachelor's degree or the equivalent from an acceptable accredited institution of higher learning with training comparable to that provided by The California State University or University of California undergraduate programs. Admission to the program requires acceptance by both institutions on recommendation of the participating units at SDSU and UCSD. It is understood that acceptance of a student into the joint program by each of the units will be conditioned by their respective standards for graduate admissions and also the available facilities.

Applications must be received by the Graduate School of Public Health not later than February 1 for the Ph.D. program.

Application

Preliminary application for admission must be made to the steering committee, in care of the Graduate School of Public Health, SDSU. A complete application to the joint doctoral program in public health requires the following information:

The appropriate application form.

Three letters of recommendation (sent directly to the Doctoral Program Coordinator, Graduate School of Public Health, SDSU).

Transcripts of academic work already completed.

Results of the Graduate Record Examination.

To be considered for admission to the joint SDSU-UCSD doctoral program in public health, students must meet the general requirements for admission to both universities with 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 two graduate divisions; (b) a GPA of at least 3.0 in the last 60 semester (90 quarter) units attempted; (c) good standing at the last institution attended; and (d) an acceptable score (verbal and quantitative) on the GRE General Test. Given the large number of applicants in the field of public health, and the limited number of spaces in the program, the selection process is designed to identify the best from among many highly qualified applicants. Thus no minimum set of qualifications in any way guarantees admission.

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 San Diego State University and University of California, San Diego.

Advisory Committee

Upon admission to the program, the steering committee of the two institutions will establish an advisory committee for the student. This committee will consist of three faculty members chosen jointly from the two institutions. In consultation with the student, the committee will develop the student's course of study, prepare and guide a preliminary examination, and establish the student's joint qualifying committee. At least one member of the advisory committee must be from SDSU and one from UCSD.

Course Requirements

Core courses required for the doctoral degree in public health include Public Health 601, 602, 621, 622, 623, 627, 628, 649, and Mathematics 554A. Prior to taking the qualifying examination, every student is expected to have a firm understanding of modern principles of public health and the student's area of epidemiologic interest.

Elective coursework may be selected from offerings at either SDSU or UCSD.

Preliminary Examination

The advisory committee has the responsibility for the preparation of a written preliminary examination that will test broad public health principles and knowledge of epidemiologic methods and their application.

Doctoral Committee

A five-member committee, composed of faculty at SDSU and UCSD, will be recommended by the advisory committee for each student and approved by the graduate deans from both campuses. Two members must be nonprogram faculty and at least one of those outside members must be a tenured member of each university. The student's dissertation adviser will chair the committee. At least two members

must be from SDSU and two from UCSD.

The doctoral committee will conduct a written and oral comprehensive qualifying examination, which will evaluate the student's understanding and knowledge of his or her special area of epidemiologic interest. The purpose of this examination is for the student to demonstrate competence in the major research field.

The doctoral 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 UCSD for advancement to candidacy. Upon payment of the candidacy fee to UCSD, and after approval by the graduate deans on both campuses, the student will be notified of advancement to candidacy by the UCSD Graduate Division.

Dissertation

Following successful completion of the qualifying examination and advancement to candidacy, 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 the dissertation adviser, who may be from either SDSU or UCSD. The doctoral committee becomes the dissertation committee after the student's advancement to candidacy. Requirements currently in force at SDSU and UCSD must be met for completing and filing the dissertation.

Award of the Degree

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

Financial Support

The Graduate School of Public Health at SDSU and the Department of Community and Family Medicine at UCSD endeavors to provide financial support that will enable all students to devote full time to research training and study.

Section III. Other Programs

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 and at the University of California, San Diego, School of Medicine.

Program Adviser:

Kevin M. Patrick, M.D., Director
General Preventive Medicine

Courses Acceptable on Master's and Doctoral 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: Successful completion of an elementary statistics course within three years or satisfactory score on departmental competency examination on basic statistical methods.
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: Psychology 316, 340, and 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)**
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.
- 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.
Applications of advanced statistical methods for analysis of public health and biomedical data. Topics include multiple linear regression, analysis of variance, logistic regression, and introduction to survival analysis.
- 628. Applications of Multivariate Statistics in Public Health (3)**
Prerequisite: Public Health 627.
Statistical methods for multivariate problems in public health including regression diagnostics, cluster analysis, discriminant analysis, principal components, multivariate discrete analysis and Poisson regression. Computer applications included.
- 632. Air Quality (3)**
Prerequisites: Biology 100, Chemistry 251, Physics 180A.
Properties of airborne gases, vapors, and particulate matter. Effects of air pollution on community. Mobile and stationary sources of air pollution. Meteorology and dispersion of air pollutants. Ambient air quality standards.
- 634. Environmental Protection (3)**
Rationale and mechanisms for control of water supplies, liquid and solid waste disposal, lighting, heat, food and housing, pesticides and community noise.
- 635. Occupational Medicine (3)**
Etiology, diagnosis of disease, and stress in the modern industrial environment.
- 636. Hazardous Waste Management (3)**
Prerequisite: Chemistry 201.
Rationale, methods, and regulations governing the proper management of hazardous and toxic wastes.
- 637. Biological Mechanisms of Environmental Toxicants (3)**
Two lectures and three hours of laboratory.

Prerequisites: Biology 261 and Chemistry 160.

Biologic effects and underlying mechanisms of action of harmful environmental agents on mammalian 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 and Chemistry 160.

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.

640. Public Issues in Financing Health Care (3)

Prerequisite: Open to Health Services Administration majors and students in related fields with consent of instructor.

Orientation to growing role of public intervention in health care sector, including equity versus efficiency aspects of taxation and health care financing, social insurance programs, and methods of evaluating public health activities.

641. Health Care Delivery Systems (3)

National health care system; topics include health personnel, facilities, organization, and funding of health care.

642. 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. (Formerly numbered Public Health 642A.)

644A. Health Services Organizations Structure and Functioning (3)

Prerequisite: Public Health 641.

Health services organization theory. Processes and functioning of the organization and its relationship to the surrounding environment.

644B. Organizational Behavior in Health Services Organizations (3)

Prerequisite: Public Health 644A.

Managerial role performance in health service organizations in context of organization behavior theory. Acquisition of techniques and skills to enhance managerial effectiveness, efficiency, adaptability, and creativity.

645. Health Services Economics (3)

Prerequisite: Public Health 640.

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 | D. Environmental Health |
| B. Maternal and Child Health | E. Health Services Administration |
| C. Occupational Health | F. Health Promotion |

651A. Contemporary Issues in Maternal and Child Health (3)

Prerequisite: Open to graduate students in the College of Health and Human Services.

Health policy, legislation, and services for mothers, infants, children, youth, and childbearing families.

651B. Advanced Issues in Problems and Programs in Maternal and Child Health (3)

Prerequisite: Open to graduate students in the College of Health and Human Services.

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 and Women's Health (3)

Prerequisite: Concurrent registration in Public Health 651A or consent of instructor for students not in maternal and child health.

Focus on system of organization and delivery of public health services to women.

653. Family Planning (3)

Physiology of menstruation, pregnancy and lactation; methods of contraception, effectiveness, safety, acceptance and cost; abortion; sterilization; family planning services and programs.

655. Child Health (3)

Prerequisite: Public Health 651A or consent of instructor for students not in maternal and child health.

Health problems of children and adolescents in the U.S. with identification of priorities, approaches, and services which exist to deal with these problems.

656. Seminar in International Maternal and Child Health (3)

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.

658. Program and Data Management in Maternal and Child Health (3)

Planning and evaluation, program implementation, budgeting, personnel issues, quality assurance, and data management for services in maternal and child health programs.

659. Nutrition in Public Health (3)

Prerequisite: Limited to classified graduate students in health and biological science.

Relationship between nutrition and health, assessment of community nutritional status, and analysis of community nutrition programs designed to prevent or treat nutritional problems.

661. Theoretical Foundations of Health Promotion (3)

Prerequisite: Community Health Education 290.

Psychological, sociological, economic, and political theories relevant to the mission and processes of health promotion. (Formerly numbered Community Health Education 621.)

662. Motivating Health Behavior (3)

Prerequisite: Community Health Education 401.

Application of behavioral change techniques and health education methodology to health promotion targeting individuals and whole communities. (Formerly numbered Community Health Education 606.)

663. Health Promotion Communications Theory and Design (3)

Prerequisite: Community Health Education 402.

Theory, design and implementation of health education communications in 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.

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)

Prerequisites: 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, ethical and methodological issues in current health promotion research and services.

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.

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)

Prerequisites: Public Health 601, 602, and 603.

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.

- | | |
|-------------------------|------------------------|
| A. Epidemiology | E. Health Services |
| B. Maternal and Child | Administration |
| C. Occupational Health | F. Health Promotion |
| D. Environmental Health | G. Preventive Medicine |

721. Environmental Epidemiology (3)

Prerequisites: Public Health 601 and 602. Recommended: Public Health 623.

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, 431, and Physics 180A.

Fundamental principles of recognition, evaluation, and control of hazardous chemical, physical, and biological agents in the work place.

733. Principles of Industrial Safety (3)

Prerequisite: Public Health 732.

Introduction to field of industrial safety including accident prevention as a function of training people in safe work behaviors and maintaining and monitoring the machine interface.

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.

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.

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. Hospital Administration (3)

Prerequisite: Public Health 644A.

Organization and management of hospitals including such topics as environment, relationships among medical staff, board, and administration, role of administrator, patient services, structure of hospital, and organizational survival.

744. Ambulatory Care Management (3)

Prerequisite: Public Health 644A.

Organization and management of ambulatory care. Emphasis on group practice, prepayment, organizations, hospital services, and other clinical settings.

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.

Methods for development and evaluation of quality assurance programs in health service organizations. Alternative methods of assessment. Evaluation of consumer, professional, institutional, and governmental responsibilities.

747. Program Evaluation in Health Services (3)

Prerequisites: Public Health 601, 602, and 658.

Evaluation of programs with topics covering population health care needs assessment, establishment of program goals, evaluation design, data collection, as applicable to ongoing programs, statistical analysis, and feedback mechanisms to relate evaluation to program activities.

748. Competitive Strategies and Tactics in Health Services Delivery (3)

Prerequisite: Public Health 644B.

Application of strategy concepts and techniques to health services marketing.

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 | D. Environmental Health |
| B. Maternal and Child Health | E. Health Services Administration |
| C. Occupational Health | F. Health Promotion |

751. Studies in Perinatal and Reproductive Health (3)

Perinatal mortality and morbidity. Review of methods and findings in studies of reproductive exposures and outcomes.

752. Seminar in Adolescent Health and Social Issues (3)

Physical, emotional, and psychosocial issues of adolescence including pregnancy, substance abuse, suicide and homicide and other high-risk behavior, and preventive approaches.

754. Seminar: Children with Special Health Needs (3)

Legislative base, funding, and management of programs for children with special health needs (prevention, case finding, diagnosis, treatment, habilitation, special education, vocational assistance, and residential care).

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.

758. Seminar in Issues of Women in Public Health (3)

Critical areas of health and human services for professional women in public health are addressed through a planning, program development and policy context.

759. Seminar in Advanced Issues in Public Health Nutrition (3)

Prerequisite: Public Health 659 or background in health or biological science.

Current issues in public health nutrition including background and recommendations for solutions.

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 programming in various settings.

762. Behavioral Medicine (3)

Prerequisites: Public Health 661 and 662.

Behavioral management approaches to health care problems. Dis-

eases and conditions that arise from physical, psychological and environmental causes; behavioral interventions that attenuate disease process and improve compliance.

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.

800. Seminar (1-9)

Prerequisite: Admission to the doctoral program.

Investigation of a particular topic or issue, emphasis on empirical research; topic to be announced in the Class Schedule. Maximum credit nine units applicable to a doctoral degree.

897. Doctoral Research (1-9) Cr/NC/SP

Prerequisite: Admission to the doctoral program.

Independent investigation in the general field of the dissertation.

898. Doctoral Special Study (1-9) Cr/NC/SP

Prerequisite: Admission to the doctoral program.

Individual study in the field of specialization. Maximum credit nine units applicable to the doctoral degree.

899. Doctoral Dissertation (6-9) 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.

Religious Studies

OFFICE: Adams Humanities 4231
TELEPHONE: (619) 594-5185

In the College of Arts and Letters

Faculty

Irving Alan Sparks, Ph.D., Professor of Religious Studies, Chair of Department

Marcia K. Hermansen, Ph.D., Professor of Religious Studies

Willard L. Johnson, Ph.D., Professor of Religious Studies

Linda D. Holler, Ph.D., Associate Professor of Religious Studies

General Information

The Department offers advanced coursework in religious studies which may be used toward fulfilling advanced degree requirements in Interdisciplinary Studies and in other departments with the approval of the student's graduate adviser.

UPPER DIVISION COURSES

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. Major Theme (3) I, II

Prerequisites: Three units of religious studies and upper division or graduate standing.

Advanced systematic study of a theme or motif selected from major religious traditions. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

582. Major Text (1-3)

Prerequisites: Three units of religious studies and upper division or graduate standing.

Advanced systematic study of a selected scripture or classic text(s) selected from one of the major religious traditions. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

583. Major Tradition (3)

Prerequisites: Three units of religious studies and upper division or graduate standing.

Advanced systematic study of the doctrines, practices, and development of a major religious tradition. 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 296, 496, 596 courses applicable to a bachelor's degree. 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

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.

Rhetoric and Writing Studies

In the College of Arts and Letters

OFFICE: Nasatir Hall 227
TELEPHONE: (619) 594-6515

Faculty

Carol O. Sweedler-Brown, Ph.D., Professor of Rhetoric and Writing Studies, Chair of Department

Ann M. Johns, Ph.D., Professor of Rhetoric and Writing Studies, Assistant Dean for Student Affairs, College of Arts and Letters

Sherry B. Little, Ph.D., Professor of Rhetoric and Writing Studies, Director of the Technical Writing Program

Deborah Poole, Ph.D., Associate Professor of Rhetoric and Writing Studies

Ellen Quandahl, Ph.D., Associate Professor of Rhetoric and Writing Studies, T.A. Program Director

Cezar M. Ornatowski, Ph.D., Assistant Professor of Rhetoric and Writing Studies (Graduate Adviser)

Associateships

Graduate teaching associateships in rhetoric and writing studies are available to a limited number of qualified students from departments offering graduate degrees. With the guidance of department faculty, teaching associates teach in the lower division writing program. Application forms and additional information may be secured from the Rhetoric and Writing Studies department office.

General Information

The Department offers the required courses in rhetoric and writing for the Master of Arts degree in English with a Specialization in Rhetoric and Writing Studies which is currently offered by the Department of English and Comparative Literature.

UPPER DIVISION COURSES

500W. Advanced Composition (3) I, II

Prerequisites: 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:** Test scores or verification of exemption; copy of transcript.

The theory and practice of expository writing, including the contributions of semantics, rhetoric, and logic. (Formerly numbered English 500W.)

503W. Technical Writing (3) I, II

Prerequisites: Rhetoric and Writing Studies 200. 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:** Test scores or verification of exemption; copy of transcript.

Principles and practices of writing required in technical and scientific fields or professions, including technical writing style and rhetorical strategies of designing technical documents. (Formerly numbered English 503W.)

504. Problems in Technical Communication (3) I, II

Prerequisite: Rhetoric and Writing Studies 503W. Recommended: Graphics or drawing course.

Problems in technical writing, including graphics, printing, and reproduction of technical documents; types of technical communication, including reports, manuals, and proposals; manuscript editing and proofreading; audience analysis and readability; writing and recognition of clear technical prose. (Formerly numbered English 504.)

506. Writing Internship (3) Cr/NC I, II, S

Prerequisites: 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. (Formerly numbered English 506.)

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. (Formerly numbered English 509.)

GRADUATE COURSES

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. (Formerly numbered English 741.)

742. Seminar in Modern Rhetoric and Composition (3)

Twentieth century rhetoric: composition theory, reading theory, psycholinguistics, sociolinguistics, language philosophy, and literary theory. Relationship between rhetorical theory and modern approaches to teaching of writing and literature. (Formerly numbered English 742.)

744. Seminar: Issues in Rhetorical Theory and Practice (3)

Prerequisites: English 600 and 602.

Problems in the teaching of rhetoric and writing, both practical and theoretical. Advanced study of topics such as teaching practices, genres, stylistics, or a major figure. May be repeated with new content. Maximum credit six units. (Formerly numbered English 744.)

745. Advanced Seminar: Research Methods in Rhetoric and Writing (3)

Prerequisites: English 741 or 742 and 744.

Research methods and critical approaches common to advanced graduate study of rhetoric and writing, with attention to basic reference works, scholarly journals, bibliographical techniques. Recommended for students planning a thesis within the rhetoric and writing emphasis. (Formerly numbered English 745.)

796. Teaching Internship (3)

Prerequisite: Advancement to candidacy for Master of Arts degree, completion of Rhetoric and Writing Studies 509, and consent of graduate adviser.

Teaching experience while student is under joint supervision of college-level teacher and academic instructor. Involves completing a minimum of 150 hours, and conferences with instructor and field supervisor. Maximum credit three units.

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 master's degree.

Russian

In the College of Arts and Letters

OFFICE: Business Administration 304
TELEPHONE: (619) 594-6813
FAX: (619) 594-8006
EMAIL: russian.coord@sdsu.edu

Faculty

Edith J. Benkov, Ph.D., Professor of French, Acting Chair of Department
Veronica Shapovalov, Ph.D., Associate Professor of Russian

General Information

The Department of German and Russian Languages and Literatures, in the College of Arts and Letters, offers coursework in Russian which may be used toward fulfilling advanced degree requirements in Interdisciplinary Studies and other departments with the approval of the student's graduate adviser.

UPPER DIVISION COURSES

501. Translation (3)

Prerequisite: Russian 301.

Comparison of Russian and English through translation of a variety of texts from Russian to English and from English to Russian.

555. Russian Literature of the Nineteenth Century (3)

Prerequisite: Russian 200B.

Development of Russian novel, short story, drama and poetry of the nineteenth century.

563. Russian Literature of the Twentieth Century (3)

Prerequisite: Russian 200B.

Poetry, prose and drama of the twentieth century.

580. Russian Syntax and Stylistics (3)

Prerequisite: Russian 301. **Proof of completion of prerequisite required:** Copy of transcript.

The structure of contemporary Russian.

596. Topics in Russian Studies (3) I, II

Prerequisite: Russian 305B (for literary topics). **Proof of completion of prerequisite required:** Copy of transcript.

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 296, 496, 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 Russian Studies (3)

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.

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

Prerequisites: Eighteen upper division units in Russian and consent of staff; to be arranged with department chair and instructor.

Individual study. Maximum credit six units applicable to a master's degree.

Social Work

In the College of Health and Human Services

OFFICE: Hepner Hall 119
TELEPHONE: (619) 594-6865

Faculty

Anita S. Harbert, Ph.D., Professor of Social Work, Director of School
Inger P. Davis, Ph.D., Professor of Social Work
Alfred Dean, Ph.D., Professor of Social Work
Maria R. DeGennaro, Ph.D., Professor of Social Work
Ronald W. Griffin, Ph.D., Professor of Social Work
Joseph B. Kelley, D.S.W., Professor of Social Work
E. Percil Stanford, Ph.D., Professor of Social Work
Juan Ramon Valle, Ph.D., Professor of Social Work
Maria E. Zuniga, Ph.D., Professor of Social Work
Arthur L. Ellis, D.S.W., Associate Professor of Social Work
Olita D. Harris, Ph.D., Associate Professor of Social Work
Loring P. Jones, D.S.W., Associate Professor of Social Work
David C. Pritchard, Ph.D., Associate Professor of Social Work
Alan E. Siman, Ph.D., Associate Professor of Social Work
James A. Ajemian, Ph.D., Assistant Professor of Social Work
Daniel J. Finnegan, Ph.D., Assistant Professor of Social Work
(Graduate Adviser)
Melinda M. Hohman, Ph.D., Assistant Professor of Social Work
Yu-hwa Eva Lu, Ph.D., Assistant Professor of Social Work
Lucinda A. Rasmussen, Ph.D., 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 in the College of Health and Human Services offers a two year full-time or three year part-time accredited graduate program leading to a Master of Social Work degree. The program qualifies students to apply for the Licensed Clinical Social Worker (LCSW) certification process by the Board of Behavioral Science Examiners of the State of California.

