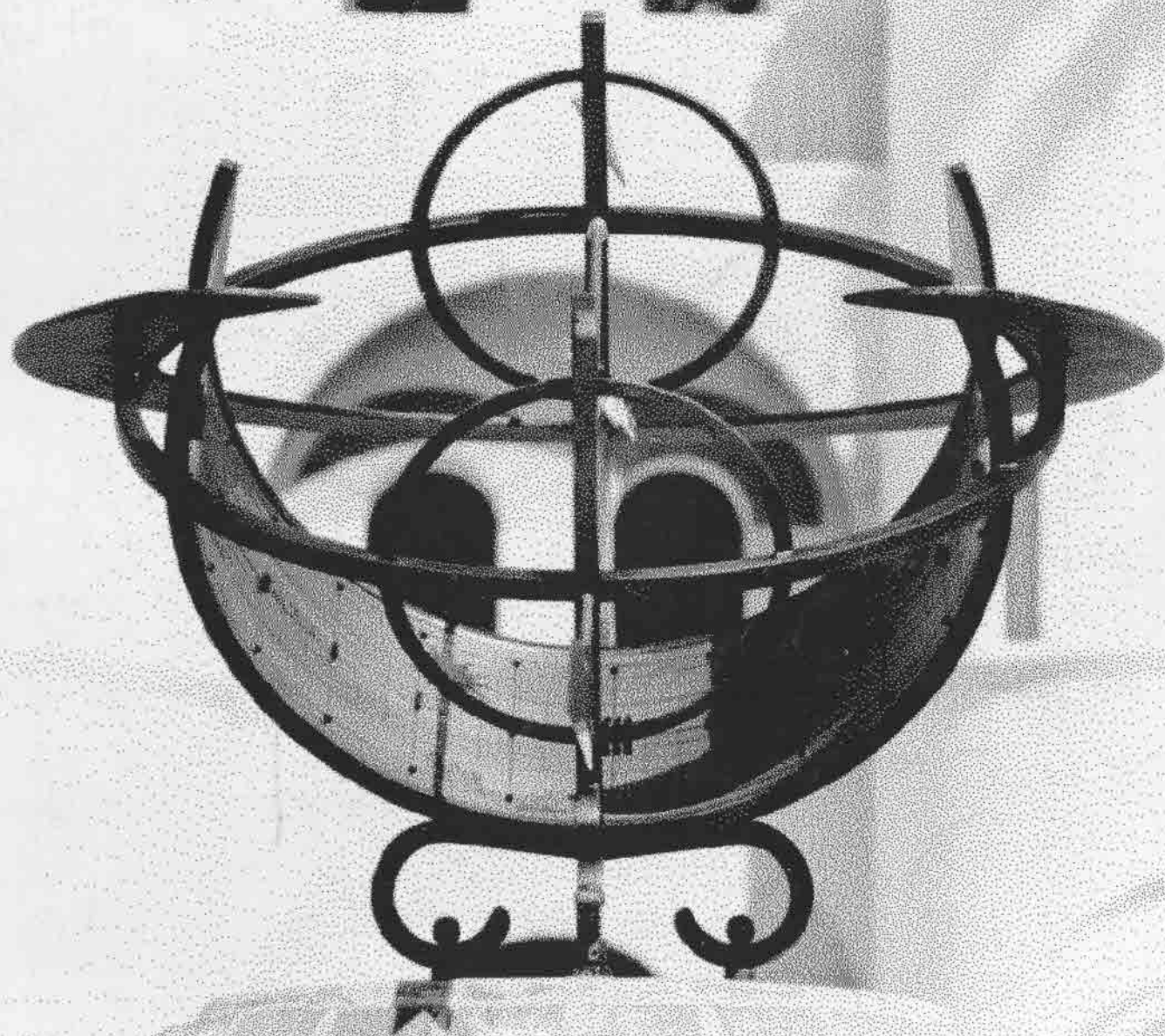


SAN DIEGO STATE UNIVERSITY ♦ 1992-93 GENERAL CATALOG

THE CALIFORNIA STATE UNIVERSITY



IN HONOR OF  
GEORGE A. NOBSTER PhD  
PROFESSOR OF EDUCATION  
EXECUTIVE DEAN  
IN APPRECIATION OF HIS SERVICE TO  
THE UNIVERSITY  
1985-1986

# General Catalog

and

## Announcement of Courses

Volume 79

1992-1993

San Diego State University  
5300 Campanile Drive  
San Diego, California  
92182-0763  
(619) 594-5200



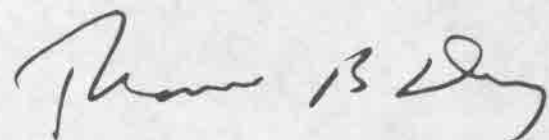
Dear Student,

There is something you should know about this catalog. Although it provides you with basic information about courses, degrees, and graduation requirements, it omits something important which cannot be defined by data alone — our commitment to undergraduate education. San Diego State University began as a teachers' college 94 years ago and grew to become a major urban university and the runaway leader in research grants among the 20-campus California State University system. But through these years of growth and achievement, we have never wavered in our dedication to providing an outstanding learning environment for our undergraduates.

This is an aspect of the University that you may not have thought about, yet it plays a very important role in your education. It means that you get the benefit of an institution that values teaching as much as research. The faculty members who are principal investigators on hundreds of research projects are the same faculty who teach the introductory courses. The faculty who train and mentor our doctoral and master's degree students are the same faculty who work with freshmen and sophomores. The faculty who conduct scholarly research or laboratory investigations are the same faculty who open their offices for student consultations. This assures you access to professors who are at the forefront of their fields.

However, in spite of our emphasis on undergraduate education, you initially may be daunted simply by the large size of the University. Your concern is understandable, but I remind you that learning is a personal experience. While the size of our institution may cause some inconveniences, it also provides some unparalleled opportunities. Where we once were a teacher's college offering only one degree program, we now offer baccalaureate degrees in seventy-six academic areas, master's degrees in fifty-four, and, in conjunction with other universities, doctoral degrees in eight areas. You can choose from an exciting diversity of courses and programs, enriched by a wide range of cultural, social and recreational activities.

It is up to you to take advantage of all that the University has to offer. I urge you to regard yourself as a traveler on an intellectual adventure. You can follow the familiar, well traveled routes, but you also can embark on a path of exploration and discovery. The treasures are here waiting for you. Seek them out.



Thomas B. Day  
President



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# Annual Calendar

CALENDAR 1992																				
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	2	3	4	5	6	7
5	6	7	8	9	10	11	2	3	4	5	6	7	8	8	9	10	11	12	13	14
12	13	14	15	16	17	18	9	10	11	12	13	14	15	15	16	17	18	19	20	21
19	20	21	22	23	24	25	16	17	18	19	20	21	22	22	23	24	25	26	27	28
26	27	28	29	30	31		23	24	25	26	27	28	29	29	30	31				
APRIL							MAY							JUNE						
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	2			1	2	3	4	5	6	
5	6	7	8	9	10	11	3	4	5	6	7	8	9	7	8	9	10	11	12	13
12	13	14	15	16	17	18	10	11	12	13	14	15	16	14	15	16	17	18	19	20
19	20	21	22	23	24	25	17	18	19	20	21	22	23	21	22	23	24	25	26	27
26	27	28	29	30			24	25	26	27	28	29	30	28	29	30				
							31													
JULY							AUGUST							SEPTEMBER						
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	1	2	3	4						1				1	2	3	4	5		
5	6	7	8	9	10	11	2	3	4	5	6	7	8	6	7	8	9	10	11	12
12	13	14	15	16	17	18	9	10	11	12	13	14	15	13	14	15	16	17	18	19
19	20	21	22	23	24	25	16	17	18	19	20	21	22	20	21	22	23	24	25	26
26	27	28	29	30	31		23	24	25	26	27	28	29	27	28	29	30			
							30	31												
OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3							1	2	3	4	5	1	2	3	4	5	
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26
25	26	27	28	29	30	31	29	30						27	28	29	30	31		

CALENDAR 1993																				
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	1	2	3	4	5	6		1	2	3	4	5	6	
3	4	5	6	7	8	9	7	8	9	10	11	12	13	7	8	9	10	11	12	13
10	11	12	13	14	15	16	14	15	16	17	18	19	20	14	15	16	17	18	19	20
17	18	19	20	21	22	23	21	22	23	24	25	26	27	21	22	23	24	25	26	27
24	25	26	27	28	29	30	28							28	29	30	31			
31																				
APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3					1				1	2	3	4	5		
4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12
11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19
18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26
25	26	27	28	29	30		23	24	25	26	27	28	29	27	28	29	30			
							30	31												
JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3		1	2	3	4	5	6	7		1	2	3	4		
4	5	6	7	8	9	10	8	9	10	11	12	13	14	5	6	7	8	9	10	11
11	12	13	14	15	16	17	15	16	17	18	19	20	21	12	13	14	15	16	17	18
18	19	20	21	22	23	24	22	23	24	25	26	27	28	19	20	21	22	23	24	25
25	26	27	28	29	30	31	29	30	31					26	27	28	29	30		
OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2						1	2	3	4	5	1	2	3	4		
3	4	5	6	7	8	9	7	8	9	10	11	12	13	5	6	7	8	9	10	11
10	11	12	13	14	15	16	14	15	16	17	18	19	20	12	13	14	15	16	17	18
17	18	19	20	21	22	23	21	22	23	24	25	26	27	19	20	21	22	23	24	25
24	25	26	27	28	29	30	28	29	30					26	27	28	29	30	31	
31																				

# Academic Calendar 1992-1993

## SUMMER SESSIONS 1992

June 1-19	Term A (3 weeks)
June 1-26	Term B (4 weeks)
June 1-July 10	Term C (6 weeks)
June 1-August 21	Term Z (12 weeks)
June 22-July 24	Term D (5 weeks)
June 22-July 31	Term E (6 weeks)
June 22-August 14	Term F (8 weeks)
July 3-4	Holiday—Independence Day. Staff holiday (no classes).
July 13-August 21	Term G (6 weeks)
August 3-21	Term H (3 weeks)

## FALL SEMESTER 1992

August 1	Applications for admission or readmission to San Diego State University for the spring semester 1993 accepted. Applications are accepted after August 31 only until enrollment quotas are met.
August 24	First day of fall semester. Opening date of the academic year for faculty.
August 24-26	Orientation and advising days.
August 27-28	Testing and advising days.
August 31	First day of classes.
Aug. 31-Sept. 14	Late Registration.
September 7	Holiday—Labor Day. Staff holiday (no classes).
September 14	Last day to drop classes.
September 15	Last day to apply for refunds.
September 21	Last day to add classes, change grading basis, or apply for course "forgiveness."
September 21	Last day to withdraw officially from the University for fall semester 1992.
September 25	Last day to file application for bachelor's degree for December 1992 graduation.
September 28	Census.
November 1	Applications for admission or readmission to San Diego State University for the fall semester 1993 accepted. Applications are accepted after November 30 (postmarked) only until enrollment quotas are met.
November 26-28	Holiday—Thanksgiving recess. Staff holiday (no classes).
December 11	Last day of classes before final examinations.
December 12-19	Final examinations.
December 21	Winter recess begins.
December 21-25	Holiday—Winter recess. Staff holiday (no classes).
December 29	Grades due from instructors. (Noon deadline.)
December 29	Last day to apply for a leave of absence for fall semester 1992.
December 29	Last day of fall semester.
January 1, 1993	Holiday—New Year's. Staff holiday (no classes).

## WINTER SESSION 1993

January 4-22	Winter Session.
January 18	Holiday—Martin Luther King, Jr. Day. Staff holiday (no classes).

## SPRING SEMESTER 1993

January 18	Holiday—Martin Luther King, Jr. Day. Staff holiday (no classes).
January 19	First day of spring semester. Opening date of semester for faculty.
January 19-20	Orientation and advising days.
January 21-22	Testing and advising days.
January 25	First day of classes.
Jan. 25-Feb. 5	Late Registration.
February 1	Applications for bachelor's degree for December 1993 graduation accepted.
February 5	Last day to drop classes.
February 8	Last day to apply for refunds.
February 12	Last day to add classes, change grading basis, or apply for course "forgiveness."
February 12	Last day to withdraw officially from the University for spring semester 1993.
February 15	Last day to file application for bachelor's degree for May and August 1993 graduation.
February 19	Census.
April 3	Last day of classes before spring recess.
April 5-10	Spring recess.
April 12	Classes resume.
May 3	Applications for bachelor's degree for May and August 1994 graduation accepted.
May 14	Last day of classes before final examinations.
May 15-22	Final examinations.
May 22 & 23	Commencement.
May 28	Grades due from instructors. (Noon deadline.)
May 28	Last day to apply for a leave of absence for spring semester 1993.
May 28	Last day of spring semester.
May 31	Holiday—Memorial Day. Staff holiday (no classes).

## SUMMER SESSIONS 1993

June 1-18	Term A (3 weeks)
June 1-25	Term B (4 weeks)
June 1-July 9	Term C (6 weeks)
June 1-August 20	Term Z (12 weeks)
June 21-July 23	Term D (5 weeks)
June 21-July 30	Term E (6 weeks)
June 21-August 13	Term F (8 weeks)
July 4-5	Holiday—Independence Day. Staff holiday (no classes).
July 12-August 20	Term G (6 weeks)
August 2-20	Term H (3 weeks)

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



# Schedule of Fees 1992-1993

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

FEES MUST BE PAID AT TIME OF REGISTRATION. CHECKS OR CHARGE SLIPS ACCEPTED FOR EXACT AMOUNT OF FEES. OVERPAYMENTS OF \$5.00 OR LESS ARE REFUNDED ONLY UPON REQUEST. IF YOUR CHECK OR CHARGE SLIP IS RETURNED BY THE BANK FOR ANY REASON, YOUR REGISTRATION MAY BE CANCELED AND YOU WILL BE BILLED \$30.00 (a dishonored payment charge of \$10.00 and late fee of \$20.00). PAYMENT OF FEES FOR *REGLINE* OR LATE REGISTRATION SHOULD BE MADE BY CHECK, MONEY ORDER, OR CHARGE CARD. THE UNIVERSITY RESERVES THE RIGHT TO REFUSE PAYMENT BY PERSONAL CHECK FROM THOSE INDIVIDUALS WHO HAVE PREVIOUSLY HAD ITEMS RETURNED UNPAID BY THEIR BANK. REFUNDS MAY BE APPLIED AGAINST OTHER AMOUNTS DUE THE UNIVERSITY. CHECKS TO BE MADE PAYABLE TO SDSU. DO NOT ENCLOSE CASH.

### ADMINISTRATIVE/FINANCIAL HOLDS

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

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 instructions and forms are in the Class Schedule available at the campus bookstore. Additional forms are available at the University Cashiers Office.

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

Units Attempted	Registration Fee
0 units — 6.0 units	\$366.00
6.1 or more units	\$564.00

The above fee also includes a Student Activity Fee of \$15.00, a Student Union Fee of \$63.00, a Facilities Fee of \$3.00, an Instructionally Related Activities Fee of \$15.00, and a State University Fee of either \$270.00 or \$468.00, depending on unit load.

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

The total fee paid per term will be determined by the number of units taken; including those in excess of fifteen.

No fees of any kind shall be required of or collected from those individuals who qualify for such exemption under the provisions of the Alan Pattee Scholarship Act.

Legal residents of California are not charged tuition.