The goal of the Master of Social Work program is the education of advanced social work practitioners that enables them to provide services which assure people equal access to resources, programs, and opportunities; assist individuals in the accomplishment of life tasks, the alleviation of individual and social distress and the realization of aspirations as they relate to oneself, others and the society as a whole; and finally because of its special geographic location in the Southern California Pacific basin the school seeks to prepare professionals who will work with the predominate ethnic minority groups of the region in order to enhance the quality of life for economically disadvantaged groups. Special emphasis is currently given to those human needs which relate to the continuum of health care and well-being, families in transition, and social/environmental factors which create stress as it relates to individuals and groups in the home, workplace and community.

The specific program is organized around student experience in a field of service concentration during their first year (Aging, Health,

Mental Health or Children, Youth and Families) and a methods concentration (clinical or administration) in their second year. The school is extensively involved in local, state and national human service issues through individual faculty research and community intervention programs. In addition the school has made commitments in the area of chemical dependency research and practice through the Center on Substance Abuse and policy research and intervention through the Human Service Institute of Southern California.

Admission to Graduate Study

The School of Social Work admits new students to the MSW program beginning in the Fall of each academic year only. New students are not admitted to the program during the Spring semester. New students must apply for the program between November 1 and March 1 of the year before they desire entry. Students currently enrolled or on leave of absence from CSWE accredited schools of social work are considered transfer students and can apply to the program for either fall or spring admission.

All applicants must file two separate applications. One to the University Office of Admissions and Records and one to the School of Social Work. The School of Social Work will not consider any applicant who has not filed both required applications. Specific University admission requirements and procedures are outlined in Part Two of this bulletin. Specific School of Social Work requirements and procedures are outlined in the admissions packet as well as on our voice mail telephone system. Applicants should call (619) 594-6865 (24 hours a day) and follow the verbal prompts for information on the MSW program. The recorded message provides information on how to receive application packets as well as a summary of specific admission policies.

In addition to the regular application material the University requires all applicants to take the Graduate Record Examination for admission. Scores must be reported to both the University and the School of Social Work. Applicants will not be reviewed by the School unless GRE scores are on file. Applicants must have taken and successfully passed one course in statistics and one course in human or general biology at the undergraduate or graduate level. Students who do not meet this requirement may be conditionally admitted to the program but will have to take the course(s) prior to actual enrollment in the program for their initial semester. Failure to take the course(s) will result in disqualification from the program prior to the start of the Fall semester.

The School cannot accept any student into the program until the University has accepted them into Graduate Study. For this reason we urge interested students to submit both applications as early as possible. Students who are qualified for admission but who submit applications after we accepted all students are placed on a waiting list and can be admitted up until August 1.

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 (Cr) in field practicum; (2) be recommended by the faculty of the School of Social Work; (3) be approved for advancement by the Graduate Division; (4) have no incomplete grades.

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 two-year full time or three-year part time 60 unit course of study including: (1) six units in social policy and services (Social Work 601 and Social Work 602B, 602C or 602D); (2) nine units in human behavior and the social environment (Social Work 619, 620A or 620B and 720); (3) fifteen units of social work practice (Social Work 630, 631, 632, 739 or 740, and 744 or 745); (4) six units of research (Social Work 690 and 791A or 791B); (5) fifteen units of practicum (Social Work 650 and 750A or 750B); (6) three units of computer applications in social work (Social Work 710); and (7) six units of electives (Plan B students); (three units of electives and Social Work 799A (Plan A students). Within the 60-unit official program, students must complete (1) 25 units in generalist/foundation courses (Social Work 601, 619, 630, 631, 632, 650, 690); (2) six units in a field of service (Social Work 602B, 602C, or 602D and 720); (3) 20 units in a Social Work Methods Focus Area (Clinical or Administration).

Clinical	Administration
SWORK 620A (3)	SWORK 620B (3)
SWORK 739 (3)	SWORK 740 (3)
SWORK 744 (3)	SWORK 745 (3)
SWORK 750A (8)	SWORK 750B (8)
SWORK 791A (3)	SWORK 791B (3)

The above courses excludes Social Work 710, 799A, 799B, and elective courses.

In addition, students must complete either a Thesis (Plan A) or a comprehensive written examination (Plan B)

At least 32 units of the program must be completed in residence at San Diego State University. A maximum of 28 units is transferable from another accredited graduate program in social work. Six units of elective credit may be taken from other schools or departments from the approved list below.*

To receive the degree, students must earn a 3.0 (B) grade point average in academic courses and demonstrate professional competence for required practicum (Cr for all semesters).

*Administration, Rehabilitation and Postsecondary Education 685A-685B; Anthropology 509, 529; Child and Family Development 537, 570; Communicative Disorders 289; Community Health Education 561, 574; Counseling and School Psychology 585A, 585B; Criminal Justice Administration 531; Management 626, 727; Nutrition 607, 608; Psychology 651; Public Administration 520; Public Health 646, 651A, 651B, 652, 653, 655, 754, 757; Sociology 528, 543, 557.

Program of Study

The program is organized in the first year around a generalist/foundations first semester and a mixed generalist, and methods focus area in the second semester. The second year program is organized around a field of service focus area and a methods focus area.

Students will select one methods focus area during their second semester in the program and one field of service focus area in their third semester in the program. The following field of service focus areas and methods focus areas are available in the program.

Methods Focus Areas

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.

Social Work Administration

Focus is on intervention in inter- and intra-organizational 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.

Fields of Service Focus Areas

Social Work in Mental Health

This focus area addresses human and institutional problems related to personal and family dysfunction reflected in acute life crises, and emotional/behavioral/mental disorders. The objective is social work knowledge and skill development in interdisciplinary community mental health planning, practice and research, with emphasis on roles and modalities of intervention which promote mental health, prevent mental disabilities, and treat personal and family dysfunctions.

Social Work in Health and Aging

This focus area addresses a range of emerging and established social work roles, modalities and strategies, applied collaboratively with other disciplines in health promotion, prevention and treatment of psychosocial components of illness in individuals (with emphasis on children and the aged), families and groups. Humanizing health care through consumer advocacy, policy and program development, planning and administration is emphasized. The focus area addresses the implications of changing demography, characteristics and needs of elderly, functional and dysfunctional elements in service systems, and personal/social significance of life cycle changes.

Social Work with Children, Youth, and Families

This focus area addresses social work professional roles in delivery of service to children, youth, and families in public and voluntary social agencies. The functional and dysfunctional aspects of socialization processes and institutional influences on children and families are reviewed with respect to interventive strategies, social policy issues, and program development.

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 promote health, prevent disease, and enhance the delivery of social and health services in the community. The student will select one of two practice contexts: social work with a 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

For additional admission information refer to Admission to Graduate Study for the MSW. 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

(Major Code: 12991)

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 83 units as outlined below.

Option A: Social Work/Public Health – Maternal and Child Health

SWORK 601	Seminar in Social Welfare Policy and Services (3)
SWORK 602C	Seminar in Social Welfare and Policy Services: Health (3)
SWORK 619	Human Behavior in the Social Environment (3)
SWORK 620B	Seminar in Human Behavior and Social Environment: Administration (3)

SWORK 630	Social Work Practice: A Generalist Perspective (3)
SWORK 631	Social Work Practice: Individuals, Families, and Groups (3)
SWORK 632	Social Work Practice: Organizations and Communities (3)
SWORK 650*	Field Practicum (7) Cr/NC
SWORK 690	Seminar in Social Work Research Methods (3)
SWORK 740	Advanced Seminar in Social Work Administration (3)
SWORK 745	Advanced Seminar in Selected Topics in Social Work Administration (3)
SWORK 750B*	Advanced Field Practicum: Social Work Administration (8) Cr/NC
SWORK 797	Research (3) Cr/NC/SP
PH 601	Epidemiology (3)
PH 602	Biostatistics (3)
PH 604	Environmental Determinants of Human Health (2)
PH 651A	Contemporary Issues in Maternal and Child Health (3)
PH 651B	Advanced Issues in Problems and Programs in Maternal and Child Health (3)
PH 652	Maternal and Women's Health (3)
PH 655	Child Health (3)
PH 658	Program and Data Management in Maternal and Child Health (3)
PH 747	Program Evaluation in Health Services (3)
PH 797	Research (3) Cr/NC/SP
PH 799A	Thesis (3) Cr/NC/SP
	Elective, acceptable to faculty advisory committee (3)

Option B: Social Work/Public Health-Health Services Administration

SWORK 601	Seminar in Social Welfare Policy and Services (3)
SWORK 602C	Seminar in Social Welfare and Policy Services: Health (3)
SWORK 619	Human Behavior and Social Environment (3)
SWORK 620B	Seminar in Human Behavior and Social Environment: Administration (3)
SWORK 630	Social Work Practice: A Generalist Perspective (3)
SWORK 631	Social Work Practice: Individuals, Families, and Groups (3)
SWORK 632	Social Work Practice: Organizations and Communities (3)
SWORK 650*	Field Practicum (7) Cr/NC
SWORK 690	Seminar in Social Work Research Methods (3)
SWORK 740	Advanced Seminar in Social Work Administration (3)
SWORK 745	Advanced Seminar in Selected Topics in Social Work Administration (3)
SWORK 750B*	Advanced Field Practicum: Social Work Administration (8) Cr/NC
SWORK 797	Research (3) Cr/NC/SP

PH 601	Epidemiology (3)
PH 602	Biostatistics (3)
PH 604	Environmental Determinants of Human Health (2)
PH 641	Health Care Delivery Systems (3)
PH 644A	Health Services Organizations Structure and Functioning (3)
PH 644B	Organizational Behavior in Health Services Organizations (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)
PH 797	Research (3) Cr/NC/SP
PH 799A	Thesis (3) Cr/NC/SP

*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. Graduate study or degrees obtained previously will not be accepted toward meeting the unit requirements of 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.

Pupil Personnel Services Credential

The School of Social Work offers an approved school social worker program leading to the Pupil Personnel Services Credential granted by the California State Department of Education.

The program is intended for qualified second year graduate social work students, and continuing education MSW professionals. The program and learning content are interdisciplinary. It includes opportunities to work with qualified members of health and human service professionals such as psychologists, nurses, speech and hearing specialists and communicative disorder specialists.

Emphasis is placed on preparing leaders for roles in school social work. The focus of the training is to develop expertise in service delivery and working as part of an interdisciplinary team. Field practice takes place at both the elementary and secondary school levels.

Program

The credential requires participants to complete 11 units as follows: three elective units (Social Work 758, School Social Work,

taken during the fall semester) and an eight unit, two semester supervised internship in a school setting (Social Work 750A for four units in the fall and for four units in the spring).

Admission

Second year MSW students must request a school setting for their second year field practicum. Application materials and instructions may be requested from the School of Social Work.

Continuing education students may contact the School of Social Work for application materials and instructions (619) 594-5197.

Applications for the Pupil Personnel Services Credential must demonstrate evidence of leadership potential and academic success through previous and/or current work.

Courses Acceptable on Master's Degree Programs in Social Work

UPPER DIVISION COURSE

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 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. 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 in both policy and program development, implementation, and evaluation.

602B. Seminar in Social Welfare Policy and Services: Mental Health (3)

Prerequisite: Social Work 601.
Policy and programs within the mental health field of service concentration.

602C. Seminar in Social Welfare and Policy Services: Health (3)

Prerequisite: Social Work 601.
Policy and programs within the health field of service concentration.

602D. Seminar in Social Welfare Policy and Services: Children, Youth, and Families (3)

Prerequisite: Social Work 601.
Policy and programs within the children, youth, and families of service concentration.

619. Human Behavior in the Social Environment (3)

Conceptual framework to view and interpret behavior and to understand functioning of individuals, families, groups, organizations, and communities within ecological systems.

620. Seminar in Human Behavior and Social Environment (3)

Prerequisite: Social Work 619.

Human behavior theories and concepts appropriate to a methods concentration.

A. Clinical

B. Administration

630. Social Work Practice: A Generalist Perspective (3)

Overview of generalist social work practice as a method and process. Generalist social work presented as a basic helping approach used to assist individuals, groups, families, organizations, and communities to achieve personal and social change.

631. Social Work Practice: Individuals, Families, and Groups (3)

Prerequisite: Social Work 630.

Preparation for direct intervention with individuals, families, and groups. (Formerly numbered Social Work 631A, 631B, 631C, 631D.)

632. Social Work Practice: Organizations and Communities (3)

Prerequisite: Social Work 630.

Theoretical knowledge of elementary organizational and interorganizational decision making in human service programs. (Formerly numbered Social Work 632A, 632B, 632C, 632D.)

650. Field Practicum (3-8) Cr/NC

Prerequisite: Concurrent registration in Social Work 631 and 632.

Field instruction in public or voluntary social work setting. Seven units required. Maximum credit seven units. Experiences emphasize application of social work objectives, principles, and skills in service to individuals, families, groups, organizations, and communities. (Formerly numbered Social Work 650A, 650B, 650C, 650D.)

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. (Formerly number Social Work 690A, 690B, 690C, 690D.)

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.

710. Computer Application in Social Work Practice (3)

Prerequisites: Social Work 631 and 632.

Computer technology in social work practice with emphasis on clinical and administrative applications, program monitoring, and support of service provision and delivery.

720. Seminar in Selected Topics in Human Behavior and Social Environment (3)

Prerequisite: Social Work 620A or 620B.

Selected topics related to current theories of natural and induced change in human behavior which have utility for social work practice within fields of service.

739. Advanced Seminar in Social Work Practice with Families and Groups (3)

Prerequisites: Social Work 631, 632, and concurrent registration in Social Work 750A.

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 631, 632, and concurrent registration in Social Work 750B.

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.

744. Advanced Seminar in Selected Topics in Clinical Social Work Practice (3)

Prerequisites: Social Work 739 and concurrent registration in Social Work 750A.

Study of a selected aspect of clinical social work. Topics include treatment methodology, theoretical approaches, levels of practice, specific client groups, or special problem areas. See Class Schedule for specific content.

745. Advanced Seminar in Selected Topics in Social Work Administration (3)

Prerequisite: Social Work 740 and concurrent registration in Social Work 750B.

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 and 744 or 745.

Advanced field instruction in public or voluntary social work setting. Eight units required. Continuation and intensification of experiences in application of social work objectives, principles and skills in service to individuals, families, groups and communities related to:

A. Clinical Social Work

B. Social Work Administration

758. Seminar in Social Work and Selected Fields of Practice (1-3)

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.

780. Seminar in Social Work and Selected Populations-at-Risk (3)

Social work practice with selected populations-at-risk such as one-parent families, children in institutions, ethnic minority immigrants, Native-Americans in the urban scene, and foreign-born brides of U.S. servicemen. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master's degree.

781. Seminar on Selected Populations-at-Risk (3)

Knowledge about and analysis of selected populations-at-risk, social work responsibilities in emerging service demands by diverse and needful, high risk segments of the population in a complex society, and implications for social work practice. Population-at-risk for study to be announced in Class Schedule. May be repeated with new content. Maximum credit six units applicable 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.

- A. Clinical Social Work
- B. Social Work Administration

797. Research (3) Cr/NC/SP

Prerequisite: Consent of Instructor.

Research in one of the areas of social work. Maximum credit three units 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

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.

Sociology

In the College of Arts and Letters

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Faculty

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Will C. Kennedy, Ph.D., Associate Professor of Sociology
R. George Kirkpatrick, Ph.D., Associate Professor of Sociology
Joan T. Werner, Ph.D., Associate Professor of Sociology

Associateships

Graduate associateships and graduate teaching associateships 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 preparation is deemed insufficient by the graduate advisory committee may be admitted as conditionally classified and 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. Students must take at least three of the four 600-level core courses (Sociology 601, 602, 603, and 604) and must achieve a minimum "B" (3.0) grade average by the end of the first year in the master's program and no less than a B- grade in each core course. A student may seek exemption from a maximum of two core courses by passing an examination in the respective areas.

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.

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 six additional units in sociology courses from the list of 700-level seminar courses; Sociology 799A (Thesis); and a minimum of nine additional units, chosen from 500-, 600-, and 700-numbered courses (six units of which may be taken in other departments).

Applied Sociology. Students master theory and methods, but with an emphasis on applying social theory and methods to specific real-world research problems, in preparation for employment as applied researchers in non-academic settings.

Courses required for the applied sociology specialization: 30 units to include Sociology 505; nine units of core courses, Sociology 601, 602, and either 603 or 604; a minimum of nine additional units, selected from Sociology 500-, 600-, and 700-numbered courses (a maximum of six 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 Program in Sociology

UPPER DIVISION COURSES

505. Applied Sociological Research (3)

Prerequisite: Sociology 407 or 408.

Types and methods of applied sociological research; and an overview of their application in substantive areas. Practical research skills.

517. Life Crises and Coping: Sociological Perspectives (3)

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 Perspectives (3)

Prerequisite: Sociology 101. Recommended: Sociology 421.

Comparative study of selected family systems in the past and present. Family and parafamily forms in intentional communities of the nineteenth century compared with contemporary communal experiments. Ethnic 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 variables 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)

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.

532. Workers, Managers, and Bureaucracy (3)

Prerequisite: Sociology 101.

Sociology of work in formal organizations. From classic theories on division of labor, industrial capitalism, and bureaucracy, to transformation of work in the twentieth century. Experiences of workers and managers in the U.S. and other societies. (Formerly numbered Sociology 431.)

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)

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)

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.

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)

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.

557. Urban Sociology (3)

Prerequisite: Sociology 101.

The structure and function of the modern city; types of neighborhoods; forms of recreation; social forces in a metropolitan area; types of urban personalities and groups; rural-urban conflicts of culture. Practical field studies required.

596. Current Topics in Sociology (1-3)

Prerequisite: Sociology 101.

Selected specialized, controversial or currently relevant topics in sociology. Maximum opportunity provided for student initiative in determining course content and procedures. May be repeated with new content. See Class Schedule for specific content. 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.

597. Investigation and Report (3) I, II

Prerequisites: Fifteen units in sociology and consent of instructor.

Analysis of special topics in sociology. Maximum credit six units.

GRADUATE COURSES
601. Advanced Social Theory: Core Course (3)

Prerequisites: Conditional graduate standing, Sociology 401.

Systematic treatment of the original European and American classic sociological writing and an overview of the major developments in contemporary social theory.

602. Advanced Research Methods: Core Course (3)

Prerequisites: Conditional graduate standing; Sociology 406, 407, or 408.

Problems and techniques in social research with stress on philosophy of science, theory building, research design, measurement, and data analysis including fundamental critiques and alternatives.

603. Advanced Social Psychology (Sociological Approaches): Core Course (3)

Prerequisites: Conditional graduate standing, Sociology 410.

Investigation and analysis of original works in classical social psychological theory focusing on implications for research on topics such as socialization, motivation, perception, role, self, interaction and symbolic processes.

604. Advanced Social Organization: Core Course (3)

Prerequisites: Conditional graduate standing, Sociology 430.

Concepts, theories and findings concerning structure and change in society, institutions, formal organizations, the community and small groups. Special attention given key concepts of culture, stratification, division of labor, power, bureaucracy, role relationships and interaction.

695. Topics in Directed Readings (3)

Prerequisite: Credit or concurrent registration in at least one core course or one seminar.

Selected reading providing coverage of social theory, social disorganization, social organization, social institutions, social psychology (sociological approaches), community research methods, population and demography, or special topics. Maximum credit six units applicable to a master's degree.

696. Experimental Topics (3)

Prerequisite: Graduate standing.

Intensive study in specific areas of sociology. 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. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

700. Seminar in Social Theory (3)

Prerequisites: Sociology 401 and 407.

Classics of sociology, American social theory, theory construction, application of theory to research, theoretical models, sociology of knowledge, special topics. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master's degree.

730. Seminar in Social Institutions (3)

Prerequisites: Sociology 407 and 430.

The family and kinship, political organization, economic organization, religion, education, industry, occupations and professions, social stratification, special topics. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master's degree.

740. Seminar in Social Psychology: Sociological Approaches (3)

Prerequisites: Sociology 407 and 410.

Socialization, role theory, motivation, perception, self, social context of personality, attitude theory, interaction, language and symbolic process, social types, collective behavior, small groups, special topics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

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.

Spanish

In the College of Arts and Letters

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Faculty

Theodore V. Higgs, Ph.D., Professor of Spanish, Chair of Department
Ernesto M. Barrera, Ph.D., Professor of Spanish
Thomas E. Case, Ph.D., Professor of Spanish
C. Ben Christensen, Ph.D., Professor of Spanish
Gerald L. Head, Ph.D., Professor of Spanish (Graduate Adviser)
Gail L. Robinson, Ph.D., Professor of Spanish
Gustavo V. Segade, Ph.D., Professor of Spanish
Malcolm N. Silverman, Ph.D., Professor of Spanish
Carlos G. Wilson, Ph.D., Professor of Spanish
Margarita G. Hidalgo, Ph.D., Associate Professor of Spanish
Mary E. O'Brien, Ph.D., Associate Professor of Spanish
Ronald R. Young, Ph.D., Associate Professor of Spanish

Associateships

Graduate teaching associateships in Spanish are available to a limited number of qualified students. New teaching associates are required to enroll in Spanish 770 during their first semester as teaching associates. Application blanks and additional information may be secured from the chair of the department.

General Information

The Department of Spanish and Portuguese Languages and Literatures, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in Spanish.

The staff in charge of the graduate program in Spanish is composed of professors whose native tongue is Spanish, or who have studied and traveled extensively in Spain or in Spanish America, enabling them to represent authoritatively the Spanish language and culture. Library facilities include rich resources in Spanish literature and linguistics, including books, periodicals and newspapers. A Language Acquisition Resource Center 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, 620, 770, and 780.

Candidates for the master's degree in Spanish may select one of the following areas of specialization:

1. **Spanish Linguistics:** Spanish 601, 620, 770, 780; six additional units in Spanish linguistics selected from 600- or 700-level courses; three units from any 500-level Spanish linguistics course; six units in Spanish or Spanish American literature selected from 600- or 700-level courses; three elective units with linguistic content selected from 500-, 600-, 700-level Spanish courses, or Spanish 799A.
2. **Spanish American Literature:** Spanish 601, 620, 770, 780; 15 units in Spanish with Spanish American literature content selected from 500-, 600- or 700-level courses; Spanish 799A or three units of electives in Spanish American literature content.
3. **Spanish Literature:** Spanish 601, 620, 770, 780; twelve units in Spanish with Spanish literature content selected from 600- or 700-level Spanish courses; three units in Spanish with Spanish American literature content selected from 500-, 600-, or 700-level courses; Spanish 799A or three units of electives in Spanish literature content.

In addition, all candidates must demonstrate a knowledge of Portuguese by passing an examination administered by the department or by completing Portuguese 101 or 201.

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 Program in Spanish

Spanish

UPPER DIVISION COURSES

501. Genre Studies in Spanish Literature (3)

Prerequisites: Spanish 405A-405B.

A specific literary genre: overview of the genre's development in Spanish literature (Spanish novel, short story, theater) or focus on a narrower period (contemporary narrative, modern poetry). May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

502. Genre Studies in Spanish American Literature (3)

Prerequisites: Spanish 406A-406B.

A specific literary genre: overview of the genre's development in Spanish American literature (the Spanish American novel, short story, theater) or focus on a narrower period (vanguardista poetry, the "Boom"). May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

515. Mexican Literature (3)

Prerequisites: Spanish 406A-406B.

Mexican literature from the Romantic period to the present. Special emphasis placed on contemporary era. (Formerly numbered Spanish 515A-515B.)

520. Caribbean Area Countries Literature (3)

Prerequisites: Spanish 406A-406B.

Literature of Caribbean Islands, Central America, Colombia and Venezuela, from colonial period to present. Special emphasis on contemporary era.

522. Andean Countries Literature (3)

Prerequisites: Spanish 406A-406B.

Literature of Ecuador, Peru, Bolivia, and Chile from the period immediately preceding the Spanish conquest to the present.

556. Translation of Literary Works: A Critical Comparison (3)

Prerequisite: 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.

561. Methods in Teaching Spanish as a Second Language (3)

Prerequisite: Spanish 350 or 448.

Teaching of Spanish as a second language: contemporary theory and methods. Not open to students with credit or concurrent enrollment in French 561.

581. Mexican and Chicano Sociolinguistics (3)

Prerequisites: Spanish 340; and Spanish 448 or 449.

Language issues encountered in both Mexico and U.S. Southwest. Bilingualism, diglossia, language attitudes and bilingual education studied in sociohistorical perspective using concepts and methods advanced by sociology of language.

596. Selected Studies in Spanish (3)

Prerequisite: Spanish 302.

Topics in Spanish or Spanish American language, literature, culture and linguistics. 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.

Portuguese

UPPER DIVISION COURSES

534. Portuguese Literature (3)

Prerequisite: Portuguese 401.

Important movements, authors and works in the literature of Portugal from its beginnings to the present.

535. Brazilian Literature (3)

Prerequisite: Portuguese 401.

Important movements, authors and works of the literature of Brazil from the colonial period to modern times.

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.

Critical issues in Hispanic literary theory from medieval to modern times. Emphasis on contemporary theory: formalism, hermeneutics, phenomenology, structuralism, and post-structuralism, including semiotics and deconstructionism.

610. Seminar in Medieval Spanish (3)

Prerequisite: Credit or concurrent enrollment in Spanish 448 or 449.

History of Castilian language from Latin to medieval Spanish with readings from medieval Spanish literature, especially *El poema de Mio Cid* and *Berceo*.

620. Cervantes (3)

The principal prose works of Cervantes: The *Novelas ejemplares* and *Don Quixote*.

630. Golden Age Drama (3)

The works of Lope de Vega and Calderon among others.

650. The Gaucho Epic (3)

The *Poesía gauchesca*, with particular emphasis on *Martín Fierro*, *Fausto*, and *Santos Vega*.

660. Modernism (3)

The *Modernista* movement in Spanish America, with special attention to representative poets.

670. The Generation of 1898 (3)

Prerequisite: Two upper division courses in Spanish literature.

Major authors and works of the generation of 1898 in Spain: novel, drama, poetry, and essay.

675. Contemporary Spanish Prose Fiction (3)

Prerequisite: Two upper division courses in Spanish literature.
Development of Spanish prose fiction since the Spanish Civil War.

681. Spanish/Spanish American Dialectology (3)

Prerequisite: Spanish 448 or 449 or Linguistics 420 or a 500-level linguistics or Spanish linguistics course.

Dialects of Spain and Latin America; emphasis on differences in pronunciation, syntax, and lexicon. (Formerly numbered Spanish 557.)

695. Contemporary Spanish American Prose Fiction (3)

The principal writers of prose fiction in Spanish America from the mid-thirties to today.

696. Selected Topics (3)

Prerequisites: Twelve upper division units in Spanish.

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.

710. Images of Women in Spanish American Literature (3)

Prerequisites: Two upper division courses in Spanish American literature.

Women as literary figures in works by Spanish American women writers.

750. Seminar in Spanish American Literature (3)

A genre or movement of Spanish America. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

755. Seminar in Spanish American Culture and Thought (3)

Works of representative authors of Spanish America. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

770. Applied Spanish Linguistics for Teachers (3)

Prerequisite: Spanish 448 or 449.

The application of linguistic theory to the teaching of Spanish at the secondary and college levels.

780. Multimedia Methods for Teaching Spanish (3)

Prerequisite: Spanish 770.

Theory and applications of teaching Spanish through multimedia and interactive technologies. Research and development of interactive multimedia programs for use in the classroom and in the language laboratory.

790. Seminar in Spanish Syntax and Morphology (3)

Prerequisites: Spanish 350, and Linguistics 522.

Advanced study of the grammatical structures of Spanish.

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.

Speech Communication

Refer to "Communication" in this section of the bulletin.

The Master of Arts degree in Speech Communication has been integrated into the newly created Master of Arts degree in Communication, in the School of Communication, beginning fall 1996. Current students officially enrolled in the speech communication degree may complete that degree or they may change to the new degree program. Please see a graduate adviser in the School of Communication.

Statistics

In the Department of Mathematical Sciences
In the College of Sciences

OFFICE: Business Administration/Mathematics 203
TELEPHONE: (619) 594-6191

Faculty

John D. Elwin, Ph.D., Professor of Mathematical Sciences, Chair of Mathematical Sciences
Amanda L. Golbeck, Ph.D., Professor of Mathematical Sciences
Kung-Jong Lui, Ph.D., Professor of Mathematical Sciences
(Statistics Coordinator and M.S. Biostatistics Graduate Adviser)
Joseph M. Moser, Ph.D., Professor of Mathematical Sciences
Chong Jin Park, Ph.D., Professor of Mathematical Sciences (M.S. Statistics Graduate Adviser)
David W. Macky, Ph.D., Associate Professor of Mathematical Sciences
Duane L. Steffey, Ph.D., Associate Professor of Mathematical Sciences

Associateships

Graduate teaching associateships in statistics and biostatistics are available and are awarded on a competitive basis by the Department of Mathematical Sciences. Application forms and additional information may be secured from the office of the Department of Mathematical Sciences.

General Information

The Department of Mathematical Sciences in the College of Sciences, offers graduate study leading to the Master of Science degree in statistics. Students may pursue either the general degree or a concentration in biostatistics that emphasizes statistical methods and applications in the biological, health, and medical sciences.

Statisticians and biostatisticians are engaged in the acquisition and use of knowledge through the collection, analysis, and interpretation of data. Today, almost all disciplines – from economics to engineering, from social science to medicine – employ statistical methods. Such methods are essential in studying relationships, predicting results, and making informed decisions in many different contexts. This diversity of application is an exciting aspect of the field and has stimulated the current demand of well-trained statisticians and biostatisticians at all degree levels.

The Master of Science degree provides advanced training, with emphasis on statistical methodology, and prepares students for careers in industry and government as applied statisticians or biostatisticians, or for entry into a doctoral program in statistics or biostatistics.

As part of the degree requirements, graduate students conduct theses or research projects under the guidance of faculty with active research interests in most general areas of probability, statistics, and biostatistics. These research areas include biostatistical methods, survival analysis, mathematical demography, data analysis, inference, stochastic processes, time series, Bayesian statistics, categorical data analysis, statistical computing, nonparametric statistics, sample surveys, multivariate analysis, linear models, experimental design, and clinical trials.

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.

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 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 students must meet the following program requirements:

The student should have completed before entering the program the following undergraduate coursework: three semesters of calculus; and one semester each of linear algebra and probability theory. The student should also have working knowledge of a programming language before entering the program. Students lacking some of the above undergraduate coursework may be admitted conditionally and may make up this coursework during the first year of the program (these courses will not count toward the degree course requirements).

The student must complete a minimum of 30 units of coursework as described below. Upon entry to the program, the student will be assigned to a graduate adviser in statistics. Thereafter, the adviser will meet with the student each semester and discuss his or her academic program. A program of study must be approved by the graduate adviser in statistics.

1. Complete Mathematics 670A, 670B, and 553 with no grade less than B in each course. These are core statistics courses.
2. Complete six units of courses in statistics and biostatistics, to be selected from the following with the approval of the graduate adviser in statistics: Mathematics 671, 672, 673, 674, 675, 677, 678, 679, 680A, 680B.
3. Complete six additional units of 600- and 700-numbered courses offered by the Department of Mathematical Sciences, except that Mathematics 600, 602, and 799A may not be used to fulfill these units required.
4. Complete three additional units of graduate level or approved upper division courses offered by the Department of Mathematical Sciences, not including Mathematics 799A.
5. Complete three units of approved electives.
6. Pass the departmental qualifying examinations in mathematical statistics. Policy and procedures for these examinations are documented and available from the office of the Department of Mathematical Sciences.
7. With the approval of the Department of Mathematical Sciences, a student may select Plan A and complete Mathematics 799A, Thesis or Project. In other cases, Plan B will be followed, and the student must complete three units of Mathemat-

Specific Requirements for the Master of Science Degree in Statistics with Concentration in Biostatistics

(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 program requirements:

The student should have completed before entering the program the following undergraduate coursework: three semesters of calculus and one semester each of linear algebra and probability theory. The student should also have working knowledge of a programming language before entering the program. Students lacking some of the above undergraduate coursework may be admitted conditionally and may make up this coursework during the first year of the program (these courses will not count toward the degree course requirements).

The student must complete a minimum of 30 units of coursework as described below. Upon entry to the program, the student will be assigned to a graduate adviser in biostatistics. Thereafter, the adviser will meet with the student each semester and discuss his or her academic program. A program of study must be approved by the graduate adviser in biostatistics.

1. Complete Mathematics 670A, 670B, and 553 with no grade less than B in each course. These are core statistics courses.
2. Complete Mathematics 680A and 680B with no grade less than B in each course. These are biostatistics concentration courses.
3. Complete at least six units of courses in biostatistics and statistics, to be selected from the following with the approval of the graduate adviser in Biostatistics: Mathematics 554A, 554B, 555, 596, 671, 672, 673, 674, 675, 677, 678, 679, 696, 720, and 798.
4. Complete at least six units of upper division or graduate courses from a science of application of biostatistics (e.g., bioscience, health science, or medical science), with the approval of the graduate adviser in biostatistics. Up to three units of Mathematics 797 may be substituted, for one of the above courses, with the approval of the graduate adviser in biostatistics. If the student has an undergraduate degree in an area of application of biostatistics, upper division or graduate mathematical sciences courses may be substituted with the approval of the graduate adviser in biostatistics.
5. Complete three units of Mathematics 799A.
6. Plan A 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 in the Department of Mathematical Sciences. One of the other two members of the thesis committee must be a faculty member from a science of application of biostatistics (i.e., bioscience, health science, or medical science).

Courses Acceptable on Master's Degree Program in Statistics

UPPER DIVISION COURSES IN MATHEMATICS

(Note: Mathematics 550, 551A, or 551B are not acceptable on the Master of Science degree in Statistics.)

550. Probability (3) I, II, S

Prerequisite: Mathematics 151.

Computation of probability by enumeration of cases, discrete and continuous random variables, density functions, moments, limit theorems, selected distributions. Markov chains, random walks, selected topics.

551A. Mathematical Statistics (3) I, II

Prerequisite: Mathematics 252.

Probability models in the theory of statistics, sampling distributions with applications in statistical inference.

551B. Mathematical Statistics (3) II

Prerequisite: Mathematics 551A.

Point and interval estimation and hypothesis testing in statistical models with applications to problems in various fields.

553. Stochastic Processes (3) II

Prerequisite: Mathematics 550 or 551A.

Introduction to stochastic processes with selected applications.

554A. Computer Oriented Statistical Analysis (3) I

Prerequisite: Mathematics 350A.

Using statistical computer packages such as BMDP and SAS to analyze problems in univariate ANOVA, multiple regression, contingency tables, nonparametric methods and discriminant analysis.

554B. Advanced Computer Oriented Statistical Analysis (3) II

Prerequisite: Mathematics 554A.

Analyze problems in multivariate ANOVA, factor analysis, repeated measures, logistic regression, loglinear 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.

Mathematics

GRADUATE COURSES

670A-670B. Advanced Mathematical Statistics (3-3)

Prerequisite: Mathematics 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 or 670B.

Machine computation in the development, application, and evaluation of advanced statistical techniques. Floating point arithmetic and algorithm stability; numerical methods for parameter estimation (including maximum likelihood) and multivariate probability integration; Monte Carlo simulation and other computer-intensive statistical techniques.

672. Nonparametric Statistics (3)

Prerequisite: Mathematics 551B or 670B.

Tolerance regions, randomness problems, most powerful rank tests, the invariance methods, consistency and efficiency of tests.

673. Sample Surveys (3)

Prerequisite: Mathematics 550 or 551A.

The methods and applications of sample surveys, stratification and sampling, subsamples of clusters.

674. Multivariate Analysis (3)

Prerequisites: Mathematics 524 and 551B or 670B.

Multivariate normal distributions, multivariate analysis of variance, factor analysis, canonical correlation.

675. Linear Statistical Hypothesis Testing (3)

Prerequisites: Mathematics 524 and 550 or 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 550 or 551A.

Experimental design models, a basic approach as well as a matrix algebra approach.

678. Survival Analysis (3)

Prerequisite: Mathematics 551B.

Survival distributions; inference in parametric survival models; life tables; proportional hazards model; time-dependent covariates; accelerated time model and inference based on ranks; multivariate time data and competing risks.

679. Discrete Data (3)

Prerequisite: Mathematics 551B.

Discrete sampling models; goodness-of-fit testing; methods for binary data with covariates, including logistic regression and probit analysis; loglinear modeling of multidimensional contingency tables; ordered categories; incomplete tables; Bayesian methods; hierarchical models.

680A-680B. Advanced Biostatistical Methods (3-3)

Prerequisites: Mathematics 550 or 551A. Mathematics 680A is prerequisite to 680B.

Design, conduct, and analysis of experimental and observational studies. Cohort studies. Multifactor screening. Survival studies. Case-control studies. Biological assays. Selected current topics.

For additional courses applicable to the Master of Science degree in statistics see:

Mathematics 596:	Advanced Topics in Mathematics
Mathematics 696:	Selected Topics in Mathematical Sciences
Mathematics 720:	Seminar
Mathematics 797:	Research
Mathematics 798:	Special Study
Mathematics 799A:	Thesis or Project

Telecommunications and Film

Refer to "Communication" in this section of the bulletin.

The Master of Arts degree in Telecommunications has been integrated into the newly created Master of Arts degree in Television, Film, and New Media Production, in the School of Communication, beginning fall 1996. Current students officially enrolled in the telecommunications degree may complete that degree or they may change to the new degree program. Please see a graduate adviser in the School of Communication.

Women's Studies

In the College of Arts and Letters

OFFICE: Adams Humanities 3138
TELEPHONE: (619) 594-6524

Faculty

Bonnie Zimmerman, Ph.D., Professor of Women's Studies, Chair of Department
Susan E. Cayleff, Ph.D., Professor of Women's Studies (Graduate Adviser)
Olivia M. Espín, Ph.D., Professor of Women's Studies
Patricia Huckle, Ph.D., Professor of Women's Studies
Kathleen B. Jones, Ph.D., Professor of Women's Studies, Associate Dean of the College of Arts and Letters
Maria-Barbara Watson, Ph.D., Professor of Women's Studies
Janet A. Kohen, Ph.D., Associate Professor of Women's Studies

Associateships

Graduate associateships in women's studies are available to a limited number of qualified students. Application forms and additional information may be obtained from the graduate adviser in the Department of Women's Studies.

General Information

The Department of Women's Studies, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in women's studies.

The department, recognized as the nation's first (1970) and among the strongest, has a distinguished faculty in the humanities and social sciences. Discipline-specific expertise as well as feminist theoretical paradigms are available to satisfy students' multi-faceted interests.

The Master of Arts degree is designed to provide advanced training for (1) students who plan to terminate their graduate studies at the master's level, and (2) those who anticipate further study leading to a doctoral degree in women's studies or related fields. It will also provide a foundation for further graduate work in professional degree programs such as counseling, social work, law, and public health. The M.A. will enhance students' ability to participate professionally in a range of organizations and businesses in the public and private sector, particularly those addressing women's issues.

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, students must demonstrate sufficient preparation for the program. This preparation can include possession of a bachelor's degree in women's studies from an accredited institution or completion of sufficient units in women's studies and related fields. Evaluation of a student's transcript will be made on an individual basis by the admissions committee to determine whether evidence of sufficient preparation can be demonstrated. A student whose preparation is deemed insufficient by the Graduate Admissions Committee may be admitted as conditionally classified and will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

The grade point average required for admission to the M.A. pro-

gram in women's studies is 3.0 for the last 60 units of the student's undergraduate work, plus satisfactory scores on the verbal and quantitative sections of the GRE. Conditional admission is possible pending the taking of the GRE General Test during the first semester of enrollment and the attainment of a satisfactory score.

Applicants must provide the Graduate Admissions Committee with the following items: (1) transcripts of all previous coursework; (2) a written statement of background, intentions, and goals, including experience in women's studies and with women's issues, rationale for pursuing the M.A. degree, and relation of the M.A. degree in women's studies to prior academic work and to career objectives; (3) two letters of reference from individuals with direct knowledge of the applicant's scholarly ability.