### TUITION FOR NONRESIDENT STUDENT (Foreign and Domestic)

Tuition will be charged for all units attempted.

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 ..... 350.00

### 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

### 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
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.)	3.00
Lost identification card	
Photo I.D. card only	2.00
Fee receipt card only	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 or charge slip returned for any cause*	10.00
Loss of or damage to library materials	Replacement cost plus \$8.00 service charge
Commencement fee (Paid only at time of initial filing.)	16.00
Graduation evaluation and diploma fee	16.00
(You must pay this fee for each graduation date requested.)	
Diploma replacement fee	12.00
Credential application fee	60.00
Credential evaluation fee	25.00
Musical instrument repair fee	20.00
Lock and locker fee (optional)	1.00
Towel fee (optional)	2.00
Lost key fee (per key)	10.00
Miscellaneous 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 office of the student for the following courses:

Accountancy 302	
Art 225, 325, 425, 525, 526, 625, 627, 700D	
Educational Technology 532, 540, 541, 544, 553, 572, 644, 671, 775	
Family Studies and Consumer Sciences 205, 301, 302L, 405	
Geological Sciences 508	
Industrial Technology 115, 121, 131, 140, 151, 161, 171, 181, 315, 321, 331, 341, 351, 361, 371, 381, 422, 432, 443, 444, 452, 462, 472, 482, 498A-498B, 499, 517, 523, 533, 542, 553, 573, 583	

Music 151, 345.

Physical Education 116A-116B, 119A-119B, 124, 138, 145, 146, 147, 150A-150B.

### UNIVERSITY CASHIERS FEE RECEIPT CARD

Validation cards are no longer issued. 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, 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

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

### LIABILITY FOR PAYMENT

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

All continuing students participating in *RegLine* must make registration payments by the deadline as instructed. Non-*RegLine* registration payments must be made at the time of registration.

Non-resident 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 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.

### DISHONORED CHECK OR CHARGE SLIP

If your check or charge slip is returned or not accepted by the bank for ANY REASON, you will be billed for the \$10.00 dishonored payment charge and the \$20.00 late fee when applicable. Non-payment of fees or non-resident/foreign 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 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.

## Schedule of Fees

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 Annex, Room 1, 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. 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 Nonresident and Foreign Student Tuition

REFUNDS ARE NOT AUTOMATIC. WHETHER OR NOT YOU RECEIVE CLASSES THROUGH THE REGISTRATION PROCESS, YOU MUST APPLY FOR THE REFUND.

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:

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

### Refund of Parking Fees

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

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

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 and those registering for block classes through their college **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 under Public Law 894, 87-815, California state veterans' dependents, or state rehabilitation programs will have tuition and fees paid under provisions of these respective programs.

#### EXEMPTION FROM PAYING FEE INCREASE

In response to Chapter 1174, approved by the Governor on October 14, 1991, students who were required to leave school for active military service during any term commencing in the fall of 1990 through the spring of 1991 are exempted from paying any increase in fees. This exemption remains in effect for the same number of terms that the student was absent from school as a result of being called to active military service. Contact University Cashiers Office for information on applying for this exemption.

#### 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 filling period and be admitted under regular admission requirements. Participants register for classes on a space-available basis after students who pay normal fees 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, *Education Code*, Section 68121. Students qualifying for these benefits are known as Alan Pattee scholars. For further information contact the Admissions and Records Office, which determines eligibility.

#### Procedure for the Establishment or 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 (*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*, Sections 42380 and 42381). For example, the institution may withhold permission to receive official transcripts of grades from any person owing a debt. If a student believes that he or she does not owe all or part of an unpaid obligation, the student should contact the campus 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.

# Organization and Administration

The California State University  
Board of Trustees  
Office of the Chancellor

San Diego State University  
Administration  
Advisory Board  
Colleges, Schools,  
Departments, Programs  
Auxiliary Organizations



# The California State University

The individual California State Colleges were brought together as a system by the Donahoe Higher Education Act of 1960. In 1972 the system became The California State University and Colleges and in 1982 the system became The California State University. Today, all twenty campuses have the title "University."

The oldest campus—San Jose State University—was founded as a Normal School in 1857 and became the first institution of public higher education in California. The newest campus—California State University, San Marcos—began admitting students in fall 1990.

Responsibility for The California State University is vested in the Board of Trustees, whose members are appointed by the Governor. The Trustees appoint the Chancellor, who is the chief executive officer of the system, and the Presidents, who are the chief executive officers on the respective campuses.

The Trustees, the Chancellor, and the Presidents develop 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 universities in California.

System enrollments total more than 369,000 students, who are taught by some 20,500 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 campuses since 1960.

## Average Annual Cost of Education and Sources of Funds per Full-time Equivalent\* Student in The California State University

The 20 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 1991/92, including capital outlay and employee compensation increases, is \$1,788,282,238. The total cost of education for CSU, however, is \$2,128,676,028 which provides support for a projected 280,220 full-time equivalent (FTE)\* students.

The total cost of education in the CSU is defined as the expenditures for current operations, including payments made to students in the form of financial aid and all fully reimbursed programs contained

in state appropriations, but excluding capital outlay appropriations. The average cost 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 (i.e., building amortization), the average cost of education per FTE student is \$7,596. Of this amount, the average student fee support per FTE is \$1,376. The calculation for this latter amount includes the amount paid by nonresident students.

## Source of Funds and Average Costs for 1991/92 CSU Budget

(Projected Enrollment: 280,220 FTE)

	Amount	Average Cost Per Student (FTE)*	Percent
Total Cost of Education	\$2,128,676,028**	\$7,596	100.0
-State Appropriation	1,647,249,238***	5,878	77.4
-Student Fee Support	385,707,990	1,376****	18.1
-Support from Other Sources	95,718,800	342	4.5

\*For budgetary purposes, full-time equivalent (FTE) translates total head count into total academic student load equivalent to 15 units per term. Some students enroll for more than 15 units; some students enroll for fewer than 15 units.

\*\*The total cost of education does not include the amount related to lottery and the capital investment of the CSU. The estimated replacement cost of all the system's permanent facilities and equipment on the 20 campuses is currently valued at \$6.5 billion, excluding the cost of land.

\*\*\*This figure does not include the capital outlay appropriation of \$141,033,000.

\*\*\*\*The average costs paid by a student include the State University Fee, Application Fee, and Nonresident Tuition. Individual students may pay less than \$1,376 depending on whether they are part-time, full-time, resident, or nonresident students.

## Trustees of The California State University

### Ex Officio Trustees

The Hon. Pete Wilson	State Capitol
Governor of California	Sacramento 95814
The Hon. Leo T. McCarthy	State Capitol
Lieutenant Governor of California	Sacramento 95814
The Hon. Willie L. Brown, Jr.	State Capitol
Speaker of the Assembly	Sacramento 95814
The Hon. Bill Honig	721 Capitol Mall
State Superintendent of Public Instruction	Sacramento 95814
Dr. Barry Munitz	400 Golden Shore
Chancellor,	Long Beach 90802-4275
The California State University	

### Officers of the Trustees

Governor Pete Wilson	Mr. Anthony M. Vitti
President	Vice Chair
Mr. William D. Campbell	Chancellor Barry Munitz
Chair	Secretary-Treasurer

### Appointed Trustees

Appointments are for a term of eight years, except for a student Trustee, alumni Trustee, and faculty Trustee whose terms are for two years. Terms expire in the year in parentheses. Names are listed in order of appointment to the Board.

Mr. R. James Considine, Jr. (1992)  
~~Mrs. Gloria S. Hom (1992)~~  
~~Mr. J. Gary Shansby (1992)~~  
 Dr. Bernard Goldstein (1993)  
 Mrs. Marianthi K. Lansdale (1993)  
~~Mr. Dean S. Lesher (1993)~~  
 Dr. Claudia H. Hampton (1994)  
 Dr. John E. Kashiwabara, M.D. (1994)  
 Mr. William D. Campbell (1995)  
 Ms. Martha C. Fallgatter (1995)  
 Ms. Marian Bagdasarian (1996)  
 Mr. Ralph R. Pesqueira (1996)  
 Mr. Ted J. Saenger (1997)  
 Mr. Anthony M. Vitti (1997)  
 Mr. Roland E. Arnall (1998)  
 Mr. James H. Gray (1998)  
 Mr. Ronald L. Cedillos (1999)  
 Mr. Terrance W. Flanigan (1999)

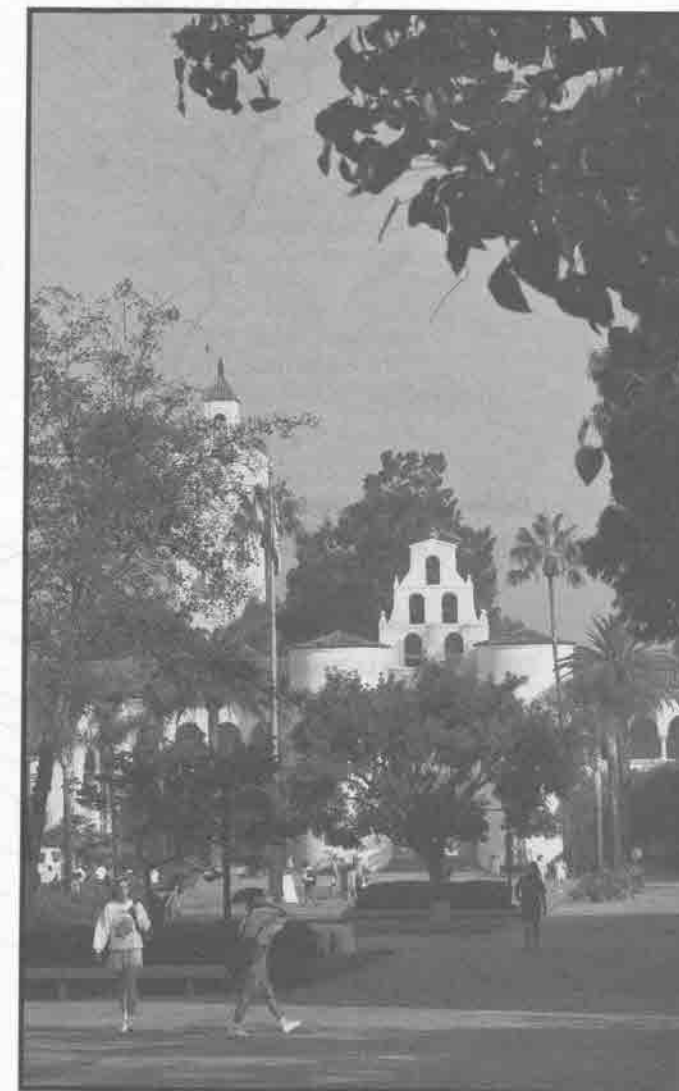
### Correspondence with Trustees should be sent:

c/o Trustees Secretariat  
 The California State University  
 400 Golden Shore, Suite 214  
 Long Beach, CA 90802-4275

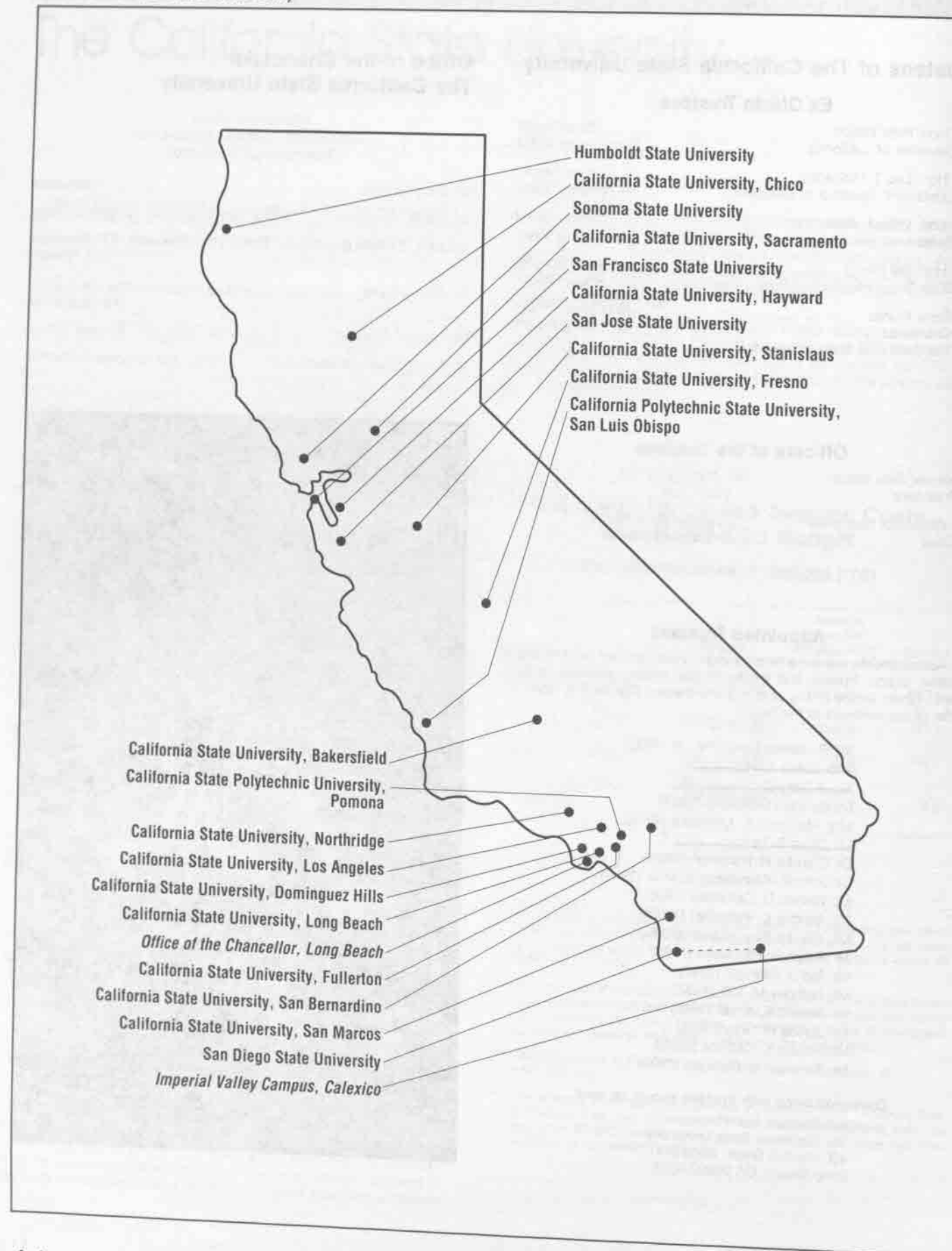
## Office of the Chancellor The California State University

400 Golden Shore  
 Long Beach, California 90802-4275  
 Telephone: (310) 985-2500

Dr. Barry Munitz ..... Chancellor  
 Dr. Lee R. Kerschner ..... Senior Vice Chancellor, Academic Affairs  
 Ms. Molly Corbett Broad ..... Senior Vice Chancellor, Administration and Finance  
 Dr. June Cooper ..... Vice Chancellor, Human Resources and Operations  
 Mr. Louis V. Messner ..... Vice Chancellor, Business Affairs  
 Mr. Bruce M. Richardson ..... Acting General Counsel







## Campuses of The California State University

California State University, Bakersfield  
9001 Stockdale Highway  
Bakersfield, California 93311-1099  
Dr. Tomás A. Arciniega, President  
(805) 664-2011

California State University, Chico  
1st & Normal Streets  
Chico, California 95929  
Dr. Robin S. Wilson, 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  
800 North State College Boulevard  
Fullerton, California 92634  
Dr. Milton A. Gordon, President  
(714) 773-2011

California State University, Hayward  
Hayward, California 94542  
Dr. Norma S. Rees, President  
(510) 881-3000

California State University, Long Beach  
1250 Bellflower Boulevard  
Long Beach, California 90840  
Dr. Curtis L. McCray, 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 State University, Northridge  
18111 Nordhoff Street  
Northridge, California 91330  
Dr. James W. Cleary, 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  
(714) 880-5000

California State University, San Marcos  
820 West Los Vallecitos Boulevard  
San Marcos, California 92069  
Dr. Bill W. Stacy, President  
(619) 752-4000

California State University, Stanislaus  
801 West Monte Vista Avenue  
Turlock, California 95380  
Dr. John W. Moore, 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  
(714) 869-7659

Humboldt State University  
Arcata, California 95521  
Dr. Alistair W. McCrone, President  
(707) 826-3011

San Diego State University  
5300 Campanile Drive  
San Diego, California 92182  
Dr. Thomas B. Day, President  
(619) 594-5000  
Imperial Valley Campus  
720 Heber Avenue  
Calexico, 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. J. Handel Evans, Acting President  
(408) 924-1000

Sonoma State University  
1801 East Cotati Avenue  
Rohnert Park, California 94928  
Dr. David W. Benson, President  
(707) 664-2880

# 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 and, with over 32,000 students, San Diego State is today one of the largest institutions in the State. In 1960, the College became a part of the newly created California State College system, under a state-wide Board of Trustees and a Chancellor. In 1971, recognizing that the institution had in fact achieved the status of a university, the Legislature renamed the system The California State University and Colleges, and shortly afterward renamed this institution San Diego State University.