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 Arts Degree in Women's Studies

(Major Code: 49991)

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 with at least 21 units in women's studies including Women's Studies 601; nine units selected from Women's Studies 602, 603, 604, or 605; Women's Studies 701, 797, and 799A; and a theme of study composed of nine units of graduate electives, selected with the approval of the student's adviser, which should include courses in departments other than women's studies.

Candidates for this degree must demonstrate knowledge of either (a) a relevant foreign language or (b) an approved substitute in statistical methods in a field appropriate to the candidate's research, including Anthropology 580, Psychology 670A, and Public Health 602 with a grade of C or better. Each candidate, with approval of the graduate adviser, may fulfill the foreign language requirement in one of several ways: (1) by passing the Graduate School Foreign Language Test, (2) by passing a local examination administered by one of the University's foreign language departments, or (3) by completing one three-unit upper division foreign language course with readings in the original language with a grade of C (2.0) or better. Substitutes for (a) or (b) may be approved where the skills involved are directly related to the student's research interests. Course selection and programs must be approved by the graduate adviser prior to the student's registration.

UPPER DIVISION COURSES

515. Women: Mythology and Ritual (3)

Prerequisite: Three upper division units in women's studies.

Meanings and functions of myths and rituals in their sacred and secular aspects, emphasizing their impact on women's lives and relationships in differing cultural contexts, past and present.

521. Life Cycles of Women (3)

Prerequisite: Three upper division units in women's studies.

Women's developmental processes across the life cycle; their impact on women, men, and the family, including life passages related to adolescence, marriage, motherhood, divorce, widowhood, "second careers," and aging in varying socioeconomic and cultural contexts.

522. Women: Madness and Sanity (3)

Prerequisite: Three upper division units in women's studies.

Concepts of mental health and mental illness as applied to women. Theory of psychotherapy, both traditional and feminist. Alternative approaches to mental health.

530. International Women's Movement (3)

Prerequisite: Three upper division units in women's studies.

Comparative study of women's movements worldwide in past and present, to include discussion of issues such as female bonding, leadership, and women's goals and strategies to achieve them within local, national, and global contexts. (Formerly numbered Women's Studies 330.)

535. Lesbian Lives and Cultures (3)

Prerequisite: Consent of instructor.

Historical, cultural, and social exploration of lesbianism. Topics include myths and stereotypes, history and literature, social and political movements, theoretical explanations, and current conditions. (Formerly numbered Women's Studies 335.)

536. Women, Race, and Class (3)

Prerequisite: Three upper division units in women's studies.

Major issues and themes in the history, culture, and contemporary lives of women of color in the U.S. Analysis of theories explaining similarities and differences in opportunities and life choices. Roles within social and political movements.

553. Women Writers (3)

Prerequisite: Three upper division units in women's studies.

Literary, historical, and social consideration of women writers; may focus on one author, era, or theme. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units. Limit of three units applicable to the major in women's studies.

565. Women, Health, and Medicine (3)

Prerequisite: Three upper division units in women's studies.

Historical and contemporary relationship of women to alternative and traditional healing systems. Illness labeling, folk-healing beliefs, sectarian medicine, reproduction, birth control, life-cycle events, roles as practitioners and patients, ethical controversies, and aging.

580. Women and International Development (3)

Prerequisite: Three upper division units in women's studies.

Women's roles as agents and recipients of change worldwide, focusing on such issues as self-determination, education, family and work, food and hunger, and reproduction.

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.

596. Topics in Women's Studies (3)

Prerequisite: Consent of instructor.

Advanced topics in women's studies. 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.

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

601. Foundations of Feminist Scholarship (3)

Prerequisite: Graduate standing.

Theories, issues, and major paradigms underlying feminist scholarship. Development of women's studies as a discipline. Emphasis on multicultural approaches and perspectives.

602. Seminar: Methods of Inquiry in Women's Studies (3)

Prerequisites: Six upper division units in women's studies.

Examination and critique of traditional research methods; methods of critical feminist investigation; designs of research proposals.

603. Seminar: Advanced Feminist Theory (3)

Prerequisite: Six upper division units in women's studies.

Analysis of categories of contemporary feminist theory including concepts of identity and difference; theories of subjectivity; feminist discourses, strategies, and practices.

604. Seminar: Gender, Culture, and Representation (3)

Prerequisite: Six upper division units in women's studies.

Representations of women and femininity in cultural systems. Women as images in and creators of literature, art, music, and other cultural endeavors. Interconnection between representations of gender and of race, ethnicity, class, and sexualities.

605. Seminar: Women, Relationships, and Social Policy (3)

Prerequisites: Six upper division units in women's studies.

Theories of women's friendships and family relationships; relationship development in historical and cross-cultural context; effects of social policies on women's relationships.

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.

701. Seminar in Women's Studies (3)

Prerequisite: Six upper division units in women's studies.

Interdisciplinary seminar integrating research in various areas of women's studies in humanities, social sciences, arts and/or sciences. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

797. Research (1-3) Cr/NC

Prerequisite: Advancement to candidacy and written approval of the Women's Studies department graduate adviser.

Independent research in a specialized subject in women's studies.

798. Special Study (1-3) 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.

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.

Upper Division and General Studies Courses

(Also Acceptable for Advanced Degrees)

The following courses are acceptable on selected advanced degree programs.

AMERICAN STUDIES COURSE

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

Topics dealing with cultural images and myths, social protest, folklore; themes focusing upon fear, alienation and nationalism; problems around racism, minorities and countercultures. See Class Schedule for specific content. May be repeated once with new content; and with the approval of the adviser, more than once by American studies majors.

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 304L; for 599G: 304G; for 599L: 304L.

- C. Special Study in Classics
- G. Special Study in Greek
- L. Special Study in Latin

COMMUNITY HEALTH EDUCATION COURSES

560. Introduction to Public Health (3) I

Prerequisite: Community Health Education 290.

Epidemiological methods, behavioral and biological determinants, modes of transmission, risk factors, prevention of common infectious and chronic disease. Evaluation of health information to develop health education programs. (Formerly numbered Health Science 560.)

561. Health and Medical Care (3) 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. (Formerly numbered Health Science 561.)

574. Habit-Forming Substances (3) I

Tobacco, alcohol, and other drugs; their use, misuse and abuse. (Formerly numbered Health Science 574.)

596. Workshop in Health Education (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.

GENERAL STUDIES COURSE

650. Interdisciplinary Topics (1-4)

General Studies 650 is an interdisciplinary selected topics course. Questions about individual courses should be directed to the department or departments listed immediately after the General Studies number in the Class Schedule.

GERONTOLOGY COURSES

520. Analysis of Programs for the Aging (3)

Prerequisite: One upper division course in gerontology.

Major programs in aging that support the daily functioning of the elderly. Effectiveness of programs in servicing today's elderly with attention to ethnic and cross-cultural variations.

522. International Issues on Aging (3)

Prerequisite: Three units in gerontology.

Socio-economic implications of rapidly growing number and proportion of older people around the world. Comparative study of aging populations in different countries, analysis and evaluation of related policies and programs.

596. Advanced Special Topics in Gerontology (1-4) I, II

Advanced selected topics in gerontology. 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 or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

696. Contemporary Topics in Gerontology and Geriatrics Seminar (3)

Prerequisite: A graduate level course in gerontology.

Areas of gerontology and geriatrics that make an immediate impact on the quality of life and lifestyles of the elderly. To include diverse life situations of older people.

HUMANITIES COURSES

596. Topics in Humanities (1-3)

Prerequisites: Upper division standing and consent of instructor.

Special topics on selected aspects of civilization from interdisciplinary humanities perspective. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. No more than six units may be applied toward either the bachelor's or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

599. Special Study (1-3)

Prerequisites: Humanities or European studies major or minor with upper division standing, twelve units in courses acceptable for major or minor, and consent of instructor and program chair; or graduate standing and consent of instructor and program chair.

Directed individual study. Maximum credit six units.

**MEXICAN AMERICAN STUDIES
COURSES**

504. Immigration: A Literary Analysis (3)

Prerequisite: Upper division standing.
Literary analysis of themes of immigration, the borderlands, and ethnicity.

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.

597. US/Mexico Border: Urban and Regional Development (3)

Prerequisite: Mexican American Studies 355.
US/Mexico border region as seen through the lens of city and regional planning and geography.

RECREATION COURSES

570. Administration of Recreation Systems (3) I, II

Prerequisite: Recreation 464.
Administrative management of recreation, parks and tourism organizations including organizational behavior, planning, policy development, legal obligations, principles of fiscal management, control, budgeting, managerial economics, liability, land acquisition, constitutional guarantees, contracts, and criminal law. Not open to students with credit in Recreation 560 and 565.

575. Designing Recreation and Park 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.

PART FOUR

General Information

**General Information
College of Extended Studies
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. Service desks are located in these units: Circulation, General Reference, Government Publications and Maps, Media Center, Current Periodicals and Microforms Center, Reserve Book Room, Science Reference, and Special Collections.

The Library has automated acquisitions, cataloging, circulation, and serials control systems. Computer based bibliographic search services provide student/faculty access to 30 databases directly through library workstations, with hundreds of additional databases available through mediated approaches. The Library's Internet Online Network (LION) provides access to the library's databases within the Library as well as from workstations around campus and off campus. The Information Systems and Support organization utilizes software, network, and workstation technology to make information products available to students, faculty, and staff. Accessible resources include licensed research databases, CD-ROM titles, and global data via the Internet. The group also provides computer accounts to all students, and the Library (<http://libweb.sdsu.edu/>). 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. The Library has a comprehensive instruction program, which includes course-related instruction, a library research workbook, term paper clinics, and tours.

The Library's holdings include 1,128,058 volumes (monographs and bound periodicals); 592,474 government documents; over 3.6 million microforms; 63,578 reels of microfilm; 173,572 maps; 8,529 sound recordings; and 4,812 linear feet of archival papers. The Library receives 5,635 periodical and serial titles, excluding government publications. It is a depository for United States and California government publications, and receives selected United Nations publications.

Research

The importance of research in graduate instruction is recognized by the faculty, and all graduate programs provide 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. Percil Stanford, Director

The University Center on Aging offers the B.A. in Gerontology. The Center is active in the area of aging, involved with such activities as supporting interdisciplinary educational and curriculum efforts; undertaking research, demonstration and evaluation activities; providing technical assistance and agency consultation for the community; coordinating workshops and seminars; and providing opportunities for student involvement in aging activities. The Center is also responsible for the coordination of a certificate program in conjunction with the College of Extended Studies and administers an undergraduate minor in gerontology. The Center serves as a central point for the develop-

ment and dissemination of minority aging data nationally.

The Edwin C. Allison Center for the Study of Paleontological and Geological Sciences

The Allison Center has supported research in paleontology, geology and related sciences since 1972. The Center maintains a research library containing journals, reprints, textbooks, maps, and copies of master's theses and senior theses completed in the Geological Sciences. The library is open to faculty and students. In addition, the Center houses a collection of fossil and recent vertebrates, invertebrates, and plants. Research space is available for students, faculty, and visiting scholars. Small grants, other funds and equipment are available to students and faculty for research projects. The Center also publishes reports of various types containing geological information related to the southern California and northern Baja regions.

Asian/Pacific American Studies Consortium

Ray T. Smith, Director

The Asian/Pacific American Studies Consortium is an association of faculty, staff, and students. The purpose of the Consortium is to develop Asian/Pacific American research capacities on campus and to provide for seminars, colloquia, and other public activities of benefit to Asian and Pacific American communities in the San Diego area.

The Consortium has acquired organizational records from sources such as the Union of Pan Asian Communities (UPAC) of San Diego. These and other Asian and Pacific American materials are maintained in the University Library. Inquiries about their use can be made through the Director of the Asian/Pacific American Studies Consortium.

The Consortium coordinates its work with the Center for Asian Studies. General liaison is maintained with the University Library.

Center for Asian Studies

Murugappa C. Madhavan, Director

The Center for Asian Studies is an interdisciplinary organization in the College of Arts and Letters. Drawing upon faculty members from many fields, campuswide, it performs such services as (1) developing and administering the Asian studies program and relevant curricula at the undergraduate and graduate levels; (2) organizing symposia and seminars on Asia related topics; (3) securing and administering grants and other support for research and development in Asian studies; (4) coordinating and publicizing the activities of faculty engaged in Asian-centered studies; (5) responding to campus and community requests for information and services; (6) fostering campus and community interest in Asian studies.

**Center for Behavioral and
Community Health Studies**

John P. Elder, Director

**Alan J. Litrownik, Gregory Talavera, Joni Mayer, and
Terry Conway, Senior Faculty Investigators**

The Center for Behavioral and Community Health Studies is housed at 6383 Alvarado Court. The Center, formerly known as The Center for Behavioral Medicine, was established in 1982 for the purpose of promoting research and academic programs relevant to the applications of behavioral science principles to medicine and health care. Administratively, the Center has three co-directors who report to the deans of the College of Sciences and the College of Health and Human Services. The interdisciplinary center encourages participation from all of the University colleges and departments. Currently, active investigators come from the Departments of Exercise and Nutritional Sciences, Psychology, and the Graduate School of Public Health. Current Center projects involve collaboration between scientists and physicians from a variety of specialties as well as a variety of other institutions, including Scripps Clinic and Research Foundation, the University of California, San Diego Medical Center, and the Children's Hospital and Health Center. Funding for the Center comes from federal and private foundation grants including several National Institutes of Health agencies. Current sponsors include the American Heart Association, National Cancer Institute, the National Heart, Lung and Blood Institute, the State of California Department of Health Services, the University of California Tobacco Related Disease Research Program, the Centers for Disease Control, and the National Science Foundation.

The Center has a commitment to provide important research experience to students who intend to pursue related careers and offers opportunities to project staff and graduate students involved in several training programs to participate in community interventions.

Biological Field Stations

Paul H. Zedler, Director

SDSU maintains three natural reserves administered by the College of Sciences that are available for research and educational activities in biology, ecology, soils science, hydrology, geology, geography, and other field sciences.

The Santa Margarita Ecological Reserve, about 4200 acres in area, is located on the San Diego-Riverside County line near Temecula, and includes the spectacular gorge of the Santa Margarita River. The recently established Philip C. Miller Field Station, located on the north rim of the gorge, has laboratory and dormitory facilities, a weather station, and experimental eucalyptus plantings. The site lies in rugged hills and is a mosaic of riparian vegetation, oak woodlands, grasslands, coastal sage scrub, chamise chaparral, and mixed chaparral. Elevations range from 500 to 2300 feet. Abundant wildlife typical of chaparral and woodland areas is found on the reserve, including mule deer and mountain lions. The Santa Margarita River, a perennial stream, offers opportunities for study of stream and riparian systems.

The Sky Oaks Biological Research Station, 4400 acres in an area at an elevation of 4000 feet, is located near Warner Springs in northern San Diego County adjacent to the Anza-Borrego Desert State Park and the Cleveland National Forest. Dormitory and basic laboratory facilities are located on this site. A diversity of community types is found on the station including several types of chaparral, extensive oak woodlands, grasslands, riparian communities, and pine forest. This station has been the site of several research projects on the effect of fire on natural vegetation, and stand of chaparral of a variety of post-fire ages are available for study. Currently, several major projects studying aspects of global climate change are underway. Dormitory and basic laboratory facilities are available on this site.

The Fortuna Mountain Ecological Reserve consists of 500 acres within the city of San Diego a few miles from the campus. The reserve

is covered by a mosaic of chaparral, coastal sage scrub, and grassland, and is adjacent to riparian areas along the San Diego River. This property also lies within Mission Trails Regional Park, most of which is now administered as an area of natural landscape.

Persons interested in conducting research at one of the ecological reserves or using them for instructional purposes should contact the director through the campus Biological Field Stations Office at 594-2896 or inquire at the Biology Department, 594-5504.

**Institute for Built Environment and Comparative Urban
Research (BECUR)**

Lawrence A. Herzog, Director

The main purpose of the Institute for Built Environment and Comparative Urban Research (BECUR) is to: (1) study the impact of culture on the design and shape of the urban built environment; and (2) understand how cities in different cultural settings are being transformed by global processes. BECUR provides a forum for research and dialogue among SDSU faculty and students on the cross-cultural nature of urban space and urban place. The Institute is administered by the College of Arts and Letters, and operates in conjunction with the College of Professional Studies and Fine Arts. Among its activities, the Institute promotes public lectures and conferences, research projects, and networking among urbanists, social science, planning, design and architectural scholars both in the region, as well as in other parts of the world. The Institute is located in Adams Humanities 4132; 594-6964.

**Institute for Central and Eastern
European Studies**

Yannis Venieris, Director

The Institute aims to increase understanding between the U.S. and Central and Eastern European countries through student and faculty exchanges, seminars, and educational programs. Another goal is to contribute to the process of economic growth and development in Central and Eastern Europe by making available to them appropriate human capital. The Institute has established a formal relationship with the Warsaw School of Economics and is in the process of doing the same with the Prague School of Economics, Czechoslovakia National Academy of Sciences, as well as similar institutions in Albania. The purpose of these relationships is to exchange faculty and students and to effect appropriate technological diffusion. Students and faculty can obtain more information by calling the Institute Office at 594-5503, Nasatir Hall 318.

China Studies Institute

Paochin Chu, Director

The China Studies Institute coordinates and supports on-campus teaching and research related to China. The Institute develops and fosters faculty and student exchange programs with Chinese universities and institutions of higher learning. Various cultural programs on China and activities on campus and in the community promote cultural awareness and understanding. The development of Chinese publications, audio-visual materials, periodicals, newspapers, and other resources on campus fosters relationships between San Diego State University and the Chinese community, as well as nurtures friendship between the Chinese and American peoples.

Coastal and Marine Institute

Clive E. Dorman and Susan L. Williams, Co-Directors

The Coastal and Marine Institute provides a focus for oceanography and marine studies at SDSU. The Institute assists departments within the University in the development of instructional, research, and public service aspects of coastal and ocean-oriented programs and provides special supporting services including advising students, assistance to faculty and students in research, preparation of manuscripts, operation of the SDSU Marine Laboratories and boats at Mission Bay, and liaison with other institutions and the community. The Institute is operated as a special unit of the College of Sciences and is administered by a director and an advisory council consisting of faculty members elected from participating departments. Additional information about marine studies is available from the Coastal and Marine Institute office, or from the Office of the Dean of the College of Sciences.

Communications Clinic for Speech, Language and Hearing Disorders

**Kathee Christensen, Charlotte Lopes,
Diane Williams, Co-Directors**

Administered by the Department of Communicative Disorders, the Clinic is staffed by graduate students and supervised by department faculty. It provides assessment and remediation services for SDSU students, staff, faculty, and the community. Comprehensive diagnostic and treatment programs are available for children and adults in the areas of delayed speech/language development, voice, fluency or articulation disorders, aphasia, cleft palate, cerebral palsy, loss of communication function, hearing loss and deafness. Also provided are services for bilingual/multicultural clients and speakers of English as a second language. Audiologic services provided by the Clinic include hearing assessment, hearing aid evaluation and selection, assistive listening device evaluations, earmolds, ear protectors, hearing conservation and speech reading/aural rehabilitation therapy. The clinic is located at 6330 Alvarado Court, Suite 100, San Diego, CA 92120-4917, (619) 594-6477.

Center for Computer Simulation

William Root, Director

The Center for Computer Simulation serves faculty and students throughout the University by designing and implementing computer simulations in support of faculty research and teaching. The Center also autonomously pursues research opportunities involving the creation of complex simulations, particularly those addressing challenges in the public sector. The diversity of fields in which computer simulation now plays a role, allow the Center to provide research opportunities for undergraduate and graduate students in a wide variety of academic majors.

The Center supports an extensive collection of simulation software under site license, and maintains cooperative relationships with prominent public and private sector simulation software developers to ensure that the Center's capabilities keep pace with the state-of-the-art. The Center provides educational/training materials for students and faculty seeking to familiarize themselves with specific simulation tools, sponsors lectures and seminars on simulation-related topics, and disseminates announcements of activities in the local and national simulation communities.

The Center is comprised of an interdisciplinary group of faculty who have technical expertise in areas specifically related to computer simulation development, or who have research interests involving significant use of simulation. Currently the Center includes members from the faculties of Applied Mathematics, Computer Science, Criminal Justice Administration, Engineering, Public Health, and Statistics.

The Center is administered by a director appointed by the Dean of the College of Sciences, and resides in facilities provided by the Computer Science Division of the Department of Mathematical Sciences.

Concrete Research Institute

M. Ziad Bayasi, Director

The Concrete Research Institute supports educational needs in civil engineering curriculum and concrete research performed for sponsors from industry and governments. The Institute encompasses a wide range of topics. The main emphasis is currently on concrete materials and structures. Civil and environmental engineering faculty members are involved with finding optimum design solutions in bridges, seismic resistant structures, residential buildings, and retaining walls.

Counseling and School Psychology

Valerie Cook-Morales, Director

The Center for Counseling and School Psychology, 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 counseling and school psychology, (2) encouraging cooperation with faculty members from other relevant disciplines such as anthropology, economics, psychology, social work, sociology, and Counseling and Psychological Services, and (3) conducting programs or rendering services designed to promote counseling and school psychology at San Diego State University. The Center is administered by the Department of Counseling and School Psychology; fiscal matters are coordinated through the San Diego State University Foundation.

Center for Economic Education

Kathleen Mikitka, Director

Joyce Jennings, Adjunct Director

The Center for Economic Education is a unit within the College of Education. The center is affiliated with Economics America, California Council on Economic Education, and the National 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.

Donald I. Eidemiller Weather Station

Edward Aguado, Director

The Donald I. Eidemiller Weather Station serves as a teaching and research resource. The station receives surface, upper-air and forecast weather maps via satellite from the National Weather Service. The station also archives monthly and annual data published by the National Climatic Data Center and has been observing and recording local weather information for more than 35 years.

Energy Engineering Institute

Halil M. Güven, Director

The Energy Engineering Institute has supported educational and research activities in energy related areas since 1985. Undergraduate and graduate students and faculty from the mechanical engineering and electrical and computer engineering departments are involved in obtaining solutions to problems presented by industrial sponsors. Institute research projects cover a wide range of areas from optimizing energy resources to international energy studies.

Center for Energy Studies

Alan R. Sweedler, Director

The San Diego State University Center for Energy Studies (CES) facilitates, promotes and supports research and academic programs relating to energy, with particular emphasis on energy matters of concern to the San Diego and local southwest region including the international border with Mexico. The Center encourages interdisciplinary research and instructional programs in the broad areas of energy modeling, technology assessment of energy systems, local energy policy planning and data collection relating to energy usage in the San Diego region. SDSU offers through the Center an interdisciplinary minor in energy studies. Completion of the minor will give the student a broad understanding of the technical, economic, social and political aspects of energy issues. For more information call the Center at 594-6240 or 594-6155. The Center works closely with local and state agencies concerned with energy policy and planning, and serves as a community resource in matters concerning local energy issues and the impact of energy use of the environment.

Entrepreneurial Management Center (EMC)

**Allan R. Bailey, Executive Director, Richard D. Brooks, Director,
Community Relations and Programming**

The Entrepreneurial Management Center (EMC) serves the emerging growth sector of the regional business community. The growth, development and success of new business ventures is essential to the future of the San Diego region. The mission of the EMC is to assist this sector of the economy through educational programming focused on the application of the underlying principles and perspectives of entrepreneurship offered to students, organizations and individuals.

The range of entrepreneurial programming offered includes: (1) support for entrepreneurial academic degree programs, (2) individual knowledge and skill development, and (3) organizational consulting and development programming. The entrepreneurial topics presented include the outcomes of the entrepreneurial process: the creation of wealth, new enterprises, innovation, organizational change, increased firm value, and organizational growth. The EMC focuses programming on both the entrepreneur and the entrepreneurial process which results in a variety of outcomes essential to economic development.

The EMC sponsors an annual Business Plan Competition which provides students with an opportunity to present their business ideas to a distinguished panel of judges. The competition currently involves students from colleges throughout North America.

Facility for Applied Manufacturing Enterprise (FAME)

James S. Burns, Director

The centerpiece of San Diego State University's manufacturing endeavors is the Facility for Applied Manufacturing Enterprise. FAME was planned as an interdisciplinary center-of-excellence dedicated to science and technology in the area of manufacturing. Its mission is to provide students with a complete and immersive product development environment in which to augment their job experiences with next-century tools and strategies. This facility evolved from the Computer Integrated Manufacturing (CIM) center founded in 1988. Since then, it has

grown considerably in physical size and scope. FAME resources include 3000 square feet of dedicated floor space in the Engineering and Engineering Laboratory Buildings and another 2000 square feet for student projects. Manufacturing-related equipment includes plastic injection, compression, extrusion, pultrusion, resin transfer molding and vacuum forming equipment, a composite repair station, ultrasonic scanning equipment, platen presses, mechanical testing machines, ovens, CNC lathe and mill, automated parts bin, and four multi-axis robots. A 3" diameter by 15" long, high-pressure and temperature autoclave facility is currently under construction.

Interdisciplinary Center for Health and Human Services

Charlotte Lopes, Clinical Director

Administered by the Department of Communicative Disorders, the Center is a multidisciplinary training, research, and service facility which promotes educational and research opportunities for SDSU faculty and students in health and human services fields. The Center's **Interdisciplinary Assessment Program** teaches students the skills of interdisciplinary collaboration as they assess the behavioral, cognitive, communicative, educational and physical/mental health problems experienced by clients of all ages. The **Assistive Device Assessment Program** provides language, cognitive, and technical assessments related to augmentative/assistive devices and systems for individuals who have communication disabilities. **Project BEST** (Better Elder Service Teams) coordinates free Senior Health Fairs, which include screenings for blood pressure readings, vision and hearing checks, glucose and hemoglobin tests, drug interaction analysis, health education and referral assistance.

International Institute for Human Resources Development in Health and Human Services

Tarek Shuman, Director

Administered through the Dean's Office, the purpose of this International Institute is to respond to the urgent global need for human resources development, particularly in the fields of health and human services. Specific activities include the development of education and training programs; promoting relevant research and model demonstration programs and projects; encouraging technical cooperation with developing countries; promoting exchange of information and experience at the international level; and engaging in the convening of conferences. The Institute will also provide a comprehensive, centralized source of data and information on human resource development, linking it to internationally recognized networks, and serving as a repository and a clearinghouse for information in this field.

Center for International Business Education and Research (CIBER)

**Allan R. Bailey and Paul J. Strand, Executive Co-Directors
Alvord G. Branan and Michael L. Hergert, Program Co-Directors
David Earwicker, Assistant Director**

The Center for International Business Education and Research (CIBER), one of 27 such centers of excellence in the United States, was established in 1989 under the auspices of a grant from the U.S. Department of Education and is administered by the Colleges of Arts and Letters and Business Administration.

CIBER promotes (1) interdisciplinary programs which incorporate foreign language and international studies training into business, finance, management, communications systems, and other professional curricula; (2) interdisciplinary programs which provide business, finance, management, communications systems, and other professional training for foreign language and international studies faculty and

advanced degree candidates; (3) evening or summer programs, such as intensive language programs, available to members of the business community and other professionals, which are designed to develop or enhance their international skills, awareness, and expertise; (4) collaborative programs, activities, or research involving other institutions of higher education, local educational agencies, professional associations, businesses, firms or combinations thereof, to promote the development of international skills, awareness, and expertise among current and prospective members of the business community and other professionals; (5) research designed to strengthen and improve the international aspects of business and professional education and to promote integrated curricula; and (6) research designed to promote the international competitiveness of American businesses and firms, including those not currently active in international trade.

The Center is located in Business Administration 428, 594-6023, (FAX) 594-7738; CIBER @ mail.sdsu.edu.

International Center for Communications

John M. Eger, Director

The International Center for Communications draws upon the resources of the University, the community and the communications industry to provide the nation's first international focal point in the Pacific in which academic study, innovative research and practical experience among the private and public sectors are joined to help solve critical issues confronting the Pacific region. The Center serves two main purposes: 1) to initiate dialogues leading to new understanding among the diverse cultural and community interests of the region; and 2) to link communications and community in the new relationships essential to fulfilling the promise of the Pacific world.

The goals of the International Center are to establish an institutional approach to learning, problem-solving and practical work focusing on the critical issues of communication and information; to create a new and dynamic partnership in San Diego between business and industry, government and academia, redefining and building a sense of community; and to develop a forum and agenda for research, discussion and collaboration with other organizations in the Pacific leading toward the establishment of a permanent "Pacific Dialogue on the Media."

Center for the Study of International Education

Patrick J. Harrison, Director

The Center for the Study of International Education is a unit of the College of Education. It promotes faculty and graduate student research, explores study abroad and exchange possibilities for faculty and students, and disseminates information about international 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.

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) promotes applied demographic research and the provision of technical assistance and consulting, especially focusing on population issues and policy within the San Diego/Tijuana region.

Although it is located in the Department of Geography, 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. The telephone number for the center is 594-8040.

Institute for International Security and Conflict Resolution

Alan R. Sweedler and Dipak Gupta, Co-Directors

The SDSU Institute for International Security and Conflict Resolution (IISCOR) encourages and facilitates teaching and research in the multidisciplinary area of international security and conflict resolution. Topics such as nuclear armaments, international and intranational conflict, sociopolitical violence, and global environmental issues as they relate to security are covered.

The Institute is a joint effort of the Colleges of Arts and Letters, Professional Studies and Fine Arts, and Sciences. IISCOR is administered by two co-directors, advised by an executive committee consisting of faculty members representing the different disciplines that provide input into the study of international security and conflict resolution.

The Institute promotes teaching and research by organizing public forums, faculty and student seminars, developing appropriate curricula for undergraduate and graduate instruction and facilitating research and scholarly activities. SDSU offers, through IISCOR, a multidisciplinary Bachelor of Arts degree in International Security and Conflict Resolution. More information is available by calling the IISCOR office at 594-6240.

Interwork Institute

Fred R. McFarlane and Ian R. Pumpian, Co-Directors

The Institute efforts focus on promoting the integration of individuals including those with disabilities into all aspects of school, work, family, and community life through maximum participation. The Institute conduct research, training, and education using a variety of strategies including distance learning technologies. Faculty and staff associated with the Institute are uniquely prepared to promote the meaningful participation and productivity of each member of the community. The Institute's mission is supported through local, state, federal, and international organizations. The Institute's facilities are located at 5850 Hardy Avenue, Suite 112.

Japan Studies Institute

Alvin D. Coox, 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 the greater San Diego region interested in Japan and United States-Japan relations. It develops and fosters student internships and student and faculty exchanges between San Diego State University and Japanese institutions of higher learning; tuition-free exchange arrangements exist at present with seven public and private universities located throughout Japan. The Institute works closely with Japanese and American business, industrial, and banking establishments in San Diego, addressing research of mutual interest and drawing support for relevant Japan-focused courses, seminars, cultural events, lectures, forums, and workshops offered by the University. Since 1987 the Institute has offered a National Summer Program for incorporating Japanese studies into the undergraduate curriculum, cosponsored with the American Association of State Colleges and Universities. In summer 1990, the program was expanded to include a six-week on-site Study Tour of Japan led by the Japan Studies Institute Director. The multidisciplinary Institute also oversees the Liberal Studies Major Emphasis in Three Departments with a focus on Japan Studies.

The Institute supports the development of Japanese holdings in the University Library and Instructional Technology Services. The Insti-

tute operates under the jurisdiction of the College of Arts and Letters, but it draws faculty from across the campus.

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. Department of Education has designated the center as one of thirteen "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 a multidisciplinary approach to teaching and research activities focused on Latin American studies; the development of innovative methods of instruction in Spanish and Portuguese; the provision of informative and in-service training programs for elementary and secondary school teachers; and the provision of services for the general public through the sponsorship of conferences, workshops, lectures and films. The Center also assists in the development of the University library's Latin American holdings.

Center for Learning, Instruction, and Performance Technologies

Brockenbrough S. Allen, Director

The Center's faculty and staff conducts research on the design and use of technology-based systems for enhancing human learning and performance, monitors trends in advanced applications of educational technology and allied disciplines, and evaluates the effectiveness and usability of educational products and services.

The Center consults with corporations, agencies, and SDSU affiliates on the design of products for education and training, arranges for on-site and electronic delivery of professional development courses and seminars by the nationally recognized faculty of SDSU Department of Educational Technology, and coordinates fieldwork and internship opportunities for advanced graduate students.

The Center also offers the services and capabilities of the College of Education's Educational Design Research Laboratory to clients who are interested in rapid prototyping and formative evaluation of educational products and services. A principle focus of the EDRL is the use of high technology video and computer systems to capture and analyze data about the usability and learnability of prototype products.

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, Parks and Tourism at San Diego State University. It is primarily concerned with conducting leisure related research, promoting professional development, disseminating specialized publications, organizing conferences, seminars, lectures and workshops.

The Institute is governed by a Board of Directors which, in turn, is advised by a group of thirteen individuals from park and recreation and related fields. The Advisory Council has been instrumental in providing valuable information to the Board concerning the needs and direction of the leisure services field.

The Institute administers a variety of service programs within San Diego County. Camp Able, an aquatic based camp for disabled children and adults, operates ten weeks during the summer at Silver Strand State Beach. The Spring Valley Park and Recreation District within the San Miguel County service area (San Diego County) contracts for recreation services from the Institute for all its residents. Additionally, the Institute conducts research for local park and recreation entities as well as the California Department of Parks and Recreation and the United States Forest Service.

The Institute continues to publish monographs focusing on important issues relative to leisure services delivery. These are available to the public as well as park and recreation practitioners. Research projects under the direction of the Institute focus on local, state, national, and international problems related to leisure and park/recreation services.

Lipinsky 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 San Diego community, the Lipinsky Institute provides financial support for an annual visiting professor from Israel, the annual Galinson-Glickman symposium on contemporary Israeli issues, and the Robert Siegel Memorial Lecture. It also complements regular course offerings by sponsoring lectures, developing library resources, fostering research and conducting other activities that will promote the advancement of Judaic studies in the University and in the San Diego community.

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 research on substantive questions related to the learning and teaching of science and mathematics. The Center currently has members from the faculties of Biology, Mathematical Sciences, Physics, Psychology, and Teacher Education. 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.

Microchemical Core Facility

Judith W. Zyskind, Director

The Microchemical Core Facility (MCF) is a component of the California State University Program for Education and Research in Biotechnology (CSUPERB). The MCF is a full-service, state-of-the-art facility that provides DNA synthesis, sequencing, and purification services for cell and molecular biologists associated with any of the 22 CSU campuses. In addition, the MCF provides for CSU faculty access to the most recent advances in computer-assisted analyses of molecular structure. Located in the Biology Department at SDSU, the MCF provides state-of-the-art molecular analyses and characterization to CSU scientists for the lowest possible cost, as well as fostering the training of university faculty at all levels in the most recent techniques available in the molecular life sciences. Funding for the establishment and maintenance of the SDSU MCF is derived from the National Science Foundation with matching funds provided by the State of California. Call 594-1669 for more information.

Molecular Biology Institute

Jacques Perrault, 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. The MBI sponsors a weekly seminar series that facilitates faculty and student interaction with scientists from other institutions. 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, the Department of Energy, the U.S. Department of Agriculture, and the California Metabolic Research Foundation. Additional information is available from the MBI office: 594-7429.

SDSU Institute for Nursing Research

Catherine E. Loveridge, Director

Administered through the School of Nursing, the purpose of the Institute is to promote collaboration in the conduct, dissemination, and utilization of nursing research which will contribute to the quality of patient care and service. The Institute provides a forum for research interests and activities, and also fosters collaborative research efforts among Institute nurse clinicians and SDSU nursing faculty. This includes identifying research priorities for individual and multi-site research projects, and providing consultation for design, method, analysis, computer services, instrumentation, and manuscript preparation. The Institute also facilitates grant application and administration for funded research, as well as the dissemination of research findings.

Production Center for Documentary and Drama

Jack Ofield, Director

The Production Center for Documentary and Drama was established to sponsor and create professional films, television programs and series, and symposia with high artistic and technical standards, documentary accuracy and creative originality. Within the School of Communication, Production Center projects are integral to the training of senior and graduate students in the telecommunications and film disciplines who work in tandem with industry professionals to gain practical experience in location and studio production. Located in PSFA 325, the Production Center mentors graduate students and alumni in the creation of projects that are an expression of their artistic and technical growth. The Center serves local, national and international non-profit entities, such as museums, libraries, performing and visual arts groups, and public service, research, philanthropic and government agencies in the development of audio-visual programs and assists other SDSU departments in documenting important projects and programs. Production Center projects are distributed world-wide, funded from grants and contracts with industry, government, philanthropy, education and business, and administered by the SDSU Foundation.

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 Urban Studies. The Institute was established to conduct research in community and governmental affairs and to sponsor conferences, colloquia and symposia related to issues in public administration and affairs including urban planning, management, and criminal justice administration. The Institute also 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 growing collection of research materials emphasizing issues in public affairs particular to San Diego and California.

Center for Public Economics

The Center for Public Economics is a facility of the Department of Economics to encourage research by students and faculty in all phases of nonmarket economic decision making, encompassing the following areas: (1) the functioning of federal, state and local fiscal systems, including the provision for and financing of public goods at each level; (2) the economic factors involved in environmental changes, in particular, their bearing on urban and local economic problems; (3) the economic dimensions of social decision making. Fiscal matters are coordinated through the San Diego State University Foundation. Financial support in the form of student assistance is available for faculty research projects on subjects in public economics. The Center funds a number of student scholarships which are administered through the Scholarship Office. The Center is located in Storm Hall, room 349.

Institute for Public Health

Winnie Willis, Director

Administered through the Graduate School of Public Health, the mission of the Institute is to make public health expertise, resources and information available to local public health practitioners as well as to the business and industrial community of San Diego and neighboring areas, including Mexico. Resident expertise includes biostatistics, environmental health, epidemiology, health services administration, health promotion, industrial hygiene, maternal and child health, occupational health and toxicology. Specific activities include professional

advising, placement of student interns, development of new research, and expansion of ongoing research regarding current public health issues relevant to the San Diego community. The Institute also provides continuing education programs, offering practical training to public health professionals already practicing in the field.

Real Estate and Land Use Institute (RELUI)

Established in 1983, the Real Estate and Land Use Institute (RELUI) is the first systemwide research-oriented institute of its kind in the 21-campus California State University system. The San Diego regional office of RELUI is located in the College of Business Administration.

RELUI's mission is to promote education and research in real estate and land use. In support of this mission, RELUI seeks to (1) support, coordinate, and manage systemwide and inter-campus research activities; (2) assist in the development, coordination, and administration of statewide continuing education programs; (3) obtain funding sources for education and research activities; (4) promote the general well-being of undergraduate and graduate study within the CSU system; and (5) maintain liaison with government agencies, private industry, and associated organizations with interest in public policy.

RELUI maintains a research and reference center in the College of Business Administration where specialized real estate and land use related materials are available for use by students and faculty.

RELUI also sponsors an internship program for placement of qualified students with local firms to provide a combined working and learning experience. Additional benefits accrue to interns in the form of academic credits and stipends. For more information, call 594-2301.

Institute for Regional Studies of the Californias

Paul Ganster, Director

The Institute for Regional Studies of the Californias (IRSC) provides the University with a neutral forum for the investigation, discussion, and dissemination of information about the United States-Mexico border region. The Institute focuses on the three-state region of California, Baja California, and Baja California Sur and is also concerned with Mexico and important issues in the United States-Mexican relationship. IRSC also monitors border regions elsewhere in the world. Created in 1983, the Institute has undertaken multidisciplinary research projects on common regional concerns including transborder environmental issues, policy perspectives on the California-Mexico relationship, and the *maquiladora* industry. The Institute maintains a research collection on the border region and takes an active role in Mexico-related professional organizations. IRSC publishes the *Mexico Policy News* for PROFMEX (The Consortium for Research Programs on Mexico), as well as papers and monographs on border-related issues and topics.

Other Institute activities include conducting binational symposia, improving communication between public and private sector representatives on both sides of the border, serving as a clearinghouse for information on transborder events, issues, and institutions, and encouraging the effective use of educational resources among the region's universities. The Institute serves as a major link between SDSU and Mexican institutions.