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

Today, San Diego State University is a major urban comprehensive institution. It is the unquestioned leader in The California State University system. With over 32,000 students it is one of the largest universities in the western United States.

SDSU is a teaching university. Research and scholarship strengthen the instruction SDSU students receive in the classroom and laboratory. SDSU's faculty conducts more than \$40 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 as well. 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 dormitory 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 in the 1980s. Currently in the construction and planning stages are new buildings to house Student Services, a student-financed Activities Center, additional student housing, parking, and major additions to the Engineering building and the Library.

The University now offers bachelor's degrees in 76 areas, the master's in 54, and the doctorate in 8.

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 service, 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.

## San Diego State University Principal Officers of Administration

President of the University ..... Thomas B. Day  
Vice President for Academic Affairs ..... Ronald H. Hopkins  
Vice President for Business and Financial Affairs ..... William L. Erickson  
Vice President for Student Affairs ..... Daniel B. Nowak  
Vice President for University Relations and Development ..... Leslie F. Yerger  
Director of University Telecommunications ..... Paul J. Steen

## San Diego State University President's Advisory Board

Thomas F. Carter, Chair	Arthur Madrid
Frederick P. "Pat" Crowell	Richard W. Meads
Lawrence Cushman	Josiah L. Neeper
Edward Fike	Ed Quinn
Ron L. Fowler	Elizabeth Yamada
Albert Kercheval	

## Administration

Office of the President  
Executive Assistant to the President ..... Barbara W. Hartung  
Coordinators of Affirmative Action ..... Robert E. McCabe,  
Augustine S. Chavez

Office of the Vice President for Academic Affairs  
Associate Vice President for Academic Affairs ..... Frank A. Medeiros  
Associate Vice President for Faculty Affairs ..... Dean O. Popp  
Associate Vice President for Academic Counsel ..... Richard Y. Funston  
Associate Vice President for Academic Resources ..... Ethan A. Singer  
Assistant Vice President for Academic Services ..... Jane K. Smith  
Director of Academic Computing ..... Robert F. Kluge  
Director of Media Technology Services ..... William A. Broderick  
University Librarian ..... Don L. Bosseau

Chair of the Senate ..... Charles J. Stewart

Office of the Vice President for Business and Financial Affairs  
Assistant Vice President ..... Elizabeth J. Brilliant  
Assistant Vice President ..... Linda A. Stewart  
Director of Administrative and Business Services ..... Joseph Vasquez  
Director of Business Information Systems ..... Kay Messinger  
Director of Personnel Services ..... Sally F. Roush  
Director of Financial Management ..... Kenneth B. Perry  
Director of Facilities Planning and Management ..... W. Anthony Fulton  
Director of Internal Review ..... Ellene J. Anderson  
Director of Physical Plant ..... Charles Sippial  
Director of Public Safety ..... John J. Carpenter  
Director of Environmental Health and Safety ..... Richard Belanger

Office of the Vice President for Student Affairs  
Associate Vice President for Student Affairs ..... Carl F. Emerich  
Assistant Vice President for Student Affairs ..... Stephen F. Barnes  
Assistant Vice President, Budget and Personnel, Student Affairs ..... Sharon L. Edwards  
Ombudsmen, Program Coordinator ..... Susan Chappellet  
Judicial Coordinator ..... Michael A. Car  
Director of Disabled Student Services ..... Elizabeth A. Bacon  
Director of Student Resource Center ..... Garold L. Tisue

## San Diego State University

Director of Admissions and Records ..... Nancy C. Sprotte  
Director of Student Outreach Services ..... George Hutchinson  
Director of Educational Opportunity and Ethnic Affairs ..... Augustine S. Chavez  
Director of Financial Aid ..... William D. Boyd  
Director of Career Services ..... Judith G. Gumbiner  
Director of Counseling and Psychological Services ..... Douglas J. Van Sickle  
Director of International Student Services ..... Ron Moffatt  
Director of Student Health Services ..... Kevin M. Patrick, M.D.  
Director of Housing and Residential Life ..... Michael B. Hoxter  
Director of Scholarship ..... Kathleen H. Ross  
Director of Test Office ..... Michael A. Irwin  
Director of Student Athlete Academic Support Services ..... Veston Thomas

Office of the Vice President for University Relations and Development  
Director of Communications ..... Rick Moore  
Officer of Research ..... Tricia Moulton  
Director of Planned Giving ..... Richard Abbott  
Director of Major Gifts ..... David Anderson  
Director of Development and Alumni Information Services ..... Richard Taimo  
Director of Alumni/Annual Fund ..... Fred L. Miller  
Director of Intercollegiate Athletics ..... Robert McCray  
President of Aztec Athletic Foundation

## Colleges, Schools, Departments, and Programs

Chairs  
COLLEGE OF ARTS AND LETTERS ..... Paul J. Strand, Dean  
Associate Dean ..... Patricia Huckle  
Assistant Dean for Community Development ..... Barbara London  
Assistant Dean for Student Affairs ..... Donald D. Basile

Departments  
Africana Studies ..... Norman E. Chambers  
American Indian Studies ..... Victor Goldkind  
Anthropology ..... E. N. Genovese  
Classics and Humanities ..... Rafor D. Boddy  
Economics ..... Carey G. Wall  
English and Comparative Literature ..... Edith J. Benkov  
French and Italian Languages and Literatures ..... Ernst C. Griffin  
Geography ..... Julian H. Wulbern  
German and Russian Languages and Literatures ..... David V. DuFault  
History ..... Charlotte Webb  
Linguistics and Oriental Languages ..... Isidro Ortiz  
Mexican American Studies ..... Thomas S. Weston  
Philosophy ..... Louis M. Terrell  
Political Science ..... Christine R. Downing  
Religious Studies ..... James L. Wood  
Sociology ..... Michael S. Doyle  
Spanish and Portuguese Languages and Literatures ..... Kathleen B. Jones  
Women's Studies

Programs  
Academic Skills Center ..... Donald D. Basile  
Africa and Middle East Studies ..... Issa J. Khalil  
American Studies ..... Dan D. McLeod  
Asian Studies ..... Marugappa C. Madhavan  
European Studies ..... Leon Rosenstein  
International Business ..... Alvord G. Branan  
Judaic Studies ..... Lawrence Baron  
Latin American Studies ..... Thomas M. Davies, Jr.  
M.A., Liberal Arts ..... Howard I. Kushner  
Russian and East European Studies ..... Leland A. Fetzer  
Social Science ..... Albert C. O'Brien  
Urban Studies ..... Roger W. Caves



**COLLEGE OF BUSINESS ADMINISTRATION** ... Allan R. Bailey, Dean  
Associate Dean, Academic Affairs ... Thomas M. D. Warschauer  
Associate Dean, External Relations ... Harold K. Brown  
Assistant Dean for Student Affairs ... Patricia L. Dintrone

**Departments and Schools**  
Accountancy ... Robert J. Capettini  
Finance ... Nikhil P. Varaiya  
Information and Decision Systems ... James R. Lackritz  
Management ... F. Neil Brady  
Marketing ... George E. Belch

**COLLEGE OF EDUCATION** ... Ann I. Morey, Dean  
Associate Dean ... Gordon M. Thompson (Acting)  
Associate Dean for Faculty Development  
and Research ... Margie K. Kitano  
Assistant Dean ... Martin J. Block  
Doctoral Programs ... William E. Piland

**Departments and Schools**  
Administration, Rehabilitation and Postsecondary  
Education ... Fred R. McFarlane  
Counseling and School  
Psychology ... Carol A. Robinson-Zañartu  
Educational Technology ... Patrick J. Harrison  
Policy Studies in Language and Cross-Cultural  
Education ... Natalie A. Kuhlman  
Special Education ... Patricia T. Cegelka  
Teacher Education ... George L. Mehaffy

**COLLEGE OF ENGINEERING** ... George T. Craig, Dean  
Associate Dean ... Nihad A. Hussain  
Director of Special Projects ... René Wernicke  
Assistant Dean for Student Affairs ... Fang-Hui Chou

**Departments**  
Aerospace Engineering and Engineering  
Mechanics ... Nagy Nosseir  
Civil Engineering ... V. Miguel Ponce  
Electrical and Computer Engineering ... Leonard R. Marino  
Mechanical Engineering ... John G. Pinto

**COLLEGE OF HEALTH AND  
HUMAN SERVICES** ... Peter A. Dual, Dean  
Associate Dean ... Dolores A. Wozniak  
Assistant Dean for Student Affairs ... Li-rong Lilly Cheng

**Departments and Schools**  
Communicative Disorders ... Steven J. Kramer  
Graduate School of Public Health ... F. Douglas Scutchfield  
Health Science ... Karen L. Senn  
Nursing ... Patricia Wahl  
Social Work ... Anita S. Harbert

**Programs**  
Interdisciplinary Center for Health  
and Human Services ... Kathleen Hoffer  
University Center on Aging ... E. Percil Stanford

**COLLEGE OF PROFESSIONAL STUDIES  
AND FINE ARTS** ... Joyce M. Gattas, Dean  
Associate Dean for Budget and Planning ... Darrell L. Pugh  
Assistant Dean for Academic Affairs ... Myron W. Lustig  
Assistant Dean for Student Affairs ... Carole A. Robasciotti

**Departments and Schools**  
Aerospace Studies ... Lt. Col. Jeffrey C. Carr  
Art ... Fredrick J. Orth  
Drama ... Alicia M. Annas  
Family Studies and Consumer Sciences ... Francine Deutsch  
Industrial Technology ... Gerald D. Bailey  
Journalism ... Glen M. Broom  
Military Science ... Lt. Col. Richard K. Williams  
Music ... Martin J. Chambers

Naval Science ... Capt. George P. Love III  
Physical Education ... B. Robert Carlson  
Public Administration and Urban Studies ... Louis M. Rea  
Recreation, Parks and Tourism ... Gene G. Lamke  
Speech Communication ... Janis F. Andersen  
Telecommunications and Film ... John P. Witherspoon

**Programs**  
Mass Communication ... David M. Dozier  
Urban Studies ... Roger W. Caves

**COLLEGE OF SCIENCES** ... Donald R. Short, Jr., Dean  
Associate Dean ... James W. Neel  
Associate Dean ... Rebecca B. Bryson  
Associate Dean for External Relations ... Gordon L. Shackelford  
Assistant Dean for Student Affairs ... Celia L. Marshak

**Departments**  
Astronomy ... Ronald J. Angione  
Biology ... Carol A. Barnett  
Chemistry ... Morey A. Ring  
Geological Sciences ... Michael J. Walawender  
Mathematical Sciences ... John D. Elwin  
Natural Science ... Robert P. Metzger  
Physics ... Stephen B. W. Roeder  
Psychology ... Frederick W. Hornbeck

**Programs**  
Energy Studies ... Alan R. Sweedler  
Molecular Biology ... A. Stephen Dahms  
Oceanography ... James H. Mathewson

**IMPERIAL VALLEY CAMPUS** ... David Ballesteros, Dean  
Associate Dean ... Pamela M. Balch  
Associate Dean ... Dana W. Murphy  
Assistant Dean for Student Affairs ... Cynthia D. Flores  
Academic Specialist ... Kathleen Russum

**OFFICE OF THE DEAN OF THE  
GRADUATE DIVISION AND RESEARCH** ... James W. Cobble, Dean  
Associate Dean ... Penny L. Wright (Acting)  
Associate Dean ... Lawrence B. Feinberg  
Assistant Dean ... Arthur W. Schatz

**OFFICE OF THE DEAN OF  
UNDERGRADUATE STUDIES** ... Carole A. Scott  
Associate Dean ... Olita D. Harris  
Associate Dean ...  
Assistant Dean ...  
for Special Programs ... Anne-Charlotte Harvey

**OFFICE OF THE DEAN OF  
EXTENDED STUDIES** ... William P. Locke, Dean  
Associate Dean ... Paula Kelly  
Assistant Dean for Special Sessions  
and Extension ... Larry G. Cobb  
Executive Director of Professional Development ... Peggy Covert  
Director of American Language Institute ... William Gaskill  
Director of International Training Center ... Miguel A. Cardenas  
Director of Retired Adults Program ... Nancy Graves

## Auxiliary Organizations

**San Diego State University Foundation**  
President ... Thomas B. Day  
Vice President ... James W. Cobble  
General Manager ... Harry R. Albers

**Aztec Shops, Ltd.**  
General Manager ... Harvey J. Goodfriend

**The Associated Students of San Diego State University**  
President ... Joe Horiye  
Executive Director ... Dan Cornthwaite

# General Information

General Information  
Student Services  
Financial Aid  
Scholarships  
Special Programs and Services



# General Information

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 fully support this policy.

Refer to the General Regulations section for the California State University policy pertaining to nondiscrimination.

## Institutional and Financial Assistance Information

The following information concerning student financial assistance may be obtained from the Financial Aid Office, Student Services Annex, Room 7, 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 applications;
4. The rights and responsibilities of students receiving financial assistance; and
5. The standards the student 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, 594-6323.

The following information concerning the cost of attending San Diego State University is available from the Financial Aid Office, Student Services Annex, Room 7, 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 Annex, Room 1, 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 Annex, Room 7, 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;
4. Data regarding student retention at San Diego State University and, if available, the number and percentage of students completing the program in which the student is enrolled or expresses interest; and
5. The names of associations, agencies, or governmental bodies which accredit, approve, or license the institution and its programs, and the procedures under which any current or prospective student may obtain or review upon request a copy of the documents describing the institution's accreditation, approval, or licensing.

Information regarding special facilities and services available to handicapped students may be obtained from the Director of Disabled Student Services, Student Services Annex, Room 5, 594-6473.