IRSC has underway, a major project on border environmental issues and public policy. IRSC serves as the SDSU link to the Southwest Center for Environmental Research and Policy, a congressionally established consortium of universities for research and policy studies on environmental issues of the border. The Institute is located in Nasatir Hall, Room 103.

Interdisciplinary Research Center for Scientific Modeling and Computation

José E. Castillo, Director
Peter Salamon, Associate Director

The Interdisciplinary Research Center for Scientific Modeling and Computation promotes and supports an excellent environment for scientific research at SDSU. The Center facilitates the interaction between applied mathematics and other disciplines by providing the necessary infrastructure for productive research efforts.

The Center's primary areas of research are numerical methods, modeling, and simulation. Projects combine insights from theoretical mathematics and other sciences with expertise in applied as well as computational mathematics.

The Center sponsors interdisciplinary seminars, colloquia, and workshops which draw scientists from many fields. Visiting scientists come to the Center for extended periods from industries and from other universities, attracted by the conviction that science and engineering problems benefit greatly from interdisciplinary efforts.

The Center's activities significantly enhance the ties between applied and computational mathematics at SDSU by involving faculty and students in projects closely connected to real applications. Interested students and faculty may obtain more information by calling the IRC office at 594-7205.

Center for Social Equity Technical Assistance

Ruben W. Espinosa and Alberto M. Ochoa, Co-Directors

The Center conducts training and research on issues of social equity and bilingual/multicultural policy, and provides technical assistance to districts throughout southern California. The Center houses projects funded by federal, state and private sources. Current projects include the Parent Institute, and the Social Equity project. The Center functions within the department of Policy Studies in Language and Cross-Cultural Education at San Diego State University.

Social Science Research Laboratory

Douglas S. Coe, Director

The Social Science Research Laboratory (SSRL) was founded in 1974 to facilitate faculty research and to support a diverse set of instructional programs throughout the social sciences. Emphasizing public opinion polling and computer applications to social research, SSRL offers a wide range of services to University faculty, staff, and students, as well as to the broader San Diego community. Services and operations are organized along the following lines:

Research Services offers a complete range of public opinion polling and survey research services, including sample design and execution, polling fieldwork, coding and data reduction, and data archiving and retrieval. The section maintains computer systems to support faculty research, undergraduate internships, and research assistant positions.

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 and teaching assistantship positions are available to qualified students.

The SSRL is located in the Professional Studies and Fine Arts building, room 140.

Center on Substance Abuse

Anita S. Harbert, Director and Annette R. Smith, Coordinator

Administered through the School of Social Work, the Center was established in 1985, with a primary mission of facilitating the development of knowledge and skills for the prevention and treatment of alcohol and drug problems. Goals include developing and supporting projects in substance abuse research, curriculum, and community service. The Center serves as an administrative umbrella for several projects, including Student to Student, providing campus-wide substance abuse prevention, the Student to Student Dissemination Project, providing technical assistance and support to the San Diego Community Colleges, and the Central District Driving Under the Influence Program, providing education and counseling for court-ordered offenders in the central judicial district of San Diego County. Other projects have included the College Life Alcohol Prevention Project, providing awareness of issues related to family alcoholism, the Child Welfare Substance Abuse Training Project, the Neighborhood House Head Start Substance Abuse Training Project, and the production of a substance abuse training video for child welfare workers. In addition, the Center has been involved in the training of approximately 200 community professionals in substance abuse intervention, and functions in a leadership role with the San Diego Intercollegiate Consortium for Alcohol and Drug Abuse Prevention. The Center office is located at 9245 Sky Park Court, Suite 101, (619) 467-6828.

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 Instructionally Related Activities funds. The Series was established for the purpose of bringing to the campus scholars of national and international preeminence to present a public lecture on a general subject related to research and graduate education. In addition to this public lecture, the distinguished lecturer provides an unusual educational opportunity for graduate students by conducting a graduate research colloquium. Each of the lecturers in the Series is published to assure its increased availability to students, faculty, and the university community at large.

Past Distinguished Research Lecturers have included Dr. Noam Chomsky, Institute Professor of Linguistics, Massachusetts Institute of Technology; Dr. Arthur Kornberg, 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; Dr. Stephen Jay Gould, Professor of Geology, Harvard University; Dr. Frank Sherwood Rowland, Professor of Chemistry, U.C. Irvine, and theorist on origins of ozone depletion; and Ms. Susan Sontag, one of America's best known writers.

Albert W. Johnson University Research Lecture

A project sponsored by the University Research Council and the Graduate Division and Research, the Albert W. Johnson University Research Lectureship is awarded to an SDSU faculty member for outstanding achievement in research and scholarship. The purpose of the University Research Lectureship is to recognize such achievement, to foster its continuance, and to enable a distinguished resident faculty scholar to share knowledge more broadly with the academic community and the community-at-large.

One SDSU faculty member may be designated annually as the Albert W. Johnson University Research Lecturer for the academic year. Each of the lectures in the Series will be published to assure its increased availability to the students and faculty of the university and to the community at large.

Past lecturers have included Dr. Maurice Friedman, Professor of Religious Studies; Dr. Arthur Getis, Professor of Geography; Dr. Helen Wallace, Professor of Public Health; Dr. David Ward-Steinman, Professor of Music; Dr. Robert Kaplan, Professor of Psychology; Dr. Alvin Coox, Professor of History; Drs. James Flood and Diane Lapp, Professors of Education; Dr. Catherine Yi-yu Cho Woo, Professor of Chinese; Dr. E. Percil Stanford, Professor of Social Work; Dr. Joseph Ball, Professor of Anthropology; and Dr. Arthur Getis, The Stephen and Mary Birch Foundation Chair in Geographical Study.

Academic Computing

The University provides a sun SPARC Server (ROHAN running UNIX) for academic computing. A CRAY C98/8128 Supercomputer located at the San Diego Supercomputer Center is available for assigned coursework and research projects. All are available to the university community via terminals or microcomputers on the Internet. The Internet also links students to specialty computing centers located at other California State Universities. The University has over 1,000 microcomputers in 49 labs provided through individual departments and colleges. Student computing and e-mail accounts on ROHAN are available through a student account system. This system allows enrolled SDSU students to create their own accounts on this machine via the Internet from any terminal or computer on campus or via a modem from off campus. Enrolled is defined as a student who is registered for classes during the current semester.

This computing environment provides access to scores of software products including programming languages, wordprocessing, spreadsheets, presentation packages, relational databases, statistical software, World Wide Web browsers, and large databases such as Compustat.

A World Wide Web home page is available at "<http://www.sdsu.edu/>".

Instructional Technology Services

Instructional Technology Services provides support to faculty in the design, selection, production, and distribution of instructional technology. Instructional Technology Services consists of four units: Instructional Development, Multimedia Production, Instructional Resources, Technology Systems.

The Instructional Development program offers professional assistance in instructional design, course design, teaching techniques and assessment. Services include: assistance in instructional materials development; assessing and selecting instructional methods; facilitating course design; assistance to faculty who wish to analyze their instruction; workshops on teaching skills and techniques; and a facility for faculty to produce their own media and learn about new technologies.

Multimedia Production assists in the design and production of instructional, research and other campus related materials. Services include development and production of instructional videotapes; graphic and photographic support of instruction, research and publication; and assistance in development of multimedia materials.

Instructional Resources provides support in the selection, use and distribution of instructional materials and audio-visual equipment. Services include consultation on selection and operation of media materials and equipment for classroom use; access to media catalog on-line for selection of videotapes, videodiscs, CD-ROMs and films; check-out of media materials and equipment for classroom use; acquisition of new videotapes, videodiscs, and CD-ROMs related to instruction; and repair and maintenance of audiovisual equipment.

Technology Systems provides support in the scheduling and operation of electronic and multimedia distribution systems and classroom facilities. Services include transmission of ITS programs, campus programming, and cable and broadcast stations over the campus closed-circuit television system; support of classroom facilities involving media equipment; support of special technology "smart" classrooms; scheduling of films, videotapes and videodiscs for closed-circuit television; scheduling and operation of Distance Learning and Conferencing facilities; scheduling and operation of the Electronic Presentation Room with high quality computer and video projection.

San Diego State University Foundation

The San Diego State University Foundation was incorporated in 1943 as an auxiliary organization authorized by the Education Code of the State of California. It is a nonprofit corporation, self-financed, and chartered to provide and augment programs that are an integral part of the educational mission of San Diego State University.

The Foundation serves the University in the following major areas:

- Development and administration of grants and contracts for faculty and staff research and educational projects;

- Administration of funds for more than 1,500 special programs including KPBS educational television and radio stations, the College of Extended Studies, and the Alumni and Development Office;

- Financial administration of gifts and donations;

- Investment of endowment and other funds;

- Financial administration of student scholarship and loan funds;

- Management of a real property program whereby the Foundation acquires and provides space for grant and contract activity, and leases property to the University and other campus auxiliaries;

- Development of property adjacent to the campus;

- Provides funds for the support of University programs, such as the Grant-in-Aid for Research Program for faculty and financial support for graduate students;

- Administration of activities such as the June Burnett Institute for Children, Youth and Families, and the Fred J. Hansen Institute for World Peace.

The Foundation, as a nonprofit corporation, is governed by a Board of Directors in accordance with its Articles of Incorporation and Bylaws. The principal function of the directors is to establish policies and guide the corporation in achieving its objectives.

San Diego State University Press

As the scholarly press for San Diego State University, San Diego State University Press publishes works of original research, as well as other meritorious academic and creative works that will further the intellectual mission of the University. Although high quality manuscripts from any source will be considered, the current focus of the Press is in these areas: Latin America and the United States-Mexico border; regional studies of the Pacific Southwest; and postmodernism. In addition to books, the Press also publishes under its imprint one journal, *Fiction International*.

The San Diego State University Press imprint is controlled by an editorial committee of scholars, appointed by the Vice President for Academic Affairs and the Senate. Financial accounting and coordination are provided by the San Diego State University Foundation.

CSU Program for Education and Research in Biotechnology (CSUPERB)

A. Stephen Dahms, Director

The California State University Program for Education and Research in Biotechnology (CSUPERB) exists to provide a coordinated and amplified development of biotechnology research and education within the university system; to foster competitiveness both on the state and national levels; to facilitate training of a sufficient number of biotechnology technicians and scientists; to catalyze technology transfer and enhance intellectual property protection; and to facilitate the acquisition and long-term maintenance of state-of-the-art biotechnology resource facilities across the university, such as the Microchemical Core Facility and the Macromolecular Structural Analysis Resource Center, both localized at SDSU. It facilitates interdisciplinary cooperative activities between the departments of Biology and Chemistry on all campuses and between faculty and from a number of allied academic and research units such as bioengineering, agricultural biotechnology, environmental and natural resources, molecular ecology, and marine biotechnology. It also serves as the official liaison between the CSU and industry, government, the Congressional Biotechnology Caucus, and the public arena in biotechnological matters. CSUPERB operates through a Director and an Associate Director, an Executive Committee of 11, and a Governing Board composed of 45 representatives of academic and research units from the 22 campuses.

CSU International Programs

Developing intercultural communication skills and international understanding among its students is a vital mission of The California State University (CSU). Since its inception in 1963, the CSU International Programs has contributed to this effort by providing qualified students an affordable opportunity to continue their studies abroad for a full academic year. Close to 11,000 CSU students have taken advantage of this unique study option.

International Programs participants earn resident academic credit at their CSU campuses while they pursue full-time study at a host university or special study center abroad. The International Programs serves the needs of students in over 100 designated academic majors. Affiliated with 36 recognized universities and institutions of higher education in 16 countries, the International Programs also offers a wide selection of study locales and learning environments.

Australia – The University of Western Sydney

Brazil – Universidade de São Paulo

Canada – The universities of the Province of Quebec (13 institutions, including Université de Montréal, Concordia University, Université Laval, McGill University, Université du Québec system, Bishop's University, *i.a.*)

Denmark – Denmark's International Study Program (the international education affiliate of the University of Copenhagen)

France – Institut des Etudes Francaises pour Étudiants Étrangers, Université de Droit, d'Économie et des Sciences d'Aix-Marseille (Aix-en-Provence); Mission interuniversitaire de coordination des échanges franco-américains, Universités de Paris III, V, VI, VIII, X, XI, XII, XIII

Germany. The institutions of higher education in the German Federal State of Baden-Württemberg, including: Ruprecht-Karls Universität (Heidelberg), Universität Hohenheim (Hohenheim), Fachhochschule Nürtingen (Nürtingen), Fachhochschule Reutlingen (Reutlingen), Berufsakademie Stuttgart (Stuttgart), Universität Stuttgart (Stuttgart), Eberhard-Karls-Universität (Tübingen)

Israel. Tel Aviv University, The Hebrew University of Jerusalem

Italy. CSU Study Center (Florence), Università degli Studi di Firenze, and La Accademia di Belle Arti di Firenze

Japan. Waseda University (Tokyo)

Mexico. Universidad Iberoamericana (Mexico City), Universidad Pedagógica Nacional

New Zealand – Lincoln University (Christchurch) and Massey University (Palmerston North)

Spain – Universidad Complutense de Madrid and Universidad de Granada

Sweden – Uppsala Universitet

Taiwan – National Chengchi University (Taipei)

United Kingdom – Bradford University, Bristol University, Kingston University, Sheffield University, and University of Swansea

Zimbabwe – University of Zimbabwe (Harare)

The International Programs pays all tuition and administrative costs for participating California resident students to the same extent that such funds would be expended to support similar costs in California. Participants are responsible for all personal costs, such as transportation, room and board, living expenses, and home campus fees. Participants remain eligible to receive any form of financial aid (except work-study) for which they can individually qualify.

To qualify for admission to the International Programs, students must have upper division or graduate standing at a CSU campus by the time of departure. Students at the sophomore level may, however, participate in the intensive language acquisition programs in France, Germany, and Mexico. California Community Colleges transfer students are eligible to apply directly from their community college if they can meet this requirement. Students must also possess a current cumulative grade point average of 2.75 or 3.0, depending on the program for which they apply. Some programs also have language study and/or other coursework prerequisites.

Information and application materials may be obtained from the Division of Undergraduate Studies (AD 223) or by writing to The California State University International Programs, 400 Golden Shore, Suite 122, Long Beach, California 90802-4275. Applications for the 1996-97 academic year overseas must be submitted by February 1, 1996.

Office of the Executive Director for International Programs

In recognition of the rapidly expanding number and importance of international activities on the San Diego State University campus, the University has created the Office of the Executive Director for International Programs with specific responsibility for coordinating and facilitating the development of the diverse international programs and mission of the University. The executive director serves as the University's primary contact person for international programs and represents the University on international matters to external agencies and institutions. In addition to coordinating all international faculty and student exchange programs, the Office for International Programs serves as an information clearinghouse regarding international projects, funding opportunities, and academic programs and services that have an international component.

International Faculty Exchanges

In order to enhance the international character of instruction and research, San Diego State University has developed a continuing program of faculty exchange with foreign universities. Currently, the University has formal arrangements to exchange professors periodically with universities in Western and Eastern Europe, Canada, East Asia, Latin America, Africa, and the Middle East. Over 100 international scholars visit the San Diego State University campus each year to pursue scholarly research, participate in academic or professional programs, and share their international perspectives with the university community.

International Student Exchanges

In addition to the CSU International Programs, San Diego State University has entered into special institutional arrangements with selected foreign universities that provide both undergraduate and graduate students the opportunity for study abroad. Currently San Diego State University has student exchange agreements with universities in Australia, France, Germany, Japan, Mexico, the People's Republic of China, Spain, Taiwan, and the United Kingdom.

For more information about the University's international programs and international faculty and student exchanges, contact the Office of the Executive Director for International Programs, Administration Building, room 222, (619) 594-1354.

Alumni Association

Administration 201, (619) 594-6907

Membership in the San Diego State University Alumni Association 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 Association is a dynamic, exciting organization whose purpose is to promote the welfare of the University. It offers a number of programs and services designed to meet the variety of needs and interests of its alumni, including library privileges, reduced admission to many cultural activities, and Extended Studies mini-courses, workshops, and conferences.

The Alumni Association also supports the University's annual fund drive to raise private funds for innovative educational programs beyond the basic curriculum and to meet numerous needs of the University community.

In addition, the Alumni Association sponsors an Annual Awards Gala every spring honoring alumni of the University, provides scholarships for students, and provides input regarding University programs and policies.

The Alumni Association's publication for alumni and friends of the University is the quarterly *SDSU Magazine*.

For further information, phone the Alumni Office at (619) 594-6907.

Associated Students of San Diego State University

The Associated Students of San Diego State University (A.S.) is a unique, full-service organization. The A.S. provides a variety of programs, services and activities for SDSU students, as well as faculty, staff, alumni, and the public. Managed by elected student executives, the Associated Students programs range from student employment and government, to recreation, entertainment and child care. An independent, not-for-profit corporation, it is funded by the student activities fee and revenues collected from programs and services. Associated Students can be reached by calling 594-6555.

Student Government. The Associated Students sponsors extensive student leadership programs designed to encourage active student participation in the decision-making policies of the university. The A.S. Council is the voice of the SDSU student body. Composed of one representative per 1500 students and four executive officers, the Council is responsible for the (A.S.) \$7 million annual budget and for formulating policy. Elections held each semester allow for the selection of individuals to fill one-year terms on the Council. Meetings of the A.S. Council are weekly, open sessions.

Other student government activities include monitoring academic policies and managed programs; 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. Call 594-6487 for more details about student government programs.

Aztec Center. The hub of student activity at SDSU, Aztec Center is the headquarters of the Associated Students and its staff. Aztec Center features study lounges, meeting and conference rooms, the Information Booth, the Ticket Office and businesses that include Pak Mail, University Student Travel Network, Ralph's Hair Place, and USE Credit Union. The Center also houses Monty's Den, a popular campus eatery and meeting place for students that offers many food selections. For more information, call 594-6551.

- **A.S. Recreational Programs.** Associated Students manages most of the recreation programs available to SDSU students, faculty, staff, alumni, and the public providing low cost leisure and fitness programs, for fun and class credit.
- **Aztec Center Bowling and Games.** One of the most affordable places on campus. Newly renovated, includes AMF automated scoring, over 40 video games, billiards, and foosball. Call 594-6561.
- **Mission Bay Aquatic Center.** The world's largest instructional waterfront facility. Located at 1001 Santa Clara Point in Mission Bay Park, offers classes and recreational opportunities in surfing, sailing, windsurfing, waterskiing, rowing and more. Equipment rentals and facilities for group meetings or barbecues. Bus transportation from SDSU available on Transit Route 81. Call 488-1036.
- **The Leisure Connection.** A one-stop leisure and outdoor recreation center including health and fitness, dance, music, arts and crafts, food and beverage, multicultural programs and tennis. Equipment rental, craft and photo studios, plus adventurous outdoor programs with trips ranging from the Sierras to the Grand Canyon offered at a low cost. Located at 5828 Hardy Ave. Call 594-6994.
- **Recreational Sports.** Offers recreational facilities at Peterson Gym and Terry Pool, plus intramural teams sports, informal recreation, weight training, sport tournaments and courts for tennis, racquetball and wallyball. Intercollegiate sport club teams participate nationally. Visit the Rec Sports office at 196 Peterson Gym. Call 594-6424.

Child Care Programs. Associated Students provides loving child care and preschool learning programs through two facilities, the Campus Children's Center and the Faculty/Staff Children's Center. Programs range from part-time to full-time care for children ages six months to five years, with all programming provided by expertly trained teachers and staff members. For more information, call 594-6359.

Open Air Theatre and Entertainment. A.S. offers multiple programs that provide fun and versatile entertainment. The 4,600 seat Open Air Theatre features regular performances to sell-out crowds. Other offerings include concert series, lecture series and on-campus movie screenings sponsored by the Cultural Arts and Special Events

Board. Call Aztec Center Ticket Office, 594-6947, for further information.

Aztec Shops, Ltd. (Campus Store, Food Services, Copy Services)

Aztec Shops, Ltd. is a California non-profit corporation which has existed since 1931. It owns and operates such services as the Campus Store and Food Services. Aztec Shops is not funded by the State of California or the University. Its Board of Directors is composed of faculty, students, and staff of SDSU.