## 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.

## 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.

## Honor Societies

An academic honor society is a campus organization that values and reinforces the high academic standards of the University and selects its members, at least in part, on the basis of superior academic performance.

### Multidisciplinary Academic Honor Societies

**Golden Key** is a national honor society whose purpose is to recognize and encourage scholastic achievement and excellence in all undergraduate fields of study, to unite with collegiate faculties and administrators in developing and maintaining high standards of education, to provide economic assistance to outstanding members by means of scholastic achievement and altruistic conduct through voluntary service. Golden Key National Honor Society has 161 active chapters.

Membership is open to juniors and seniors with a minimum GPA of 3.40 who have completed their last 24 units at SDSU.

The faculty adviser is Dr. E. Nicholas Genovese, Department of Classics and Humanities.

**Mortar Board** is a national honor society for college seniors. The society recognizes in its membership the qualities of superior scholastic ability, outstanding and continual leadership, and dedicated service to the University community. The SDSU chapter of Mortar Board had its beginning in 1932 as Cap and Gown. In 1965 the local honorary was recognized as a member of the national organization. Nationwide there are over 200 active chapters with a membership in excess of 138,700.

Mortar Board membership means active involvement to benefit the campus and community. Current projects include presentation of annual emeritus faculty and staff Outstanding Service Awards to recognize individuals whose work contributed significantly to this university; service as volunteers in the annual KPBS fund drive; service as mentors to students at Granger Junior High School; and the sale of the Mortar Board Datebook - a daily planning calendar and information booklet for the university community.

To be considered for election to membership, students must have senior standing for the fall semester with an overall GPA of 3.00 and have participated and excelled in the areas of scholarship, service, and leadership. Admission to Mortar Board is highly competitive and is restricted to no more than 40 students per year.

Advisers are Dr. David Johns, Professor of Political Science, Dr. Barbara Hartung, Executive Assistant to the President, and Kathleen Ross, Director of Scholarships. The administrative liaison is Dr. Jane K. Smith, Assistant Vice President for Academic Services (HH-114).

**Phi Beta Kappa** is a national honor society which recognizes academic excellence in undergraduate students who are usually enrolled in the College of Arts and Letters or the College of Sciences and who are or will be eligible for the Bachelor of Arts or Bachelor of Science degree. To be considered for election, students must have a high overall GPA (3.5 minimum), have completed a minimum of 45 upper division units at SDSU, have completed a course in university-level mathematics, and have attained proficiency in a foreign language at the level of a third semester university course. Significant weight is also given to the breadth and depth of the students' coursework as evidenced by the number, variety, and seriousness of upper division courses taken outside the major, together with the grades earned; no more than 12 units may have been taken Cr/NC. Election is by vote of the faculty members of Nu Chapter (SDSU) of Phi Beta Kappa. For information, contact Dr. Anne-Charlotte Harvey, Department of Drama or Dr. Barbara B. Hemmingsen, Department of Biology.

**Phi Eta Sigma** was established in 1923 to encourage and reward high scholastic achievement among freshmen in institutions of higher learning. Activities of the organization include a topical lecture and discussion series, social events, and national convention activities. New members are acknowledged during the yearly initiation ceremony which also includes awards to faculty for outstanding teaching and the encouragement of undergraduate scholarship. Membership is open to students who achieve at least a 3.50 GPA in either semester of their freshman year.

The faculty adviser is Carl F. Emerich, Associate Vice President, Student Affairs.

**Phi Kappa Phi** was founded in 1897 to promote the pursuit of excellence in all fields of higher education and to recognize outstanding achievement by students, faculty, and others through election to membership, and through various awards for distinguished achievement. Activities of the organization include the awarding of two thousand dollars in scholarships annually, the recognition of outstanding faculty and students through nominations for national awards and scholarships, fall and spring initiation banquets, and sponsorship of the SDSU Emeritus Lecture Series. The national organization publishes a newsletter and a scholarly journal and sponsors the National Scholar and National Artist awards and the Graduate Fellowship program.

Membership is based on, but not limited to, the following criteria: Juniors must have completed a minimum of 75 units with a GPA of 3.75; seniors must have completed a minimum of 90 units with a 3.75

## General Information

GPA overall; graduate students must have completed a minimum of 15 units of graduate work at SDSU and have a GPA of 3.90 or better in graduate work.

President of the society is Dr. E. Nicholas Genovese, Department of Classics and Humanities.

### Disciplinary Honor Societies

The national honor societies at San Diego State University which accord recognition to students who demonstrate superior scholarship and leadership in specific academic fields include:

Alpha Epsilon Delta (Medical)  
Alpha Kappa Delta (Sociology)  
Beta Alpha Psi (Accountancy)  
Chi Epsilon (Civil Engineering)  
Epsilon Pi Tau (Industrial Studies)  
Eta Kappa Nu (Electrical Engineering)  
Eta Sigma Gamma (Health Science)  
Eta Sigma Phi (Classics)  
Financial Management Association  
Kappa Delta Pi (Education)  
Omicron Delta Epsilon (Economics)  
Phi Alpha Theta (History)  
Phi Beta Delta (International Studies)  
Phi Upsilon Omicron (Family Studies and Consumer Sciences)  
Pi Kappa Lambda (Music)  
Pi Lambda Theta (Education)  
Pi Tau Sigma (Mechanical Engineering)  
Psi Chi (Psychology)  
Sigma Alpha Iota (Music)  
Sigma Delta Pi (Spanish)  
Sigma Gamma Tau (Aerospace Engineering)  
Sigma Iota Epsilon (Management)  
Sigma Pi Sigma (Physics)  
Sigma Theta Tau (Nursing)  
Tau Beta Pi (Engineering)

## 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 (Clinical Psychology)  
American Speech-Language-Hearing Association, Educational Standards Board and Professional Services Board  
California Commission on Teacher Credentialing  
Council on Education of the Deaf  
Council on Education for Public Health  
Council on Rehabilitation Education  
Council on Social Work Education  
Foundation for Interior Design Education Research



National Association of Schools of Art and Design  
National Association of Schools of Music  
National Association of Schools of Public Affairs and Administration  
National Association of Schools of Theatre  
National Council for Accreditation of Teacher Education  
National League for Nursing  
National Recreation and Parks Association

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. Several College of Business Administration programs 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.

The Didactic Program in Dietetics in the School of Family Studies and Consumer Sciences is approved by the American Dietetics 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.

## Degrees and Certificates

San Diego State University offers the following degrees and certificates:

Bachelor of Arts  
Bachelor of Science  
Bachelor of Music  
Bachelor of Vocational Education  
Master of Arts  
Master of Science  
Master of Business Administration  
Master of City Planning  
Master of Fine Arts (Art, Creative Writing, Drama)  
Master of Music  
Master of Public Administration  
Master of Public Health  
Master of Social Work  
Doctor of Philosophy in Biology  
Doctor of Philosophy in Chemistry  
Doctor of Philosophy in Clinical Psychology  
Doctor of Philosophy in Ecology  
Doctor of Philosophy in Education  
Doctor of Philosophy in Engineering Sciences/Applied Mechanics  
Doctor of Philosophy in Geography  
Doctor of Philosophy in Public Health

Nondegree programs leading to certificates in Accounting, Applied Linguistics and English as a Second Language (ESL), Art (Imperial Valley Campus only), Bilingual (Spanish) Special Education, Business Administration (Imperial Valley Campus only), Children's Literature, Early Intervention Specialist, Family Life Education, Geographic Information Systems, Human Services Paraprofessional, Instructional Technology, Introductory Mathematics, Language Development Specialist, Personal Financial Planning, Preventative Medicine Residency, Professional Services Bilingual/Bicultural, Public Administration (Imperial Valley Campus only), Recombinant DNA Technology, Rehabilitation Administration, Single Subject Mathematics, Spanish Court Interpreting (Imperial Valley Campus only), Spanish Translation Studies, Supported Employment and Transition Specialist, Teaching the Emotionally Disturbed, Technical and Scientific Writing, and United States-Mexico Border Studies are offered.

## Types of Curricula Offered

San Diego State University offers the following types of curricula:

**Undergraduate Curricula.** Undergraduate curricula provide the following opportunities for study:

(1) **Liberal arts and sciences:** Curricula in the academic major fields, leading to the Bachelor of Arts degree in liberal arts and sciences.

(2) **Applied arts and sciences:** Curricula in major fields leading to the Bachelor of Science, Bachelor of Arts or Bachelor of Music degree in applied arts and sciences.

(3) **Professional curricula:** The College of Business Administration offers the Bachelor of Science degree in business administration with majors in ten fields; the College of Engineering offers the Bachelor of Science degree in engineering with majors in four fields; and the College of Education offers curricula in teacher education leading to graduate credentials at all levels of public school teaching.

The Department of Communicative Disorders offers curricula leading to graduate credentials in Education of the Deaf and Deaf-Blind; clinical certification and graduate credentials in speech pathology, audiology and communicative disorders.

The School of Nursing offers the Bachelor of Science degree and the Master of Science degree in Nursing and offers a curriculum leading to registered nurse licensure and public health nurse credential.

(4) **Preprofessional and nondegree curricula:** Programs are offered in allied health, pre dentistry, prelegal, premedical, and pre-veterinary leading to transfer to professional schools. Air Force, Army, and Naval ROTC programs are also available.

**Graduate Curricula.** The Graduate Division offers curricula leading to the Master of Arts and Master of Science degrees in a wide variety of fields, the Master of Business Administration, the Master of City Planning, the Master of Fine Arts in Art, the Master of Fine Arts in Creative Writing, the Master of Fine Arts in Drama, the Master of Music, the Master of Public Administration, the Master of Public Health, the Master of Social Work, and the Doctor of Philosophy in biology, chemistry, clinical psychology, ecology, education, engineering sciences/applied mechanics, geography, and public health.

# Student Services

## Division of Student Affairs

The Division of Student Affairs is an integral part of the active learning process, providing cocurricular programming, opportunities for personal development, and support services necessary for students to successfully respond to the many challenges of the university experience. Students are encouraged to become aware of the various programs and departments included in this section and to take the initiative in accessing these services.

Additional student service offices which are included in the Division of Student Affairs but not listed here include Admissions and Records (*see* Index), Financial Aid and Scholarships (*see* Financial Aid/Scholarships section), and Judicial Procedures (*see* Index).

## Campus Tours

5170 College Avenue, (619) 594-6868

Tours of the campus are conducted by the SDSU Ambassadors, a student-run organization devoted to providing excellent volunteer services. The Ambassadors have been carefully selected and trained in order to represent SDSU in both campus and community events. To find out how to become an Ambassador, or for information about scheduling campus tours, please contact the Campus Tours office.

## Career Services

Student Services Building, Room 1200, (619) 594-6851.

Career Services assists students in the exploration of their skills, interests and values as they decide on a major and develop a career plan. An extensive Career Library is available to provide information on potential employers as well as current open positions for graduates.

A centralized listing of part-time jobs for on and off campus is available through the Student Employment section of Career Services. Information is provided on Cooperative Education and the Career Experience programs both of which offer work experience and internships in selected fields.

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 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.

## 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.

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 Self Help 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 8:00-4:30 p.m., Monday through Friday.

## Disabled Student Services (DSS)

Student Services Annex, (619) 594-6473; TDD: 229-2929

Disabled Student Services provides support services for students with mobility limitations, learning disabilities, hearing or visual impairments, and for students interested in programs for the disabled. 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 and accessible housing in the campus area — 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.

## Educational Opportunity/Ethnic Affairs (EOP)

Student Services Building, Room 2209, (619) 594-6396

The Office of Educational Opportunity/Ethnic Affairs (EOP) at SDSU has helped many students with the potential for academic success and who are from low-income backgrounds enroll in and graduate from college. EOP assists students who have historically been underrepresented in higher education institutions. It is the purpose of the program to support those students who have the interest and motivation to obtain



a college education, but who have not been able to realize their full potential due to economic, educational, or cultural factors.

Student services provided by EOP include preadmission counseling, summer program, priority registration, academic advising, personal counseling, referral services, individual tutoring, study groups, academic skills courses, work study, and multicultural activities. Financial aid is available through the Financial Aid office to those students with demonstrated economic need.

To apply for the program, students must complete the CSU Application for Admission and **check the appropriate box for EOP**. Supplemental application forms will then be sent to students indicating interest. For assistance in filling out the application forms, or for further information about the program, please contact one of the EOP recruiters in the Student Outreach Services office, (619) 594-6966.

## Health Services

Corner, Campanile Drive and Hardy Avenue, (619) 594-5281

One of the benefits provided to regularly registered SDSU students is quality medical care at little or no cost. Fees have been prepaid through regular registration fees. Some services, for example annual Pap smears and pharmacy, require a minimal fee. Charges associated with these services are usually dramatically lower than those found elsewhere. This care is provided at Student Health Services, an on-campus center where over 75 health care providers offer a wide range of programs and services. Services include:

Care by physicians board certified in family practice, gynecology, pediatrics, internal medicine, orthopedics, psychiatry, and radiology — Primary care nurse practitioners — Nursing, x-ray, and laboratory staff — Choice of a designated family practitioner to monitor health care needs — A pharmacy which dispenses at reduced cost most of the medications prescribed by Health Services staff — Workshops in family planning, sexuality, weight control, nutrition, and other health related topics, as well as individual counseling and campuswide 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 for admission is proof of **at least one** immunization for measles given after the first birthday. **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 free measles and rubella immunizations in Student Health Services. For more information, call (619) 594-5281.

### 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 may visit Student Health Services on a future or same-day appointment basis. Those in need of urgent care may walk into Student Health Services for immediate attention by the designated urgent care staff. Those without acute or urgent problems are encouraged to make an appointment. Student Health Services is open twelve months of the year. During the fall and spring semesters, the clinic is open from 8:00 a.m. to 5:00 p.m., Monday through Friday. During intersession and summer, clinic hours vary. It is best to call for hours of service. All medical care provided at Student Health Services is **strictly confidential**. No one, on or off campus, has access to medical record information without written permission from the student.

## Student Health Advisory Board

Students can participate in the clinic activities and offer important feedback about services through membership on the Student Health Advisory Board (SHAB) sponsored by 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

Under Trustee policy, first aid or urgent medical care is provided to students, faculty, staff, and campus guests for accidents and injuries occurring on or near the University. Accidents requiring emergency treatment and/or transportation to Health Services, 5300 Campanile Drive, or a local hospital should be reported immediately to the SDSU Department of Public Safety, telephone 594-5955.

SDSU students are treated by the University as adults. Accordingly, students are responsible for their own safety and health in connection with participation in campus activities, 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

Each of the various housing alternatives available to SDSU students offers unique advantages. SDSU considers the student residence an integral part of the educational experience. Students are strongly encouraged to live on-campus at least two years while studying at SDSU. Since family housing is not available on campus, off-campus housing serves the needs of families, part-time students, and others. For assistance in finding housing most appropriate for each student, the Housing and Residential Life office is the campus resource.

## Residence Halls

On-campus residence halls are conveniently close to campus facilities and offer students a 10 to 15 percent better chance of doing well in college according to research done by the American Council on Education.

Residence halls offer a variety of accommodations including double rooms, single rooms, "super" single rooms, apartments, special interest housing for graduate students, international students, extended quiet, multicultural, academic majors and others.

There are nine coeducational residence halls on campus offering students various living situations and meal plans. Zura Hall is a nine-story highrise with 594 residents, and Tenochca Hall has eight floors for 424 students. Five other halls are three-story, red-brick buildings accommodating 223 students each. Chapultepec Hall will open in 1992 for 590 students on eleven floors. These halls provide sleeping and study facilities on a two-students-per-room basis, with a small number of single rooms available in Zura Hall. Villa Alvarado is an apartment-type facility housing 354 students in furnished two-bedroom suites. Three food service plans are available for residents. Student government within the residence halls provides residents an opportunity to run their own programs, gain leadership experience, and maintain standards of behavior.

For the 1991-92 year, the cost for room and board was \$4,070 (14-meal plan, double occupancy). Fees for Villa Alvarado, which does not include board or utilities, were \$3,042 for the academic year. Rates for all halls are reviewed and adjusted annually to meet cost-of-living increases.

**TO REQUEST AN APPLICATION FOR HOUSING, STUDENTS SHOULD TELEPHONE OR WRITE TO THE HOUSING AND RESIDENTIAL LIFE OFFICE AT THE UNIVERSITY PRIOR TO ADMISSION TO SDSU OR THEREAFTER.**

Housing applications are available in November and thereafter for the fall term of the upcoming academic year. For the spring semester, applications are available in September and thereafter. Confirmation of a room reservation is made after the following requirements have been met: (a) the student has been admitted to the University; (b) the contract has been returned to the Housing and Residential Life office; and (c) the first payment has been received as specified, and the contract is returned. Though consideration will be given to a student's request for an individual hall and roommate, a specific assignment cannot be guaranteed.

During the Summer Sessions, rooms are available on a receipt-of-check date priority. Full payment must accompany the application. Students should contact the Housing and Residential Life office in mid-April for information concerning summer session housing.

## Off-Campus Housing

Off-campus housing accommodations in the San Diego area include apartments, houses, rooms in private homes, and privately owned residence halls near campus. Listings of available dwellings and also of students seeking roommates are located next to the Housing and Residential Life Office. Assistance is also available for students signing leases or involved in landlord-tenant conflicts.

## 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 13 residential sororities and 18 residential fraternities from which to choose. Chapter houses provide accommodations for about 25 percent 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.

## International Student Services

Scripps Cottage Porch, (619) 594-5258

More than 650 international students from 75 countries attend SDSU. Through the support provided by International Student Services, 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.

International Student Services 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 ISS 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 ISS Calendar of Intercultural Activities. These include the International Coffee Hour, the Whole Earth Dialogue Series, the International Festival, and the Intercultural Exchange Camp.

## Ombudsmen

Aztec Center 168, (619) 594-6578

Becoming a student at SDSU also means becoming a member of a special community which includes students, faculty, staff, and administrators. As a member of this community, students are responsible for knowing and complying with established rules and regulations.

The Ombudsmen 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 sessions) after the semester during which the student was allegedly aggrieved.

## Student-Athlete Academic Support Services

Professional Studies and Fine Arts 147, (619) 594-4743

Academic assistance for athletes is handled through the Office of Student-Athlete Academic Support Services. The office monitors and records athletes' academic progress, and provides advising, supervised study halls, and tutoring for SDSU athletes.

## Student Outreach Services

Student Services Building, Room 2307, (619) 594-6966

Student Outreach Services (SOS) is SDSU's official representative in the community beyond the University, linking SDSU with other schools, colleges, and communities within the state. Through the programs which make up Student Outreach Services—School and College Relations, the recruitment component of EOP, and Student Affirmative Action—important facts about University life are provided to prospective students. For guidance in college selection and preparation, or information about admissions requirements, academic programs, or other student services, the SOS office is the campus resource.

Specific services provided by the staff of the Student Outreach office include:

Visits to high schools and community colleges and meetings with counselors, students, and parents — Assistance to SDSU colleges, schools, and departments in providing information



about their programs to prospective students — Distribution of printed information about the University to students, teachers, counselors, and other members of the community — Support for academic partnerships between the University and junior high schools, secondary schools, and community colleges — Administration of the Student Affirmative Action program which provides recruitment for non-EOP students from underrepresented ethnic groups.

Student Outreach Services invites all prospective students and interested members of the community to take advantage of the services and programs offered. To find out how, please contact the Student Outreach Services office.

## Student Resource Center

5170 College Avenue, (619) 594-5221

The Student Resource Center values the ability to respond to the needs of students and their families. At the SRC, questions will be answered or referrals made. Beginning with SRC's new Student Orientation Programs, SRC supports students throughout their years at SDSU in achieving academic goals and in enhancing the University experience. Students may visit the SRC for the following:

### (1) Programs and services

- Academic Information Day — assistance with course selection, G.E. and competencies requirements, and registration.
- CONTACT — introduction to University programs, services and opportunities for involvement on campus.
- Annual Leadership Institute — workshops and seminars presented to students and advisers from universities throughout the Western United States.
- Emerging Leaders — a series of introductory leadership workshops offered to new freshmen who want to get actively involved in campus life.
- Leadership and personal growth workshops — sessions on a wide variety of topics are presented by SRC staff as requested by student groups.
- Quest for the Best Vice Presidential Awards — this student service award is presented annually to ten students and the faculty they nominate.
- Ambassadors — SDSU's official student representatives.
- Campus tours.
- Student internships for class credit.
- University of New Hampshire Exchange program.

### (2) Information services

- General campus and academic information.
- Publications for parents, students, visitors, businesses, sponsors, etc. Two quarterly newspapers, *Parenthetically Speaking* for parents and families of SDSU students, and *Student Lifelines* for students featuring a campus calendar, are published by the SRC. To subscribe (home delivery), call 594-5221.
- Response to mail inquiry.
- Notary services.

### (3) Student Activities

- On campus status for clubs and organizations.
- Implementation of University policies and procedures with regard to student activities.
- Approval of all on-campus clubs' activities, including fundraising events.

### (4) Parent/family and community programs and development

- Parents' Association programs.
- Promotions and fundraising to directly support student programs.

### (5) Student services' research and evaluation

- Surveys of student needs, attitudes, and behaviors.
- Evaluation of SRC and other Student Affairs programs and services.

## Test Office

Library East 406, (619) 594-5216

The Test Office is an important resource for the entire University community, serving both students and faculty through administering tests for the purpose of admission, class placement, competency for graduation, licenses, credentials, and career planning. A library of many different tests is maintained for use by faculty and students in testing classes, and test scoring and analysis services are provided for classroom tests.

Test dates for San Diego State University competency and placement tests are listed in the Special Tests section of the current Class Schedule and advance reservations as well as fee 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, and career planning must contact Career Services or Counseling & Psychological 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

Administration 121, (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.

# Financial Aid and Scholarships

## 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, refer to the following information on Scholarships. 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, Student Services Annex, Room 7, 594-6323. A financial aid brochure which describes the programs available and the eligibility requirements is available from the Financial Aid Office.

### Applying for Aid

Applicants who want to be considered for all types of state and federal financial aid should apply as soon after January 1 as possible by completing a *Student Aid Application for California (SAAC)*. Since new California grant program applicants must apply by March 2, we strongly encourage all applicants to apply by this date.

Applications are reviewed, and funds awarded on a "first completed, first awarded" basis. Applications are reviewed, and awarded throughout the year based on available funding.

### 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:

#### Estimated Expenses for the 1992-93 Academic Year

	Living off Campus	Living on Campus	Commuting from Home
Registration fee for materials, service, student activity, student union, facilities	\$ 1118	\$1118	\$1118
Books and supplies	558	558	558
Room and board	6420	4540	1512
Transportation	724	610	724
Personal	1736	1736	1736
Total	\$10,556	\$8562	\$5648

In addition to the registration fee, foreign students and out-of-state students will pay tuition of \$246.00 per unit in 1992-93. All fees and costs are subject to change without notice.

### California Grants and California State Fellowships

California residents may apply for grants administered by the California Student Aid Commission (CSAC), P.O. Box 942845, Sacramento, California 94245-0845. To apply, complete all sections of the *Student Aid Application for California (SAAC)*. March 2 is the deadline for all aid programs administered by the CSAC.

## Scholarships

Scholarships reward academic excellence and are not generally based on financial need. For financial aid not based on academic record, refer to the preceding information on Financial Aid. All students, regardless of nationality, citizenship, or residency status, are eligible, with appropriate grade point average, to apply for scholarships.

## Scholarships and Fellowships Administered by Departments

Students receive scholarships, fellowships, grants, or stipends through the various departments. Federal, state, and private industry support programs of this nature are largely directed to students doing graduate work or to students preparing for some special field of work. Students who have decided on some particular area of study should check with an adviser in the department of their major to determine what scholarship, fellowship, grant, or stipend support might be available to them.

### Fellowships for Graduate School

As a general rule, students planning graduate work should inquire about graduate fellowship support from the graduate school to which they are applying. The San Diego State University Scholarship Office receives the annual announcements on most national awards including Fulbright, Ford, Rotary, Rhodes, and Marshall scholarships. Students interested in fellowships of this type are encouraged to discuss their applications with members of the San Diego State University faculty who have themselves in the past received these fellowships. Scores from the Graduate Record Examination, Law School Admission Test, Admission Test for Graduate Schools of Business, Dental Admissions Test, or Medical Colleges Admission Test, as appropriate, are required in applying for most fellowships; therefore students should take the appropriate test early in the fall of their senior year. Information concerning these tests may be obtained from the San Diego State University Test Office, LE-406, (619) 594-5216.

## San Diego State University Scholarships Scholarship Philosophy and Eligibility Requirements

A scholarship is a monetary award given to outstanding students to recognize them for their academic excellence, leadership, achievements and promise.

They are provided by private donors, corporations, professional associations and alumni.

High school seniors and undergraduate or graduate students may apply for scholarships awarded by their major department and/or the San Diego State University Scholarship Committee.

Students apply on their own initiative for the University Scholarship Program. Some scholarships listed require special applications and/or have a specific selection process.

Competition is based on outstanding academic achievement, campus and extracurricular activities, employment, and an essay. Undergraduates must have a 3.50 overall GPA or a 3.70 in the last 30 units of university work. Graduate and postbaccalaureate students must have a 3.50 overall 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. High school seniors must have an unweighted 3.50 cumulative GPA (excluding physical education and military science) for all work completed in the first seven semesters.

Applications for the SDSU scholarship program are available in the Scholarship Office, from all department secretaries, and in San Diego County high school and community college counseling offices. You may also write or call the SDSU Scholarship Office, San Diego, CA 92182-0587; telephone (619) 594-6180. Send a self-addressed, stamped envelope and note if you are currently a college or high school student. Long distance return calls are no longer budgeted.

Applications are available each year during one application period, November through mid-February. The SDSU scholarship application must be filed or postmarked not later than the established mid-February deadline. Students need to submit only one application for the 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. There is no limit to the number of scholarships for which a student may be considered. **Note:** There are up to ten Freshmen Scholar Awards available only to entering freshmen. The \$4,000 scholarship is awarded each semester for up to four years of undergraduate study providing the recipient maintains a minimum 3.50 grade point average.

In addition to SDSU scholarships, the Marshall, Fulbright, Rhodes, 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 in late spring or September.

## COLLEGE OF ARTS AND LETTERS

### Africana Studies Department

African American  
Dewey and Jessie E. Mosby  
Shirley Wade Thomas Memorial  
Danny L. Scarborough Memorial

### Anthropology Department

Norton Allen

### Classics

Martha Biehl Memorial  
Friends of Classics Charter  
Viola Granstaff Memorial

### Economics Department

CPE, Alumni  
CPE, Weiss  
Economics Intern Program

### English and Comparative Literature Department

Creative Writing  
John D. Dickinson Memorial  
Mindy Gates O'Mary Memorial  
Kenneth and Dorothy Stott Memorial

### Geography Department

William Finch Memorial  
Lauren C. Post Memorial

### History Department

Andrew Appleby Memorial  
Katherine Ragen Memorial  
Lionel Ridout Memorial  
Kenneth and Dorothy Stott  
Jon Sutherland Memorial

### Religious Studies Department

James E. Sparks Memorial

### Spanish Department

Raymond D. Weeter

### Women's Studies Department

Friends of Women's Studies  
Graduate Fellowship Fund

### College of Arts and Letters Miscellaneous Scholarships

Anonymous B - Outstanding Language Student  
Slim Solheid Memorial

### Japanese Language Program

Japan Travel  
Kyocera  
Tohmatsu Awoki/Touche Ross

## COLLEGE OF BUSINESS ADMINISTRATION

### School of Accountancy

Accountants Associates  
Considine and Considine  
Elias J. Katzen Memorial  
Bernard Nydam Memorial  
Vern Odmark Memorial

## Financial Services

John Burnham & Sons  
Irving Katz Memorial  
Professional Insurance Agents  
San Diego Mortgage Bankers

## Information and Decision Systems Department

Georgia Amsden Memorial  
Chevron  
Alvin Morrison Memorial  
Outstanding Student Fund  
Leroy Pemberton Memorial

## Management Department

Lynn Peters Memorial  
Frances Torbert Memorial

## Marketing Department

David W. Belcher Memorial  
Connie Fotinos Memorial

## Real Estate

John Cotton Memorial  
Ed Fletcher Foundation  
Robert C. Hird Memorial

## College of Business Administration Miscellaneous Scholarships

Buck Foundation  
College of Business Administration  
College of Business Internship Program  
Robert Hess Memorial  
MABA  
Pacific Telesis-MBA  
South East Asian Alliance  
Christina Lynn Velasco Memorial  
Monica Williams Memorial

## COLLEGE OF EDUCATION

Marguerite Brydegaard Memorial  
California PTA  
California Retired Teachers Assoc.  
Ben Ziri Caravan  
Ray Chavez  
Delta Kappa Gamma, Nu Chapter  
Alfred Einstein Living Trust/Vera Einstein Memorial  
The Alfred Harcourt Foundation  
Dr. Peggy Hawley  
Judy James Memorial  
Kappa Beta Nu  
LaPray/Schmuck  
Raymond Letsinger Trust  
Catherine Y. Lodge Memorial  
Robert R. Nardelli Memorial  
Richard Servey Memorial  
Vickie Sleiman-Equity in Education  
John Paul Stone Memorial  
Leslee Teincuff Memorial  
Gail White Memorial

## COLLEGE OF ENGINEERING

### Civil Engineering Department

American Association of Cost Engineers  
American Concrete Institute  
American Public Works Association  
American Society of Civil Engineers  
Association of California Water Agencies  
California Council of Civil Engineers and Land Surveyors  
Catlin Engineers  
Woodward Clyde  
E.F. Cook and Associates, Ltd.  
Craig, Bulthuis and Nothomb  
Engineers Club of San Diego  
Pountney and Associates, Inc.