The Campus Store provides required textbooks, assigned class materials, reference works, school supplies, computer supplies, software and hardware, SDSU items, and a selection of over 45,000 general interest books. The Pulse, located inside the Campus Store, offers a wide selection of copying and other related needs.

A large selection of art supplies may be found at Art Etc. which is located in the Art Building. Aztec Shops also operates stores at Fashion Valley Mall, SDSU/IVC, CSU San Marcos and Imperial Valley College. You need not be a student to shop in any of these stores.

Food Services includes: The MarketPlace, West Commons, The General Store, Aunt Mary's, Courtyard Cafe, Betty's Hotdogger, Sub Connection, the Faculty/Staff Centre, Rice King, DJ's Deli, Monty's Market (three locations), and Catering. The MarketPlace is open week-ends. Other operations, which are leased from Aztec Shops include Piccolo, Allegro, Monty's Pub, Sbarro, Don Diego and Arby's.

Residence Hall meal plans available include a 14 or 10 meal card plan. Plans are valid at The MarketPlace, West Commons, Rice King, Courtyard Cafe, DJ's Deli, and the General Store. Students, faculty and staff may also purchase an Aztec Card which uses the SDSU ID card. It operates similar to an ATM card and can be used at Monty's Market and all Aztec Shops Food Service locations.

Aztec Shops is dedicated to providing quality services to the campus community. Questions or concerns may be directed to the corporate offices on the second floor of the East Commons building.

The June Burnett Institute for Children, Youth, and Families

The June Burnett Institute was created in 1985 at the San Diego State University Foundation from a bequest from the estate of June Estelle Burnett. The Institute is dedicated to developing the potential of all children, youth, and parents in a manner that is sensitive and responsive to cultural, social, and economic differences and needs. It believes that its purposes can be best developed through combined funding approaches that foster cooperation and collaboration, training, and interdisciplinary/interprofessional approaches that promote understanding among children, youth, and families. An advisory board composed primarily of faculty and community members directs the activities of the Institute.

The Institute's Youth Services Division coordinates the Twelve Together Program for eighth grade middle school students. The Institute's Parent Services Division sponsors the Home/School Partnership – a school-focused collaboration of ethnically-identified organizations and PTAs. The Volunteer Division administers the California YMCA/CSU PRYDE AMERICORPS Program—a consortium of five YMCAs and companion CSU campuses throughout California. Evaluation efforts of the Institute include the Safe Zones for Learning AMERICORPS evaluation, the evaluation of San Diego Youth and Community Services' Teen Recovery Center and other evaluation services to numerous community agencies.

The Burnett Institute Faculty Fellows program, in conjunction with the Vice President for Academic Affairs and the applicant's college dean, sponsors four faculty annually who wish to assist the Institute in

the research interests.

Other Institute programs involve middle school innovation, exploring ways to prevent school dropouts, and promoting partnership between schools, parents, and nonprofit community service agencies. The Institute is located at 6310 Alvarado Court, phone (619) 594-4756 for more information.

Campus Children's Center

The Associated Students Children's Centers provide child care for children of SDSU students, faculty and staff. The academic year program is a parent participation program and gives priority to children of students. Other factors that determine priority are financial need and application date. The Campus Center serves children six months through five years of age, who are in good health. The year-round program serves children two to six years of age and gives priority to children of faculty and staff. All applications are considered regardless of race, religion, creed, sex, national origin, or handicap.

Tuition for children enrolled during the academic year is determined on a sliding fee scale based on family size and income. The year round program fees are a set fee.

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 programs are staffed by professional and student employees, volunteers and Child Development majors. Parents of children enrolled in the academic year program make a weekly contribution of time as teachers in the classroom and serve on a fundraising/publicity committee. Parent participation is not required in the Faculty/Staff Children's Center. Parents have the opportunity to serve on the Children's Center Board, which is composed of parents and other campus representatives.

The hours of operation are: Campus Preschool 7:30 a.m. to 5:30 p.m., Monday through Thursday; Toddler Classroom 7:30 a.m. to 5:00 p.m.; Monday through Thursday; Friday 7:30 a.m. to 4:00 p.m. The Infant Classroom is open Monday through Friday 8:00 a.m. to 2:00 p.m. The Faculty/Staff Preschool is open 7:00 a.m. to 6:00 p.m. Monday through Friday. Call 594-6359 for more information.

Career Placement

Career Services may furnish, upon request, information about the employment of students who graduate 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 information may include data collected from either graduates of the campus or graduates of all campuses in The California State University.

Career Services

**Student Services Building, Room 1200,
(619) 594-6851**

Career counselors assist students in the exploration of their skills, interests and values as they choose a major and develop a career plan. A variety of computerized instruments are used in the career counseling and job search process. An extensive Career Resource Library is available to provide information about potential employers as well as current open positions for graduates.

A centralized listing of paid part-time jobs and internships for on and off campus is available through the Student Employment section of Career Services.

Career fairs are scheduled each semester allowing students to meet employers in an informal setting. A comprehensive career fair is scheduled in September followed by a graduate and professional school day. In the Spring a series of specialty fairs are scheduled, including one for summer jobs. Access to a bank of SDSU alumni (through our Career Consultant Network) will also help students explore numerous career possibilities.

The On-Campus Recruiting program brings prospective employers and graduating students together for career employment interviews. Students are assisted in preparing for these interviews and all other aspects of the job quest through workshops and individual career counseling.

Various services are offered to alumni for a nominal fee.

Career Services is open 8:00-4:30 p.m. Monday through Friday, and until 6:00 p.m. on Thursdays during Fall and Spring Semesters while classes are in session.

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 & Psychological Services

**Student Services Building, Room 2109,
(619) 594-5220**

Counseling & Psychological Services (CPS) offers individual and group counseling for the typical college student who wants assistance in coping with, and successfully resolving, the problems they face in everyday life. Issues relating to intimate relationships, self-esteem, personal independence, conflict, anxieties, self-confidence and academic performance are difficult and common obstacles for most college students. Peer counselors are also available to assist students with personal and family problems.

Individual counseling services are designed for students who can benefit from short term, intensive counseling, lasting a maximum of six sessions. If a student's situation requires longer term therapy, referrals can be made to off campus resources.

CPS has a stress management program and Personal Growth Resource Library equipped with over 200 video and audio tapes and a variety of free brochures on topics to assist students in their academic

performance and personal growth.

Enrolled SDSU students who want help from the CPS staff in locating off campus community services can call 594-5220.

Counseling psychologists at CPS offer help in:

Learning to reduce stress. Stress can interfere with concentration, memory, and mental processing.

Dealing with relationship loss, feelings of helplessness or hopelessness, which may lead to a lack of motivation or prolonged depression.

Developing communication skills and problem solving techniques to improve important relationships.

Building self-esteem and improving coping skills.

Clarifying values and career decisions.

Counseling & Psychological Services is open from 9:00 a.m. to 4:00 p.m., Monday through Friday.

Disabled Student Services (DSS)

**Student Services Building, Room 1661,
(619) 594-6473; TDD: 594-2929**

Disabled Student Services provides support services for students with mobility limitations, learning disabilities, hearing or visual impairments, psychological disabilities, and other disabilities. Counselors are available to help students plan an SDSU experience to meet their individual needs. They assist students in making personal, academic, and vocational choices, and show how best to utilize campus facilities. Prior to receiving this assistance, appropriate medical documentation must be submitted to Disabled Student Services. Services offered include:

Orientation for students – Information on attendants – Government benefits counseling – Priority registration for students with special needs – Close-in parking – Transportation on campus and information about off-campus transportation – Accessibility information, maps, and library study rooms – Reader services and assistance with books on tape; sign language interpreters for deaf students – Testing assistance for visually impaired, learning disabled, and dexterity limited students – Loan of educational support equipment (tape recorders, amplification equipment, wheelchairs, etc.); a high technology computer lab – Specialists who evaluate and provide support services for learning disabled students – Tutoring and notetaking services – Referral to off-campus agencies for mobility orientation, financial benefits, and other services.

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) 594-5281**

All regularly enrolled SDSU students have prepaid a health fee which entitles them to basic medical services. Some services, including 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 on-campus center where health care providers offer a wide range of programs and services. Services include:

Care by physicians board certified in family practice, pediatrics, internal medicine, and preventive medicine, and by primary care nurse practitioners; nursing, x-ray, and laboratory staff; a pharmacy which dispenses prescriptions and over-the-counter items at reduced cost; health-related counseling and campuswide health education programming offered by the Health Promotion Department.

REQUIRED: Proof of Measles and Rubella Immunizations or Immunity

New 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 **second 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 second 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 on many college campuses during the past few years because a sizeable percentage of students lack immunity to measles and rubella. The **minimum** requirement is proof of at least one immunization for measles and rubella given after the first birthday and after 1968. **All students are encouraged to consider a second immunization for measles prior to enrollment.**

Students may fulfill the immunization requirement by bringing or sending documentation as proof of either previous illness or immunization to **Student Health Services**. Students may also receive a free immunization in Student Health Services. For more information, call (619) 594-6684.

Strongly Recommended Health Screening

Immunization from the following diseases may also protect students against potentially severe infections: tetanus, diphtheria, polio, mumps, and Hepatitis B. Like measles, these too can be particularly harmful in the college-age group. These immunizations are available at reduced cost in Student Health Services.

Entering students are also strongly encouraged to have a screening test for tuberculosis (TB). The TB skin test is offered free at Student Health Services.

Appointments

Students without acute or urgent problems are encouraged to make an appointment. Those with problems requiring immediate medical attention should walk in. 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 4:30 p.m., Monday through Friday. During the summer, fees and clinic hours vary. It is best to call for hours of service and to ask about the availability of services (594-5281). All medical care provided at Student Health Services is **strictly confidential**. No one, on or off campus, other than Student Health Services staff 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 Associated Students. Members not only work with clinic staff on a variety of health education projects, but also act as liaison between the SDSU student body and Student Health Services. SHAB keeps Student Health Services staff focused and current on major student health issues. Membership from all academic majors is encouraged.

Accidents and Student Insurance Coverage

First aid or urgent medical care is provided to students, faculty, staff, and campus guests for accidents and injuries occurring on campus. Accidents requiring treatment and/or transportation to Student Health Services or a local hospital should be reported immediately to the SDSU Department of Public Safety, 594-1991.

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 and should exercise good judgment and due care at all times. **The University does not provide accident, liability, or health insurance coverage for students. This includes those participating in extracurricular activities, intramural sports, and required or elective academic programs, such as laboratory courses, workshops, theatrical productions, internships, or practica.** Specific questions regarding insurance coverage for campus programs, institutional safety regulations, and potential risks inherent in academic programs and student activities should be directed to the responsible faculty or staff member in charge of the activity.

In addition, through the Associated Students, a **health insurance policy** is available and recommended to students having no private medical or accident insurance coverage. The insurance includes hospitalization benefits and specified medical and surgical services. The policy may be purchased by semester or on a yearly basis. An open enrollment period is available the first thirty days of each semester, and the policy may be purchased at the Aztec Center ticket office.

Housing and Residential Life

6050 Montezuma Road, (619) 594-5742

There are six residence halls and one apartment complex on campus. All are coeducational and serve single undergraduate and graduate students. Family housing is only available off campus.

Graduate Residence Hall

Recognizing the special needs of graduate students, San Diego State University offers Toltec residence hall for graduate students and re-entry students over 23. This hall is part of the Templo del Sol complex.

One of the key features of Toltec Hall is the academically oriented atmosphere. Each floor in the three story, red brick building adopts its own rules for study hours. Hall policies and programming are age appropriate.

Toltec residents may choose to share a double room with another graduate student or to have a single room. Singles include both Super Singles and Doubles as a Single. Super Singles are double size rooms furnished for one with a loveseat, table and lamp, in addition to a bed, dresser, desk and chair. Students can also live by themselves in a traditionally furnished double room (two beds, dressers and desks), known as a Double as a Single.

All rooms have local telephone service, voice mail, internet, and cable service, at no additional charge. Utilities are also included. Every room has a Microfridge which is a combination refrigerator, freezer and microwave.

Toltec Hall has a study room, lounge, recreational area, vending machines, laundry room, kitchenette for special occasions and custodial service for all common areas. Toltec is served by the 24 hour Templo del Sol service desk.

Residents enjoy the use of the Templo del Sol swimming pool. Another convenience is Monty's Market – located right across the street. On-campus housing packages include a choice of both traditional and flexible balance meal plans.

Toltec has the added advantage of being open over the breaks, at no

additional charge. Most other halls close for the Thanksgiving weekend, Winter and Spring breaks. Summer residence is also available for students who need on-campus housing year round.

Housing applications are accepted beginning each November 1 for the following academic year and beginning September 1 for the Spring semester. Early application is encouraged for best selection.

Off-Campus Housing

Off-campus housing accommodations in the San Diego area include apartments, houses, rooms in private homes, etc. Listings are available on posting boards outside the housing office.

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 10 residential sororities and 16 residential fraternities from which to choose. Chapter houses provide accommodations for about one-third of their members. New members should not plan on living in chapter houses until at least their second year for sororities, second semester for fraternities. Membership recruitment ("rush") occurs at the beginning of each semester.

International Student Center

International Student Center, (619) 594-1982

More than 650 international students from 75 countries attend SDSU. Through the support provided by the International Student Center, these students can find assistance in reaching their educational goals. Services include prearrival advising, orientation to campus life, academic and immigration advising, and a housing referral service.

The International Student Center also coordinates a variety of activities designed to foster intercultural goodwill, understanding, and friendship. One such activity is provided by the Intercultural Ambassadors, through which selected international students make home-country presentations in San Diego schools. In addition, the ISC invites 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 ISC Calendar of Intercultural Activities. These include the International Coffee Hour, the Whole Earth Dialogue Series, the International Festival, and the Intercultural Exchange Camps.

Ombudsmen

Student Services Building 3635, (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 are independent and impartial agents who help individuals and groups seeking the resolution and correction of complaints. The Ombudsmen act as liaisons between students and the University, assisting students through formal grievance procedures and functioning to mediate and reinforce other means of redress when possible. This office does not supplant existing avenues of redress. It exists to encourage appropriate and timely access to those existing processes which may best resolve the problem.

Examples of student complaints which have been resolved through this process include disputes over grades, faculty or staff conduct, academic disputes, appeals or waivers, administrative policies, and institutional compliance with federal and state nondiscrimination laws. Should a complaint not be resolved at the referral level, the Ombudsmen may act as mediators and suggest compromise solutions between parties. If the problem is still unresolved, the student may file a grievance with the student grievance committee. No student grievance can be filed with this committee later than the last day of the semester (excluding summer session) after the semester during which the student was allegedly aggrieved.

Parking and Transportation

Where possible, carpooling or use of alternate modes of transportation is recommended. For carpool information call 594-5224.

San Diego Transit has seven bus routes connecting the metropolitan area with service to the University Transit Center. These are routes 11, 13, 36, 55, 81, and 115. Bus schedule racks are located on campus at the Aztec Center Information Desk. The San Diego Transit office at 233-3004 will provide further information concerning bus routes, fares, and services.

On-campus parking is by permit only. Parking structures are located on the south, east and west perimeters of the campus, in addition to student and faculty/staff parking lots. Visitors are directed to the Information Kiosk on Campanile Drive for directions to appropriate parking areas. For further information on parking at the San Diego campus, contact the Department of Public Safety, 594-6671. Parking for visitors to the Imperial Valley Campus, 357-5500.

Test Office

**Student Services Building, Room 2549,
(619) 594-5216**

The Test Office is an important resource for the entire University community, serving both students and faculty by administering tests for the purpose of admission, class placement, competency for graduation, licenses, credentials, and career planning. A library of standardized assessment instruments 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. Advance reservations as well as fee payments are required for most tests. The Test Office will provide students with test dates and registration procedures for major national examinations in the form of a bulletin of information or with the address of the testing service. Students who are interested in assessments, assisting with the counseling process, or career planning must contact Counseling and Psychological Services or Career Services. Special competency and national testing arrangements for disabled students are 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

**Student Services Building, Room 1510,
(619) 594-5813**

Students who are eligible for veterans, dependents, or reservists V.A. education benefits should visit SDSU's Veterans Affairs Office (VAO). Services available through the VAO include assistance in applying for education benefits, coordinating the V.A. work/study program, and processing tutorial assistance paperwork.

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 first V.A. education check. For additional information, about the VAO or the services provided, please telephone or visit the office.

College of Extended Studies Continuing Education

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 educational services and are in concert with the institution's overall mission and purpose. The programs and courses in Extended Education are expected to meet the standards of quality which the institution sets for its other programs and courses, in terms of resources, faculty, level of instruction, evaluation and support services.

The College of Extended Studies serves as the principal University liaison with the adult community and provides a wide variety of traditional and nontraditional, credit and noncredit, quality educational experiences designed to fit the life-style and expectations of mature adults. In addition, it provides a range of academic and special programs for students and groups during the summer months, in the evenings, and between semesters. Under the direction of the Dean of the College, programs are developed and carried out within five divisions - Special Sessions and Extension, Professional Development, American Language Institute, International Training Center, and Administrative Services. The majority of the programs are operated on a self-support basis since state funds are not provided for Continuing Education activities.

Summer Programs

The College of Extended Studies administers a comprehensive summer program for San Diego State University. Approximately 800 courses, workshops, short courses, interdisciplinary and experimental offerings, and special programs are available for matriculated students, students from other institutions and special groups. Credit earned during the summer is applicable to graduation and residence requirements; however, admission to the University is not required for summer attendance.

Several major sessions are scheduled each summer; two 3-week terms; one major 6-week term and a variety of other terms. However, not more than 12 units of credit earned in each summer may be included on a program of study for an advanced degree. The summer program is offered from approximately the first of June through the middle of August each year.

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

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

The *Summer Sessions Bulletin*, which includes the registration form and all necessary information about the summer sessions, is available in March.

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 coursework. Credit earned during Winter Session is applicable to graduation and residence requirements. Admission to the University is not required for Winter Session attendance.

American Language Institute (ALI)

The American Language Institute offers noncredit intensive (20-25 hours per week) English programs throughout the year to students and professionals interested in improving their English proficiency. By enrolling in the ALI, students may take advantage of a program called conditional acceptance. Conditional acceptance is available to those students who require admission or proof of eligibility to a university in order to obtain a passport, a US visa, or government sponsorship. It is offered to students who do not have an adequate command of English or the required TOEFL (Test of English as a Foreign Language) score to qualify for 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 achieving appropriate TOEFL scores.

Programs offered by ALI are as follows:

English for Academic Purposes – An 11- to 17-week course for students planning to enter San Diego State or other colleges or universities. Classes are offered in reading, writing, grammar, academic listening/note-taking and academic speaking, as well as in special areas, including TOEFL, GMAT, and GRE test preparation and business topics. In addition, students may choose from over 30 elective course offerings, and TOEFL, GMAT and GRE preparation. Students may also specialize in Pre-MBA preparation.

Highly advanced students may register for three to twelve units in the Open University in addition to their English classes.

Intensive English Communications – A 6- to 19-week course emphasizing oral skills and cultural experiences. Classes include eight hours of oral communication in addition to 12 hours of reading, writing, structure and listening per week. Elective courses are offered and directed activities at SDSU and in the community provide experiences for real language use. Professionals in IEC may specialize in Intensive English for Managers. 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, Business Seminar for International Executives, Seminar for

International Teachers of English, Certificate in Business Administration Program, Pre-MBA 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, Business Seminar for International Executives, Seminar for International Teachers of 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 units of credit. Programs range from two to three weeks in length, with a maximum of four units of credit offered.

For further information contact the Coordinator of Travel Study Programs.

Certificate Programs

Professional certificate programs are coordinated by the Division of Special Sessions and Extension. Educational services are provided for a wide variety of groups and professional organizations. Extension credit certificate programs are offered in Accounting and Applied Gerontology; professional credit programs are offered in Construction Practices, Court Interpreting, Government Contract Management, Human Resources Management, and Operations Resource Management.

The Division also offers noncredit certificate programs in special interest areas, including Community Economic Development, Construction Inspection Technology, Consultancy, Legal Assistant Specialist, Medical Office Procedures, Meeting and Events Planning, Occupational Health and Safety Management, Telecommunications, and Trauma Recovery Services.

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 the convenience of adult students most courses are scheduled in the evenings or on weekends, on campus or at convenient learning extension centers throughout the service area.