San Diego Rock Producers  
Society of Military Engineers  
Structural Engineering  
Testing Engineers  
Stuart Wong

## Electrical Engineering Department

Electrical Engineering Department  
IEEE

## Mechanical Engineering Department

ASHRAE

## College of Engineering Miscellaneous Scholarships

Achievement Rewards for College Scientists (ARCS)  
Ball Corporation  
David G. Fleet  
Fleet Foundation  
S.L. Frankel  
Eric Gaipa Memorial  
General Dynamics  
Hughes Aircraft  
L.A. Power and Water  
Lockheed Leadership  
Louise McNally  
NACME  
Nasland Engineering  
National Science Foundation  
S. Falck Nielsen Family  
Pacific Telesis  
Cheng-Mo Sun  
TRW  
UNISYS  
Donald Grey Wilson

## COLLEGE OF HEALTH AND HUMAN SERVICES

### Communicative Disorders Department

Dorothy Baronofsky Memorial  
Gamma Upsilon, Sigma Alpha Sorority  
Nella Feldman Gross Memorial  
Barry W. Jones Memorial  
Paul Pfaff Memorial  
Kala Singh Memorial

### Health Science Department

Dental Health  
Lori D. Lemas Memorial

### School of Nursing

Emeritus Faculty Nursing  
Katherine R. Foley Memorial  
Dorothea Lambert Memorial  
Rueben Marks Memorial  
Lottie E. Olberg Trust  
Petra Steinhauser Memorial  
Frances Shimp Tidwell Memorial

### Graduate School of Public Health

California PTA

### School of Social Work

Mabel Naylor Danalis Memorial  
Ernest Witte Memorial

## COLLEGE OF PROFESSIONAL STUDIES AND FINE ARTS

### Aerospace Studies

ROTC

### Art Department

Art Department Fund  
Patricia Clapp Memorial  
Frances Ellsworth Memorial  
Darryl Groover Memorial

Isabel Kraft Memorial  
Paul Lingren Memorial  
Virginia Thorsen Memorial

## Dance

George Willis

## Drama Department

Jeweldean Brodie Memorial  
Sybil E. Jones Memorial  
Gordon Lusk Memorial  
Jennifer McCabe Memorial  
Marion Ross  
Hulton Sellman Memorial  
Henry Stanton Memorial

## School of Family Studies and Consumer Sciences

Mary Quam Hawkins Memorial  
Thair Milne  
Barbara Rosenblatt Memorial  
Victoria Smart Memorial  
Georgia Tait Stooke Memorial

## Industrial Studies Department

Epsilon Pi Tau  
James "Chris" Nichols Memorial

## Journalism Department

AD Club of San Diego  
Clayton H. Brace Memorial-Broadcast Journalism  
James Copley Foundation  
Harold Keen Memorial  
KFMB  
McGraw-Hill  
Jane Nelson Memorial  
Val Ryser Memorial  
Reggie Smith Memorial

## Music Department

Nadine Bolles Memorial  
Jean Taylor Brown Memorial  
Chinese Violin Fund  
Elsie Hiland Fox Memorial  
M.H. Golden  
Lois Greeno Memorial  
Joseph E. Johnson  
Kiwanis Club  
Lieber-Flower  
Jan Lowenbach, Musicology  
Alvin Morrison Memorial  
Music Department Fund  
Musical Theater  
Bessie S. Purdy Memorial  
William Resnick  
Edith Savage Memorial  
SDSU Opera Theatre  
SPEBQSA  
Paul C. Stauffer Memorial  
University Band  
Ellen Woolley, Orchestra  
Marvin Yerkey Memorial

## Physical Education Department

Adult Fitness Program  
Marguerite Ellicott Memorial  
Margaret "Robin" Murphy Memorial  
Miriam Paine Memorial  
Physical Education Fund

## Public Administration and Urban Studies Department

Cotton/Blend/Associates, Inc.  
John Fowler Award

## Recreation, Parks and Tourism Department

Bonnie Jean Gore Memorial  
Recreation Faculty



#### Speech Communication Department

Clair Burgener  
Gracia Ogden Memorial  
Percie Belle Senn Memorial  
Kevin Simmons Memorial

#### Telecommunications and Film Department

KFMB  
McGraw-Hill Broadcasting

#### COLLEGE OF SCIENCES

##### Astronomy Department

Awona Harrington Memorial  
William F. Lucas Memorial  
Clifford and Ruth Kinnell Smith Memorial

##### Biology Department

Crouch Scholarship for Avian Behavior  
Robert Harwood Memorial  
Mabel Myers Memorial  
Rancho Santa Fe Garden Club  
Systematics and Evolutionary Biology

##### Chemistry Department

Dudley Robinson Memorial

##### Geological Sciences Department

AMOCO Foundation  
R.C. Baker  
Baylor Brooks  
Chevron

Rollin and Carolyn Eckis  
Geology Alumni Fund  
Geology Fund

#### Mathematical Sciences Department

Mathematical Science Fund

#### Natural Science Department

Skolli/Smith Physical Science

#### Physics Department

Optics-Physics  
Physics Summer Research  
Skolli Fund  
SPIE Physics

#### Psychology Department

Dorothe Frick Memorial  
Dr. Edward Geldreich Memorial  
Social Psychology  
Doris Townsend Memorial

#### College of Sciences Miscellaneous Scholarships

Achievement Rewards for College Scientists (ARCS)  
Harry E. Hamber Memorial  
Mary Melton Kantor Memorial  
Phillip Kantor Memorial  
Paul G. Peninger Memorial  
Science Student Fund  
William Trowbridge Memorial

#### General Scholarships

In addition to the University Scholarship Committee Awards and the College, Department and School Scholarships, there are a number of general scholarships available. Recipients for some of these scholarships are chosen by the University Scholarship Committee; recipients for others are chosen by the donors on the basis of nominees sent to them by the University Scholarship Committee.

Associated Students  
Aztec Shops  
Mary Earnest Bean (Disabled Students)  
Brian Billotte Memorial  
Mary Brooksher Memorial  
Patricia Calhoun Memorial  
Campbell/Carter Memorial  
Copley (Disabled Students)  
Thomas Cortez  
Clara de Escudero Memorial  
Tony Esse Memorial  
Farmers Insurance Group  
Martha Farnum Memorial  
David G. Fleet  
Fleet Foundation  
Amelia Fontaine Memorial  
Fox Foundation  
Johanna M. Fox Memorial  
John and Henry Fox  
General Fund  
Arthur C. Harris Memorial  
Robert Harwood Memorial  
Houck Memorial  
International Students  
Ann and David Johns  
Lorin Kemp Memorial-ROTC  
Kiwanis  
William and Edna LaSalle Memorial  
Gaelen Leffler Memorial

Lipinsky Family  
Maxey Family  
Maxey/Point Loma  
Mortar Board Alumnae of San Diego  
National Hispanic Scholarship Fund  
Naval Science/ROTC  
James O'Hara II Memorial  
Palz/Nicholson  
Emma Pelletieri Memorial  
Phi Alpha Alpha Sorority  
Carolyn Pittman Memorial  
Foster S. Post Memorial  
President's Scholarship  
Procter and Gamble  
John F. Reeves Memorial  
Residence Hall Association  
San Diego State University Memorial  
San Diego State University Retirement Association  
San Diego State University Women's Association  
Etta Schweider Memorial  
Robert Patterson Shields Memorial  
David Springer Memorial  
Sigma Phi Epsilon  
Frank G. Tait Memorial  
Terry Lynn Thompson Memorial  
Wilma Tyler Trott Memorial  
D.B. Williams Memorial  
Peggy Wolter Memorial  
Mr. and Mrs. John Zweck Memorial

#### Imperial Valley Campus Scholarships

Enrique (Kiki) Camarena Memorial  
Deans Endowment  
Good Sport Howie Endowment

Imperial Valley Campus Fund  
Jerry Pennington  
Irene L. Westling

## Special Programs and Services

### Academic Skills Center

The Academic Skills Center offers assistance to all students at any university level, including bilingual and international students, who wish to improve reading, writing, and mathematics skills. The Center's services are available on an enrollment basis only.

In addition, the Center assists students in completing the University writing and mathematics competency requirements. The University requires students to demonstrate writing and mathematics proficiency consistent with its established standards and, accordingly, requires all entering students to pass the writing and mathematics competency tests. Students who fail either or both of these tests should enroll in appropriate coursework in the Academic Skills Center during their first semester at SDSU and continue in such coursework until successfully completing it.

### Alumni & Associates

Membership in the Alumni & Associates is open to those persons who have an abiding interest in and commitment to the growth and future of SDSU and the community it serves.

The Alumni & Associates is a dynamic, moving organization whose purpose is to promote the welfare of the University. It offers a number of programs and services designed to meet the 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 & Associates 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 & Associates sponsors an Annual Awards Program every spring honoring alumni and friends of the University, provides scholarships for students, and serves as a sounding board regarding University programs and policies.

The Alumni & Associates' publication for alumni and friends of the University is the quarterly *SDSU Report*.

For further information, phone the Alumni Office at (619) 594-2586.

### Associated Students of San Diego State University

The Associated Students of San Diego State University (AS) is the official organization for student government. The AS provides a variety of student programs, services, and activities to enhance the collegiate experience, as well as a wide variety of job opportunities for students. An independent, not-for-profit corporation, it is funded by the student activities fee and revenues collected from programs and services.

Aztec Center, the focal point of AS activities, is a model student union facility. It houses conference rooms, study lounges, retail shops, and travel and banking services for use by students, faculty, and staff, as well as the offices of AS staff and the student government. A student union fee funds both Aztec Center and the new Student Activity Center, a recreation and events complex, which begins construction in summer 1992.

In cooperation with other universities in the area, AS operates Mission Bay Aquatic Center, the world's largest instructional waterfront facility. Located in Mission Bay Park, the center offers instructional and recreational opportunities in aquatic sports.

Campus Recreation, one of the largest student services managed by AS, operates the Leisure Connection (outdoor programs, equipment rental, craft studios, and leisure classes), Red Black Bowl (bowling,

games, and wide screen TV), and Recreational Sports (intramural sports, intercollegiate sport club teams, and informal recreation).

Also operated by the AS are the Children's Center, an on-campus parent participation childcare facility, and the Open Air Theatre, a 5,000 seat outdoor entertainment venue. For more information call 594-6551.

### Audiology Diagnostic Center

The Audiology Diagnostic Center in the College of Health and Human Services is a service of the Department of Communicative Disorders. The center provides diagnostic information regarding hearing loss, hearing aid evaluations, earmolds and earprotectors for faculty, students, staff and the community, including Hispanic and Asian clients and their families. A minimal fee is charged for audiological services. The center operates throughout the school year. Referrals may be made through health professionals, agencies, school districts, or as self-referrals. For more information, contact the Communications Clinic building, Room 124, 594-6477.

### Aztec Shops, Ltd.

#### (Campus Store, Food Services, Copy Services)

Aztec Shops, Ltd. is a California not-for-profit corporation which has existed since 1931 to serve San Diego State University. It owns and operates services such as the Campus Store, Food Services, and Copy 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, imprinted items, and a selection of over 45,000 general interest books.

A large selection of art supplies may be found at Art Etc., which is located in the old Art Building. The Copy Center, Copies Too! and Paper Chase provide Xerox copying, binding, supplemental class materials, and typewriter and computer rentals. The Campus Store, Art Etc., and Copy Center are open weekdays and Saturdays. Aztec Shops also operates Campus Stores on the SDSU Calexico and CSU San Marcos campuses, as well as the Imperial Valley College campus. You need not be a student to shop in any of these stores.

Food Services includes East Commons, West Commons, Taco Bell, The General Store, Aunt Mary's, Courtyard Cafe, Betty's Hotdogger, Sub Connection, the Faculty/Staff Centre and Catering. East Commons is open weekends. Other operations, which are leased from Aztec Shops, include Piccolo, Allegro (located in Down Under, below West Commons), Square Pan Pizza, Don Diego and Arby's.

Optional meal payment plans include a 14- or 10-meal card plan and the new Aztec Plus Cash Card. All cards are good at East Commons, West Commons, Taco Bell, Courtyard Cafe, and The General Store. The Plus Card is also good at Aunt Mary's and the Sub Connection.

### The June Burnett Institute for Children, Youth, and Families

#### John Wedemeyer, Director

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 multicultural approaches that promote understanding among children, youth, and families. An advisory board composed primarily of faculty members from several colleges directs the activities of the Institute.

Every year the June Burnett Institute provides minigrants to SDSU faculty to support creative, community-focused service, education, and research. These awards enable faculty to work with community agencies and creatively blend service, training, and evaluation.

The Institute also sponsors a discussion series which highlights the progress of these awards and provides opportunities for observation, participation, and research by students and faculty from a variety of disciplines.

Other Institute programs involve middle school innovation, exploring ways to prevent school dropouts and to revitalize the partnership between schools, parents, and nonprofit community service agencies. The Institute is located at 6310 Alvarado Court.

### Campus Children's Center

The Associated Students' Campus Children's Center, a parent participation program, provides child care for SDSU students' children, six months through five years of age, who are in good health. Priority is given to families with the greatest financial need and to earliest applicants regardless of race, religion, creed, sex, national origin, or handicap. Faculty/staff children are accepted as space permits.

Tuition for children is determined on a sliding fee scale based on family size and income.

The program is staffed by professional and student employees, volunteers, parent participants, and Child Development majors. Parents make a weekly contribution of time as teachers in the classroom, plus attend a weekly parent class their first semester in the program, or serve on a fund-raising/publicity committee. They also have the opportunity to serve on the Campus Children's Center Board, which is composed of parents and other campus representatives.

The program is designed so that a variety of activities are offered that will foster the child's social, emotional, intellectual, and physical development and help the child view himself/herself and the environment positively.

The hours of operation are 7:15 a.m. to 6:00 p.m., Monday through Friday. Call 594-6359 for more information.

### 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, East Asia, Latin America, 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, 5814 Hardy Avenue, (619) 594-1354.

### Media Technology Services

Media Technology Services provides support to faculty and staff in acquisition and distribution of instructional media, in distribution and maintenance of audiovisual equipment, and in design of instruction. The center consists of three units: Distribution, Production, and Instructional Development. The director provides leadership to the University in identifying new approaches in the use of instructional technology.

Distribution provides support in the selection and use of instructional materials and the distribution and maintenance of audiovisual equipment. Services include the check-out and delivery of media and equipment for classroom use. Films, videotapes and videodiscs may be scheduled for in-classroom projection or transmitted over the campus 29 channel closed circuit system. A viewing room with high quality computer and video projection is available. The acquisition of new videotapes, films, and videodiscs related to instruction, and maintenance of these libraries is a part of this service.

Production aids in the design and production of instructional materials. Original videotape programming and slide-tape presentations required for specific instructional purposes are developed and produced by media production staff. A color studio and videotape feedback laboratory are operated and maintained. Graphic design for instruction and for research is provided. Photography for instructional materials development and for reporting of research is available to all faculty.

The Instructional Development program offers professional assistance in instructional design, course design, teaching techniques and assessment. Specific services include (1) providing assistance in instructional materials development, (2) assessing and selecting instructional methods, (3) facilitating course design, (4) providing faculty with opportunities to analyze their instruction, (5) conducting workshops on skills and techniques of teaching and testing, and (6) providing a facility for faculty to produce their own media and learn about new technology.

### Navy Officer Programs

San Diego State University maintains a liaison with the Navy Officer Programs Office in San Diego. This liaison provides students with access to the many opportunities available to college students through the Navy.

**Navy Engineering Programs.** Scholarships are available to students in technical majors who have at least a 3.0 grade point average. Those who are interested and qualified receive \$1200 each month while they finish their final two years of undergraduate or final year of graduate study. The scholarship leads to a position as an instructor, research or operating engineer for the Navy, and a commission as a naval officer.

**Health Professional Scholarship Programs.** For students applying to medical school, a scholarship is available which will cover the cost of tuition and books and provide a monthly stipend while in medical school. Initial requirements are acceptance to an AMA-accredited medical school and competitive scores on the MCAT.

**Aviation, Surface Warfare, Business/Personnel Management, Information Systems.** Positions in these fields are available to students with a B.A. or B.S. degree in many majors.

**Medical Service Corps.** For students continuing their education in the Allied Health Care Profession, the Navy has positions involving direct patient care, administration, management, and research in a variety of medical specialties.

**Navy Nurse Corps.** Scholarships are available to nursing students who have at least a 3.0 grade point average. Those who are interested and qualified receive \$1200 each month while they finish their final two years of the nursing curriculum. Students must attain their BSN. The scholarship leads to a position as an officer in the Navy Nurse Corps.

Students are encouraged to seek information and plan ahead if they are interested in adding any of these programs to their career options. More information on all programs is available by calling or writing to the Officer Programs Office, NRD San Diego, NTC BLDG 335, San Diego, CA 92133-6800; telephone 224-2856.

### Parking and Transportation

Where possible, carpooling or use of alternate modes of transportation is recommended.

San Diego Transit has seven bus routes connecting the metropolitan area with service to the University Transit Center. These are routes 11, 13, 36, 43, 81, 105, 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 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, the Imperial Valley campus, or at North County Center, contact the Department of Public Safety, 594-6671.

### Prelaw Program in Cooperation with California Western School of Law

San Diego State University and California Western School of Law offer a cooperative prelaw program designed to enhance the educational opportunities of students at both institutions by making it possible for selected students to complete both a baccalaureate degree at San Diego State University and a *Juris Doctor* degree at California Western School of Law.

Students enrolled in this program will complete approximately 91-95 units at San Diego State University and 31-33 units at California Western School of Law. Cooperative curricula may be developed in numerous academic areas. Some of the possibilities include majors in criminal justice administration, political science (with a minor in history), or liberal studies option 1 (prelegal). The units completed at California Western School of Law will be accepted as elective credits in satisfaction of the requirements for the bachelor's degree by San Diego State University and will also be accepted as work credited toward the achievement of a law degree at California Western School of Law.

Eligibility requirements for the joint degree program include:

1. A minimum grade point average of 3.20 at SDSU.
2. An interview by faculty from both institutions, after reaching upper division standing (60 units), to determine eligibility for admission to California Western School of Law.
3. A satisfactory score on the Law School Admissions Test (LSAT) during the year preceding anticipated admission to California Western School of Law.

Advising for this program is available in the Division of Undergraduate Studies, AD-223.

### 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. Originally, the Foundation handled, accounted for, and invested scholarship and loan funds donated to the University. Commencing in 1954, the Foundation began serving as the agency for the University to accept and administer sponsored research and educational projects. The Foundation is the largest of the auxiliaries in The California 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 Summer Faculty Fellowship Program and the Grant-in-Aid for Research Program for faculty;

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, the San Diego State University Press publishes works of original research, as well as other meritorious academic works that will further the intellectual mission of the University. Although high quality, nonfiction 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 post-modernism. In addition to books, the Press also publishes under its imprint two journals, the *Review of Latin American Studies*, and *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. Financial accounting and coordination is provided by the San Diego State University Foundation.

### Speech, Language, and Hearing Clinics

The Communications Clinic in the College of Health and Human Services is staffed by students and supervised by faculty of the Department of Communicative Disorders. It provides assessment and remediation services for SDSU students, staff, and faculty for minimal fees. Fees charged for services to individuals from the community may be adjusted in cases of financial need. Comprehensive diagnostic and treatment programs are available for children and adults who may present such communicative difficulties as delayed speech/language development, voice, fluency or articulation disorders, aphasia, cleft palate, cerebral palsy, or hearing impairment. Bilingual/multicultural services are available for Hispanic and Asian clients and their families. Because of staff limitations not all who apply can be admitted. Referrals may be made through agencies, hospitals, school programs, health professionals, or as self-referrals. For more information contact the Communications Clinic building, Room 124, 594-6477.



## Student Government

### (Associated Students of SDSU)

The Associated Students of San Diego State University provides many opportunities for students to participate in student government.

The AS Council is the voice of the SDSU student body. Composed of one representative per 1500 students and three executive officers, the Council is responsible for the AS' \$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 AS 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.

## Travel Study Programs

### London Semester Academic Program

The London semester academic program, operated by the College of Arts and Letters, offers students the opportunity to take a semester's work in courses in the humanities, social sciences, and fine arts in London while paying normal SDSU fees. To be eligible, students must be in good standing with the University and normally will come from the ranks of sophomores, juniors, and seniors. Courses selected for a balanced program are drawn from regular San Diego State University offerings, many of which fulfill General Education and other degree requirements. Electives particularly germane to the site are also offered. The program is currently available in the spring semester only. For further information, contact the College of Arts and Letters, SH-135.

### New Hampshire Exchange Program

Students interested in studying at a university on the East Coast for a semester may want to consider SDSU's New Hampshire Exchange program. Through this program, students can attend the University of New Hampshire and earn credits applicable towards their degree at SDSU. Travel costs and room and board expenses must be paid by the student; however, no additional tuition costs are required—students pay only those fees required for a regular semester at SDSU. In addition, those currently receiving financial aid continue to be qualified for it. To be eligible for this program, students must have completed at least 24 units by the exchange date, with 12 units completed at SDSU at the time of application. Minimum GPA required is 2.5. Interested students should contact the Student Resource Center at the beginning of the semester *prior* to the semester of the intended exchange.

### Paris Semester Academic Program

The Paris Semester offers SDSU students an opportunity to study in Paris while enrolling in courses taken from the SDSU General Catalog and paying regular University fees. Courses taught in the Paris Semester are selected from regular SDSU curricular offerings; especially those in the "Foundations" and "Explorations" sections of General Education requirements. In addition, students are required to enroll in Humanities 400: French Life and Culture. To be eligible, students must be in good standing at the University and have a grade point average of no less than 2.0. Background in French is desirable but not required.

For further information, contact the College of Arts and Letters, SH-135.

## University Computing Services

University Computing Services provides equipment, communication facilities, software, and technical services to meet the instructional, research, and administrative computing needs of the campus community.

The central computer center maintains a VAX 6320 and an ELXSI 6400 parallel processor. The VMS and UNIX operating systems are among those available. Several academic departments have computers, work stations, and specialized equipment to satisfy their computing needs. A CRAY Y-MP/864 Supercomputer located at the San Diego Supercomputer Center is available for assigned coursework and research projects. SDSUNET is a high speed communications network based on Ethernet technology. It allows microcomputer access to computing resources. The California State University Network, CSUNET, links the campus to additional central computers and to specialty computing centers on other campuses.

This computing environment provides access to hundreds of software products including programming languages (ADA, APL, BASIC, C, COBOL, FORTRAN, LISP, PASCAL), mathematical and statistical programs (BMDP, SAS, IMSL, MINITAB, NELSON, SPSS, TSP), large research data base systems (APSA, CENSUS, COMPUSTAT, FDIC, ICPSR, IMF), and interactive graphics tools (DISSPLA, MENUgraph, SPSSgraph, and SASgraph).

Instructional microcomputer users are supported by Macintosh and IBM PC systems located in laboratories throughout the campus. These systems are configured to run popular software.

Lab assistants assigned to the terminal labs provide consulting services for students.

## University Library

### Administration

University Librarian: Bosseau

Associate University Librarians: Goodram, Kinney, Palsson

### Library Faculty

Emeritus: Barclay, Crisley, C., Crisley, P., Dickinson, Goodwin, Granrud, Greene, Hoover, Johns, Kenney, Kinsey, Lamb, Leerhoff, McAmis, Murdock, Neyndorff, Posner, Sandelin, Schalles, Shira, Sonntag, Szabo, West

Librarians: Chan, Coleman, Dintrone, Pease

Associate Librarians: Cargille, Fields, Fikes, Goyne, Harkanyi,

Harris, Martinez, Muroi, Rogers, Turhollow, White, Wilson

Senior Assistant Librarians: Baber, Carande, Friedman, Harley, Marlatt, McPhail, Perkins, Shimoguchi

The University Library supports the curricular and research needs of the University community through the development of pertinent collections and the provision of services designed to facilitate access to information. The Library provides assistance to faculty and students in several areas: Circulation, General Reference, Government Publications, Maps, Media Center, Microforms and Newspaper Center, Periodicals Reading Room, Reserve Book Room, Science Reference, and Special Collections.

The Library has automated acquisitions, cataloging, circulation, and serials control systems. Computer based bibliographic search services are offered in over 400 data bases. The Library provides for interlibrary loan through a direct link with several thousand other libraries using the computer and telecommunications facilities of the OCLC bibliographic utility. Instruction in the use of library resources is offered in conjunction with specific courses, clinics, and through a comprehensive workbook program.

The Library's holdings include 1,036,200 volumes (monographs and bound periodicals); 565,200 government documents; 3.3 million microforms; 59,500 reels of microfilm; 161,475 maps; 5,300 phonograph records; and 4,375 linear feet of archival papers. The Library receives 8,555 periodical and serial titles, excluding government publications. It is a depository for United States and California government publications, and receives all United Nations and Organization of American States publications. The Library is designed to eventually accommodate three thousand reader stations and to provide shelving for one million volumes.

# Academic Organization

## Colleges

Arts and Letters

Business Administration

Education

Engineering

Health and Human Services

Professional Studies

and Fine Arts

Sciences

## Imperial Valley Campus

# College of Arts and Letters

## Administration

Dean: Paul J. Strand  
Associate Dean: Patricia Huckle  
Assistant Dean for Community Development: Barbara London  
Assistant Dean for Student Affairs: Donald D. Basile

## General Information

The College of Arts and Letters is at the very heart of liberal arts education at San Diego State University. Its programs in the humanities and social sciences are offered through 19 academic departments and several interdisciplinary programs, each of which is designed to help students to understand their role in society and to develop aesthetic sensibilities. Arts and Letters courses are offered to explore the experiences of men and women in society, their cultural expressions and practices, their languages, and their philosophical concepts. The College's highly trained, professionally active faculty seek to give students an awareness about the development of present knowledge and how to generate new knowledge. Students are encouraged to develop keen observation skills, the capacity to think critically, and the ability to express their views intelligently and sensitively as leaders.

## Curricula Offered

Refer to the Courses and Curricula section of this catalog for a complete listing of program requirements and courses offered by departments within the College of Arts and Letters.

### Doctoral Program

Geography

### Master's Degrees

Anthropology (M.A.), Asian Studies (M.A.), Creative Writing (M.F.A.), Economics (M.A.), English (M.A.), French (M.A.), Geography (M.A.), History (M.A.), Latin American Studies (M.A.), Liberal Arts (M.A.), Linguistics (M.A.), Philosophy (M.A.), Political Science (M.A.), Russian (M.A.), Sociology (M.A.), Spanish (M.A.)

### Bachelor's Degrees

Afro-American Studies (B.A.), American Studies (B.A.), Anthropology (B.A.), Asian Studies (B.A.), Classics (B.A.), Comparative Literature (B.A.), Economics (B.A.), English (B.A.), European Studies (B.A.), French (B.A.), Geography (B.A.), German (B.A.), History (B.A.), Humanities (B.A.), International Business (B.A.), Latin American Studies (B.A.), Linguistics (B.A.), Mexican American Studies (B.A.), Philosophy (B.A.), Political Science (B.A.), Religious Studies (B.A.), Russian (B.A.), Russian and East European Studies (B.A.), Social Science (B.A.), Sociology (B.A.), Spanish (B.A.), Urban Studies (B.A.), Women's Studies (B.A.)

### Minors

African Studies, Afro-American Studies, American Indian Studies, American Studies, Anthropology, Asian Studies, Chinese, Classics, Comparative Literature, Economics, English, Environment and Society, European Studies, French, Geography, German, History, Humanities, Italian, Japanese, Judaic Studies, Latin American Studies, Linguistics, Mexican American Studies, Middle East Studies, Philosophy, Political Science, Portuguese, Religious Studies, Russian, Sociology, Spanish, Women's Studies



### Preprofessional Curriculum

Prelegal

### Certificate Programs

Applied Linguistics and English as a Second Language (ESL), Children's Literature, Geographic Information Systems, Spanish Translation Studies, Technical and Scientific Writing, United States-Mexico Border Studies

## Research Centers

### 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

Marugappa 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) securing and administering grants and other support for research and development in Asian studies; (2) coordinating and publicizing the activities of faculty engaged in Asian-centered studies; (3) developing and administering the Asian studies program and relevant curricula at the undergraduate and graduate levels; (4) responding to campus and community requests for information and services; (5) fostering campus and community interest in Asian studies.

### China Studies Institute

Catherine Yi-yu Cho Woo, 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, audiovisual 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.

### Donald I. Eidemiller Weather Station

Edward Aguado, Director

The Donald I. Eidemiller Weather Station serves as a teaching and research resource. It cooperates closely with the National Weather Service (NWS) through the mutual exchange of information. The station receives surface, upper-air, and forecast weather maps via satellite from the NWS along with pertinent teletype information. 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 thirty years.

### European Studies Center

Leon Rosenstein, Director

The European Studies Center coordinates and supports teaching and research related to the European area. It supervises the major and the minor in European studies for the B.A. degree. It sponsors the annual San Diego State University Summer Seminar and Travel Study Tours to Europe at various times in the year. It administers the European Studies Center Laboratory in AH-3109 which contains books, pamphlets, English and foreign language periodicals, and a slide collection on European art and geography.

### 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, Project Co-Directors

The Center for International Business Education and Research (CIBER), one of sixteen such centers 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. The grant was awarded as a partnership between UCLA and SDSU.

The Centers at UCLA and SDSU share in the promotion of (1) interdisciplinary programs which incorporate foreign language and international training into accounting, finance, information systems, management, and marketing curricula and which provide business training for foreign language and international studies faculty and advanced degree candidates; (2) evening or summer programs, including intensive language programs for members of the business community and other professionals that are designed to develop or enhance their international skills, awareness, and expertise; (3) collaborative programs, activities, or research involving academic

and business communities that develop international skills, awareness, and expertise among current and prospective members of the business community; (4) research designed to strengthen and improve the international aspects of business education and to promote integrated curricula and the international competitiveness of American businesses, including those not currently active in international trade.

The Center operates under the jurisdiction of the College of Arts and Letters and the College of Business Administration and is located in Business Administration 311, 594-3008.

### International Population Center

John R. Weeks, Director

The International Population Center (InterPop) was created to promote the implementation of effective population policy through the conduct and application of population research, the graduate training of potential population researchers and administrators, and the provision of technical assistance to population-related agencies and organizations. The activities of InterPop focus geographically on Africa, the Middle East, and Mexico, but one of the goals of the Center is to relate country or regional demographics to global population issues, trends, and activities.

InterPop provides a variety of services including (1) the preparation, submission, and administration of research proposals for population-related research; (2) the dissemination of preliminary research findings in a Working Papers series; (3) the provision of population technical assistance to such programs; and (4) the coordination of graduate programs for students interested in pursuing a master's degree in a population-related area.

Although it is located in the College of Arts and Letters, InterPop is a multidisciplinary facility, linking Center faculty from several departments on campus with Center associates from other organizations and universities in the San Diego region.

### 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. Specifically, topics such as superpower confrontation, nuclear armaments, international conflict, sociopolitical violence, and global environmental issues as they relate to security are covered.

The Institute is a joint effort of the Colleges of Sciences, Arts and Letters, and Professional Studies and Fine Arts. 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 program, "International Security and Conflict Resolution," under the major in Liberal Studies—Emphasis in Three Departments. Students and faculty can obtain more information by calling the IISCOR office at 594-4352.