Extension Courses

Extension courses are offered each semester in a number of areas including education, business administration, public administration, and the arts and sciences. Many courses and programs are developed in cooperation with off-campus organizations and groups who have identified specific needs. Many one-unit weekend workshops are also offered throughout the year. These courses are listed in a special Extended Studies Program Bulletin published four times a year.

There is no limit on the total number of extension units for which a student may enroll; however, the maximum extension credit which may be used toward advanced degree requirements at San Diego State University is six to nine units. Extension work is considered the same

as transfer credit and is therefore not included in the student's San Diego State University scholastic average.

Open University

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 matriculated students have completed their registration. Consult the College of Extended Studies or the current Class Schedule for complete details on Open University qualifications and registration procedures. For the convenience of first-time graduate students who have missed the deadline for admission to the University, credit earned through one semester of Open University enrollment may be considered as residence credit for students who matriculate the following semester at the University in an advanced degree program. Any subsequent credit earned through Open University enrollment may not be applied toward an advanced degree. The course repeat policy does not apply to courses repeated through Open University.

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 except those students enrolling in 799B or 899B courses.

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 – San Diego (Educational Growth Opportunities – EGO) and Rancho Bernardo (The Continuing Education Center at Rancho Bernardo).

Retired adults, who are interested in continued learning, participate in these programs.

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

Professional Development

The Division of Professional Development provides business, industry, and human service and other organizations with programs that are responsive to the training and development needs of their employees. Through the Division's activities, participants are kept abreast of the latest business, managerial, and technical techniques that ensure they will add to the productivity and profitability of their organizations.

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 development.

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.

Corporate Partnerships:

**Center for Computer Technology
Management Development Center
Institute for Quality and Productivity**

The Professional Development Centers and Institutes offer practical, intensive training opportunities in the fields of information systems, management, manufacturing, quality and software engineering. 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.

International Training Center

The International Training Center (ITC) addresses the new opportunities in professional development, training, and technology transfer created by the increasing globalization of our economics, social and business activities. The Center is charged institutionally with a wide range of programs dealing with innovation, professionally relevant education and current issues of interest to the international community. Activities include joint efforts with the various divisions of the College of Extended Studies to expand their services to foreign countries, as well as collaborative projects with SDSU's academic colleges and support units. The Center also advises and provides guidance to SDSU's administration on international agreements and special projects of institutional interest.

The International Training Center brings significant University resources to bear on the challenges of international business and responds to the global economic change through the following mechanisms:

- International videoconferencing, supporting professional and human resource development through interactive satellite communication. International experts present video-seminars on management, technology transfer, and countless other topics, supporting the training needs of government, industry, and education.

- Professional Certificates offered to foreign executives interested in beginning or expanding their international activities. These certificate programs offer business leaders the opportunity to learn the most current interactive business practices, and to meet suppliers, distributors, and venture partners in new markets.

The International Training Center exists to increase understanding of the new realities of global development, and to serve government and industry through technology training and human resource development.

M.B.A. for Executives

(Offered only through the College of Extended Studies)

Specific Requirements for the Master of Business Administration Degree for Executives

(Major Code: 05011)

The Master of Business Administration for Executives is an alternative path for the Master of Business Administration degree, and is designed specifically to meet the needs of mid-career executives. Students accepted for the M.B.A. for Executives are fully matriculated in the University and meet all University standards as established by the Graduate Council and Graduate Division. The program is coordinated by the Executive Management Office in the College of Business Administration.

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 program of studies containing 48 units of 600- and 700-numbered courses. These courses will be offered in a predetermined pattern over 24 consecutive months. Courses will be scheduled in a modular fashion, not related to the traditional semester time frame, on alternate Fridays and Saturdays. No transfer courses and no substitute courses will be accepted. The official programs of all students in any one cycle will be identical. Advancement to candidacy requires completion of at least 24 units of coursework listed on the official program of study with a minimum grade point average of 3.0 (B).

Admission

In addition to meeting the criteria for admission to the University, as well as those listed under "Admission to the Graduate Program in the College of Business Administration," applicants must also demonstrate that they have had significant experience in management-level positions in business, government, or not-for-profit organizations.

Those interested in the program should write the Executive Management Office, College of Business Administration, San Diego State University, San Diego, CA 92182-8232 or telephone 594-6010 to receive the special application and additional information.

Courses Acceptable in the M.B.A. for Executives

Graduate Courses in Business Administration

600. Financial and Managerial Accounting (4)

Concepts and principles of financial accounting; understanding financial statements; measurement of business income. Nature of cost accounting information and how it is used to make managerial decisions that create competitive advantage.

601. Management of Organizations and Human Resources (3)

Role of the manager in designing organizations for effectiveness with emphasis on organization theory, organization behavior, and human resources management.

602. Quantitative Methods for Managers (3)

Statistics and production operations management. Data analysis, central tendency and variability, probability, distributions, sample inference, association analysis. Applications in engineering, manufacturing and service, and an overview of decision theory, queuing, total quality control, and project management.

605. Managerial Marketing (2)

The marketing function in an organization. Managerial activities of marketing including market analysis, target market selection and design of the organization's marketing program.

608. Managerial Communication (2)

Advanced communication concepts including the collection, analysis, and presentation of data. Written and oral communication strategies. (Formerly numbered Business Administration 609.)

615. Strategic Financial Management (3)

Provides a framework for financial decision making. Covers relevant modern theory and emphasizes role of finance in corporate strategy. Topics include financial analysis and planning, investment, capital structure and dividend decisions and valuation and corporate restructuring. Not open to students with credit in Business Administration 653 or Finance 615.

616. Competitive Analysis (3)

Competition in typical unregulated product or service markets. Competitive forces in such markets, and impact of these forces on economic profits, rates of return, and relative market-shares of competing firms. Not open to students with credit in Business Administration 665 or Finance 616.

620. Managing Quality and Productivity (2)

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.

700. Business in the Global Environment (3)

Evolution of multinational corporations, management of organiza-

tions in global environment, and marketing and management implications of competition in international arena.

701. Entrepreneurship and New Venture Formation (2)

Entrepreneurial approach to business. Concepts, theories and techniques for organizing and managing an entrepreneurial venture.

702. Social Responsibility: Legal and Ethical Environment of Business (3)

Role of the manager in dealing in a socially responsible and ethical manner with internal and external constituencies.

703. Policy Formulation and Implementation (3)

Corporate and business level strategic decision making. Topics include industry and environmental analysis, strategy implementation, strategic planning systems. Case descriptions of actual company situations serve as basis for analysis and recommendations.

704. The Financial Environment (2)

Elements of financial institutions and financial markets which may impinge upon the business enterprise as it contemplates both its short and long term goals.

705. Marketing Strategy (2)

Development, implementation, and evaluation of marketing strategy and plans. Role of marketing planning, analysis and control; contributions and implications of marketing to corporate strategy. Strategies for attaining competitive advantage. Contemporary marketing planning tools and techniques.

708. International Financial Management (2)

International financial environment and multinational corporation. Topics include international trade and balance of payments; international monetary agreements and currency arrangements, international short term borrowing and investment; and international taxation. Reviews of global financial challenges and opportunities facing U.S. firms. (Formerly offered as a part of Business Administration 700.)

710. Leadership and Management of Change (3)

Theoretical and empirical literature pertaining to study and assessment of leadership skills. Process of organizational change and development.

790. Directed Readings in Business Administration (6) Cr/NC

Preparation for the comprehensive examination for students in the M.B.A. for Executives program (Plan B).

Imperial Valley Campus, Calexico

Faculty

Emeritus: Ayala, Baldwin, Erzen, Franklin, Harmon, King, Lovely, Rodney, Smith, Spencer, Varela-Ibarra, Wilson
Professors: Balch, Ballesteros (Dean of the Campus), Dunn, Elizondo, Ryan, Simon
Associate Professors: Padmanabhan, Polich, Reyes, Stampfl
Assistant Professors: Castaneda, Garrison, Hill, Mora, Neumann, Robinett, Sabath, Shumaker, Zelina

Offered by the Imperial Valley Campus

The Imperial Valley Campus, in cooperation with academic units and the Graduate Division on the San Diego campus, offers selected graduate programs leading to advanced degrees, credentials, and certificates. Such programs, scheduled on a part-time basis for working professionals, have been offered for the Master of Arts degree in Education with a concentration in Administration and Supervision, the Master of Arts degree in Education with a concentration in Elementary Curriculum and Instruction or Secondary Curriculum and Instruction, the Master of Science degree in Counseling, Special Education Specialist credentials, the Master's degree in Social Work, and the Master's degree in Public Administration.

General Information

The Imperial Valley Campus is a two-year upper-division campus of San Diego State University serving the desert area of southeastern California. It is accredited as an integral division of SDSU and operates under the same academic calendar. Established in 1959 by an act of the State legislature, the campus is located in the Imperial Valley on the Mexican Border in the city of Calexico. Offering only the last two years of undergraduate education as well as a fifth year credential program for teacher preparation and occasional M.A. programs, the campus accepts transfer students, from community colleges or other colleges, who have at least 56 units. As a small campus, the Imperial Valley Campus offers students the advantages of small classes and individual contact with the faculty. Interactive television provides students in Calexico the opportunity to participate in some classes broadcast live from the San Diego campus. The Imperial Valley Campus schedules its classes to meet once a week in three-hour blocks so that students who work full time can earn 6-12 units a semester by attending classes once or twice a week. Classes are also offered on the weekends.

The location on the Mexican border provides the opportunity for involvement in a bicultural environment. There are many opportunities to participate in the cultural life of Mexicali, just across the border, a city of nearly 800,000 people. There are also many opportunities on the U.S. side of the border to be involved in a bilingual/cross-cultural setting. There is an exchange program for students between the Imperial Valley Campus and the Universidad Autonoma de Baja California which allows students to take classes at either of the participating universities and receive credit at their home institution. Among the faculty are professors with Latin American emphases in history, geography, sociology, and Spanish. The faculty is also augmented with other Latin American specialists from Mexico and from the San Diego campus.

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

Facilities

The campus is 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 structures. In 1980 the Legislature approved funding to construct a new classroom building and a library and media center which was dedicated in February 1983. Seven new buildings were dedicated in 1995, including doubling the size of the library.

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, special collections, and comfortable, upholstered chairs. The collection of over 80,000 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 computer and media center provide assistance to the faculty in the use of educational technology. It has a wide range of equipment for use in the classroom. A modern computer laboratory, computer laboratory, and tutoring center are available to the campus community.

A student union, bookstore, art gallery, administration/student services building, 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) 357-5509 for further information. Because of the size of the campus, the registration process is easily accomplished in a short period of time.

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

Appendix

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.

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. California State University, Monterey Bay, became the CSU's 21st campus in September 1994. The California Maritime Academy in Vallejo, founded in 1929, joined the CSU as its 22nd campus in July 1995.

Responsibility for The California State University is vested in the Board of Trustees, consisting of ex officio members, alumni and faculty representatives, and members 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 of the respective campuses.

The Trustees, the Chancellor, and the Presidents develop system-wide 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. Although 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 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 institutions in California.

In fall 1995, the system enrolled approximately 326,000 students, taught by more than 16,000 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 1.2 million persons have been graduated from the 22 campuses since 1960.

Average Annual Cost of Education and Sources of Funds per Full-time Equivalent Student

The 22 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 1995/96 (including capital outlay funding in the amount of \$160,722,000) is \$1,784,250,000. However, the total cost of education for CSU is \$2,303,448,000, which must provide support for a projected 252,000 full-time equivalent students (FTES). The number of full-time equivalent students is determined by dividing the total academic student load by 15 units per term (the figure used here to define

a full-time student's academic load).

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 and lottery funds. The average cost of education 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, the average cost of education per FTE student is \$9,141. Of this amount, the average student fee support per FTE is \$2,065. (The State University Fee, application fee, and nonresident tuition are included in the average costs paid by the students; individual students may pay less or more than \$2,065, depending on whether they are part-time, full-time, resident, or nonresident students.)

	Amount	Average Cost Per FTE Student	Percent
Total Cost of Education	\$2,303,448,000	\$9,141	100.0
–State Appropriation*	1,623,478,000	6,442	70.5
–Student Fee Support	520,439,000	2,065	22.6
–Support from Other Sources	159,532	634	6.9

*Does not include \$31,087,000 to fund retirement rate increases during 1995-96; does include \$1,878,000 reappropriated for lease bond payments.

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Appointments are for a term of eight years, except for a student Trustee, an alumni Trustee, and a 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.

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- Mr. Anthony M. Vitti (1997)
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- Mr. Roland E. Arnall (1998)
- Mr. James H. Gray (1998)
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Correspondence with Trustees should be sent:

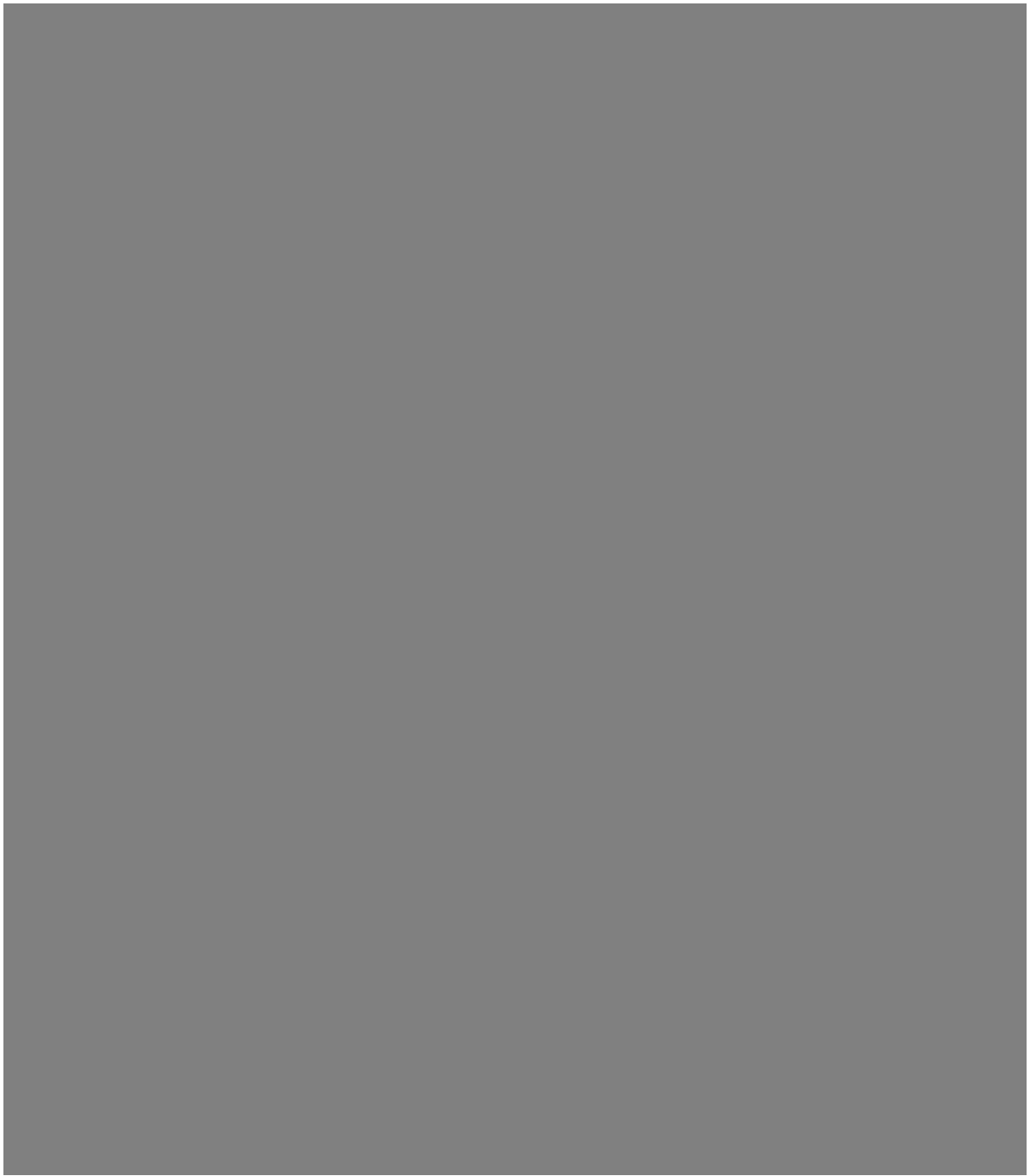
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The California State University
400 Golden Shore, Suite 134
Long Beach, CA 90802-4275

**Office of the Chancellor
The California State University**

400 Golden Shore
Long Beach, California 90802-4275
Telephone: (310*) 985-2500

- Dr. Barry Munitz Chancellor – CSU System
- Ms. Molly Corbett Broad Executive Vice Chancellor
- Dr. Peter S. Hoff Senior Vice Chancellor,
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- Dr. June M. Cooper Vice Chancellor, Human Resources
and Operations
- Mr. Richard P. West Vice Chancellor, Business and Finance
- Dr. Douglas X. Patiño Vice Chancellor, University Advancement
- Ms. Christine Helwick (Interim) General Counsel

* Area code becomes 562 on January 25, 1997.



The California State University

Campuses of The California State University

California State University, Bakersfield
9001 Stockdale Highway
Bakersfield, California 93311-1099
Dr. Tomas A. Arciniega, President
(805) 664-2011

California State University, Chico
1st & Normal Streets
Chico, California 95929
Dr. Manuel A. Estaban, President
(916) 898-6116

California State University, Dominguez Hills
1000 East Victoria Street
Carson, California 90747
Dr. Robert C. Detweiler, President
(310) 516-3300

California State University, Fresno
5241 North Maple Avenue
Fresno, California 93740
Dr. John D. Welty, President
(209) 278-4240

California State University, Fullerton
Fullerton, California 92634-9480
Dr. Milton A. Gordon, President
(714) 773-2011

California State University, Hayward
Hayward, California 94542
Dr. Norma S. Rees, President
(510) 881-3000

Humboldt State University
Arcata, California 95521
Dr. Alistair W. McCrone, President
(707) 826-3011

California State University, Long Beach
1250 Bellflower Boulevard
Long Beach, California 90840
Dr. Robert C. Maxson, President
(310*) 985-4111

California State University, Los Angeles
5151 State University Drive
Los Angeles, California 90032
Dr. James M. Rosser, President
(213) 343-3000

California Maritime Academy
200 Maritime Academy Drive
Vallejo, California 94590
Dr. Mary E. Lyons, President
(707) 648-4200

California State University, Monterey Bay
100 Campus Center
Seaside, California 93955
Dr. Peter P. Smith, President
(408) 582-33301

California State University, Northridge
18111 Nordhoff Street
Northridge, California 91330
Dr. Blenda J. Wilson, President
(818) 885-1200

California State University, Sacramento
6000 J Street
Sacramento, California 95819
Dr. Donald R. Gerth, President
(916) 278-6011

California State University, San Bernardino
5500 University Parkway
San Bernardino, California 92407
Dr. Anthony H. Evans, President
(909) 880-5000

California State University, San Marcos
San Marcos, California 92069
Dr. Bill W. Stacy, President
(619) 750-4000

California State University, Stanislaus
801 West Monte Vista Avenue
Turlock, California 95380
Dr. Marvalene Hughes, President
(209) 667-3122

California Polytechnic State University,
San Luis Obispo
San Luis Obispo, California 93407
Dr. Warren J. Baker, President
(805) 756-1111

California State Polytechnic University, Pomona
3801 West Temple Avenue
Pomona, California 91768
Dr. Bob Suzuki, President
(909) 869-7659

San Diego State University
5500 Campanile Drive
San Diego, California 92182
Dr. Stephen L. Weber, President**
(619) 594-5000

Imperial Valley Campus
720 Heber Avenue
Calxico, California 92231
(619) 357-3721

San Francisco State University
1600 Holloway Avenue
San Francisco, California 94132
Dr. Robert A. Corrigan, President
(415) 338-1111

San Jose State University
One Washington Square
San Jose, California 95192
Dr. Robert L. Caret, President
(408) 924-1000

Sonoma State University
1801 East Cotati Avenue
Rohnert Park, California 94928
Dr. Ruben Armiñana, President
(707) 664-28801

* Area code becomes 562 on January 25, 1997.

** Effective July 1996.

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