### 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 six 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 Japan-US Friendship Commission and 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 Media Technology Services. The Institute 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. Office of Education has designated the center as one of the nation's thirteen Latin American language and area centers and is funding 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: (1) the initiation of a problem-oriented approach to Latin American studies through the creation of courses dealing with urbanization and modernization of the area; (2) the development of innovative methods of instruction in Spanish and Portuguese; (3) the provision of informative and in-service training programs for elementary and secondary school teachers; and (4) the provision of services for the general public through the sponsorship of conferences, workshops, lectures and films. The Center also assists in the development of the University library's Latin American holdings and has created a collection of Latin American materials which is available in the Center's reading room, SH-146.

#### 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 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 Public Economics

George Babilot, Director

The Center for Public Economics is a facility of the Department of Economics to encourage research by students and faculty in all phases of nonmarket economic decision making, encompassing the following areas: (1) the functioning of federal, state and local fiscal systems, including the provision for and financing of public goods at each level; (2) the economic factors involved in environmental changes, in particular, their bearing on urban and local economic problems; (3) the economic dimensions of social decision making. The Center is designed to complement the curricular and degree

programs in the Department of Economics and to be of service to related disciplines. It maintains research materials and facilities to assist research and publications in the area of public economics. The Center also maintains a computer accessed San Diego Regional Data Bank and subscribes to national and regional economic data services. 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 Administrative Complex East room 126.

#### 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-Mexico 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 also maintains a research collection on the border region and takes an active role in Latin America and Mexico-related professional organizations. IRSC publishes the *Mexico Policy News* for PROFMEX (The Consortium for Research 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. The Institute is located in Nasatir Hall, Room 103.

#### 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 a VAX 750 computer system to support faculty research.

**Instructional Services** offers consultation in computer applications to social research, including a full range of statistical analysis programs. The section also provides a range of specialized workshops and demonstrations about computer uses and applications, data management, and analysis. Graduate assistantships, undergraduate internships, and research assistant positions are available to qualified students.

The SSRL is located in the Professional Studies and Fine Arts building, room 140.

# College of Business Administration

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. Several College of Business Administration programs are registered with the International Board of Certified Financial Planners.

## Administration

Dean: Allan R. Bailey  
Associate Dean, Academic Affairs and Graduate Programs: Thomas M. D. Warschauer  
Associate Dean, External Relations: Harold K. Brown  
Assistant Dean for Student Affairs: Patricia L. Dintrone

## General Information

All undergraduate and graduate programs have enjoyed continuous accreditation since their points of first application. In addition to a commitment to maintain a high quality, accredited program, the College has the following goals: (1) to create and maintain a highly motivated educational environment for both students and faculty; (2) to evaluate all College activities, including formal classroom and research, in terms of their contributions to effective learning; (3) recognizing the dynamic nature of business and the society it serves, to instill within students an awareness of the necessity to embark on life-long careers of learning; (4) to prepare students for entry level positions which will provide advancement opportunities in their chosen careers; (5) to maintain an active, positive working relationship with the regional business community; (6) to offer graduate programs that prepare students for general management positions; and (7) to provide both degree and nondegree midcareer educational opportunities.

## Curricula Offered

Refer to the Courses and Curricula section of this catalog for a complete listing of program requirements and courses offered by departments within the College of Business Administration.

### Master's Degrees

Accountancy (M.S.), Business Administration (M.S.), Business Administration (M.B.A.).

### Bachelor's Degrees

Accounting (B.S.), Decision Systems (B.S.), Finance (B.S.), Financial Services (B.S.), Human Resource Management (B.S.), Information Systems (B.S.), International Business (B.A.), Management (B.S.), Marketing (B.S.), Production and Operations Management (B.S.), Real Estate (B.S.).

### Minors

Accounting, Decision Systems, Finance, Human Resource Management, Information Systems, Management, Marketing, Production and Operations Management, Real Estate, Small Business Management (available at Imperial Valley Campus only).

### Certificate Programs

Accounting, Business Administration (available at Imperial Valley Campus only), Personal Financial Planning.

## Credential Programs

Teaching major in each business field for the single subject teaching credential.

## Research Centers

### Business and Economic Research

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

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

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

### Entrepreneurial Management Center (EMC)

Simon Coleman, Director

The Entrepreneurial Management Center (EMC) is a privately funded activity of the College of Business Administration. It is guided by a Board of Governors made up of community business leaders.

The purpose of the EMC is to encourage and promote the concepts of entrepreneurship and entrepreneurial management both in the University and in the community. Its principal objectives are to (1) plan, design, and staff courses in entrepreneurship; (2) assist students and faculty in entrepreneur-related projects and research studies; (3) involve faculty in a variety of community activities and projects that encourage and assist emerging growth firms.

The EMC sponsors an annual Student Business Plan Competition which awards students for excellence in venture capital or seed business planning. Winners then compete in the Intercollegiate Regional Student Business Plan Competition, which includes entries from colleges throughout the Western states.

Each semester the EMC sponsors an Entrepreneur-in-Residence, an individual selected from the business community for his entrepreneurial experience. This person devotes 20 hours in interaction with students and faculty—in classes, seminars, and informal exchange.

### 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, Project Co-Directors

The Center for International Business Education and Research (CIBER), one of sixteen such centers 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. The grant was awarded as a partnership between UCLA and SDSU.

The Centers at UCLA and SDSU share in the promotion of (1) interdisciplinary programs which incorporate foreign language and international training into accounting, finance, information systems, management, and marketing curricula and which provide business training for foreign language and international studies faculty and advanced degree candidates; (2) evening or summer programs, including intensive language programs for members of the business community and other professionals that are designed to develop or enhance their international skills, awareness, and expertise; (3) collaborative programs, activities, or research involving academic and business communities that develop international skills, awareness, and expertise among current and prospective members of the business community; (4) research designed to strengthen and improve the international aspects of business education and to promote integrated curricula and the international competitiveness of American businesses, including those not currently active in international trade.

The Center operates under the jurisdiction of the College of Arts and Letters and the College of Business Administration and is located in Business Administration 311, 594-3008.

### 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 20-campus California State University system. One of the two statewide offices is located in the College of Business Administration.

As it relates to real estate and land use, the purpose of RELUI is to (1) support, coordinate, and manage systemwide and intercampus research activities; (2) assist in the development, coordination, and administration of statewide continuing education programs; (3) seek 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 in the College of Business Administration a research and reference center 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.

## College of Education

### Administration

Dean: Ann I. Morey  
Associate Dean (Acting): Gordon M. Thompson  
Associate Dean for Faculty Development and Research: Margie K. Kitano  
Assistant Dean: Martin Block

### General Information

The mission of the College of Education is broad and multidimensional. The College is concerned primarily with preparing teachers, administrators, resource specialists, and support personnel for various educational settings; providing continuing professional educational opportunities for education personnel; continually assessing the quality and appropriateness of all education activities; contributing to the knowledge base of both educational theory and practice through research and scholarship; providing appropriate public service/technical assistance to individuals and agencies locally, regionally, nationally, and internationally; and contributing to the general intellectual climate of the University community. The College has had an ongoing commitment to programs serving culturally diverse communities and bilingual individuals.

The College of Education is organized into six academic units including the School of Teacher Education and the following departments: Administration, Rehabilitation and Postsecondary Education; Counseling and School Psychology; Educational Technology; Policy Studies in Language and Cross-Cultural Education; and Special Education. The Master of Arts degree in Education is offered in ten academic areas of education. The Master of Science degree is offered in two additional academic areas. A doctoral program in education is offered jointly with Claremont Graduate School. This unique program features a multicultural education emphasis. Approved teaching credential programs are offered for the multiple subject credential and the single subject credential, as well as for a number of specialist and service credentials.

### Curricula Offered

Refer to the Courses and Curricula section of this catalog for a complete listing of program requirements and courses offered by departments within the College of Education.

#### Doctoral Program

Education

#### Master's Degrees

Counseling (M.S.), Education (M.A.),  
Rehabilitation Counseling (M.S.)

#### Bachelor's Degree

Vocational Education (B.V.E.)

#### Minor

Educational Technology

### Teaching and Service Credentials

Credential Program	School Service Authorized
1. Multiple Subject	Teach in any self-contained classroom, kindergarten through twelfth grade.
2. Single Subject	Teach single subject area in grades kindergarten through twelve.

### Specialist Credentials

Bilingual/Cross-Cultural  
Reading/Language Arts  
Resource Specialist Certificate of Competence  
Special Education:  
Communication Handicapped  
(Department of Communicative Disorders)  
Gifted  
Learning Handicapped  
Physically Handicapped  
Severely Handicapped

### Service Credentials

Administrative Services  
Clinical Rehabilitative Services  
(Department of Communicative Disorders)  
Health - School Nurse (School of Nursing)  
Pupil Personnel:  
School Counseling  
School Psychology

### Certificate Programs

Bilingual (Spanish) Special Education, Instructional Microcomputer Software Design, Instructional Technology, Language Development Specialist, Rehabilitation Administration, Teaching the Emotionally Disturbed/Behaviorally Disordered.

### Research Centers

#### Counselor Education

The Center for the Study of Counselor Education is a unit within the College of Education designed to provide support for activities such as (1) securing and administering grants and other support for research and development in counselor education; (2) encouraging cooperation with faculty members from other relevant disciplines such as anthropology, economics, psychology, social work, sociology, and the University Counseling Center; and (3) conducting programs or rendering services designed to promote counselor education at San Diego State University. The Center is administered by the Department of Counseling and School Psychology; fiscal matters are coordinated through the San Diego State University Foundation.

#### Center for Economic Education

Kathleen Mikitka, Director

The Center for Economic Education is a unit within the College of Education. The Center is affiliated with the California Council on Economic Education and the Joint Council on Economic Education and has the mission to provide the following services and functions: (1) in-service 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

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**COLLEGE OF BUSINESS ADMINISTRATION**  
**PREPARING TOMORROW'S LEADERS**



(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.

**Center for Instructional Technology  
Research and Training**  
Allison Rossett, Director

The purpose of the Center is to (1) secure grants and contracts for research and development in instructional technology; (2) conduct workshops, seminars and conferences relating to applications of instructional technology to teaching, training and management; (3) respond to campus and community requests for information and assistance; (4) assist in conducting needs assessments, task analyses, instructional program design and evaluations of instructional products or programs; and (5) disseminate information reflecting model use of instructional technologies. The Center uses instructional technology to address education and training problems in health, school, military, business and social service settings. The Center functions within the Department of Educational Technology of the College of Education at San Diego State University.

**Interwork Institute**  
Fred R. McFarlane, Director

The Institute coordinates and supports training and research activities in the fields of vocational rehabilitation and special education. The Institute operates within the College of Education and works directly

with faculty and students interested in this area. The Institute administers projects funded by local, state, federal, and private agencies. The Institute's facilities are located at 5850 Hardy Avenue, Suite 112.

**Center for Policy Studies in Education**  
Alberto M. Ochoa, Director

The Center for Policy Studies in Language and Cross-Cultural Education is a unit within the College of Education. The Center houses projects funded by federal, state, and private sources. Current projects include the Parent Institute, the Multifunctional Resource Center, and the Social Equity Technical Assistance Center. These centers conduct training and research on issues of social equity and bilingual/multicultural policy, and provide technical assistance to districts throughout southern California.

**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 area.

# College of Engineering

## Administration

Dean: George T. Craig  
Associate Dean: Nihad A. Hussain  
Assistant Dean for Student Affairs: Fang-Hui Chou  
Director of Special Projects: René Wernicke

## General Information

The College of Engineering was established as a distinct unit of the University in 1958, although first courses named "Engineering" appeared in the 1922-23 catalog. The 1942-43 catalog was the first to announce the establishment of a "General Engineering" program leading to the Bachelor of Arts degree. The College is now organized into the Departments of Aerospace Engineering and Engineering Mechanics, Civil Engineering, Electrical and Computer Engineering, and Mechanical Engineering.

At the undergraduate level, the College of Engineering prescribes certain patterns of its courses, combined with those of other academic divisions of the University, as a program of 133 semester units leading to the Bachelor of Science degree in the four specific major fields of engineering. At the graduate level, the College offers the Master of Science degree in these same fields.

The objective of the engineering program at San Diego State is to provide the intellectual and physical environment best calculated to encourage students to develop their capacities toward a successful career in the profession of engineering, knowing the need for engineers to maintain a professional proficiency in a rapidly changing technology and advancing state of the art. Moreover, the effective development and application of technology depends on responsible judgments by professionals cognizant of the total needs of society and how technology affects people. Thus, the engineering graduate should have the academic background necessary for personal and professional growth. These goals determine the content of the undergraduate engineering program.

Because the engineer's work is predominantly intellectual and varied, and not of a routine mental or physical character, this program places emphasis on the mastery of a strong core of subject matter in the physical sciences, mathematics, and the engineering sciences of broad applicability. Woven throughout the pattern is a continuing study of the sociohumanistic facets of our civilization, because the engineering graduates must expect to find their best expression as leaders, conscious of the social and economic implications of their decisions.

Although the profession of engineering presents in practice a variety of specialties, undergraduate students initially focus their attention on a pattern of coursework emphasizing engineering fundamentals. Students then are able to utilize this knowledge of fundamentals in developing special knowledge in their areas of specific interest.

## Accreditation and Academic Association

The College of Engineering is a member of the American Society for Engineering Education, and all undergraduate engineering programs are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

## Registration of Engineers

Registration of engineers is required for many fields of practice. The engineering graduate cannot acquire registration as an engineer immediately upon graduation; however, early application for the required state examination is advisable. Graduation from an accredited program such as San Diego State's facilitates registration as a professional engineer.

## Curricula Offered

Refer to the Courses and Curricula section of this catalog for a complete listing of program requirements and courses offered by departments within the College of Engineering.

### Doctoral Program

Engineering Sciences/Applied Mechanics

### Master's Degrees

Aerospace Engineering (M.S.), Civil Engineering (M.S.), Electrical Engineering (M.S.), Mechanical Engineering (M.S.).

### Bachelor's Degrees

Aerospace Engineering (B.S.), Civil Engineering (B.S.), Electrical Engineering (B.S.), Mechanical Engineering (B.S.).

### Minor

Engineering

## Research Centers

### Energy Engineering Institute

Halil 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.

### Computer Integrated Manufacturing (CIM) Center

George A. Mansfield, Jr., Director

Evolved from the Computer Aided Manufacturing Center established in 1987, the CIM Center is now involved with the entire range of activities in the manufacturing enterprise. Working with the College of Business Administration and the College of Professional Studies and Fine Arts, Mechanical Engineering faculty and students apply CIM concepts in more than 20 courses and do research on projects ranging from shop floor operations through engineering design to plant operations management. The CIM Center is supported by a large complement of donated IBM mainframe computers and workstations which augment existing SDSU CIM equipment. SDSU is thus a partner in a nationwide alliance of over 70 IBM-supported schools who provide training, education, demonstration, and research in computer integrated manufacturing.



# College of Health and Human Services

## Administration

Dean: Peter A. Dual  
Associate Dean: Dolores A. Wozniak  
Assistant Dean for Student Affairs: Li-rong Lilly Cheng

## General Information

The College of Health and Human Services offers professional education in the health and human service disciplines. The College consists of the following group of professional schools, departments, programs, and centers: the Graduate School of Public Health, the Schools of Nursing and Social Work, the Departments of Communicative Disorders and Health Science, the Gerontology Program, the Interdisciplinary Center for Health and Human Services, and the University Center on Aging.

The College of Health and Human Services faculty, through advising, teaching, and supervising, offers students a balanced education of academic study, field placement, clinical experiences, and research opportunities. Thus, faculty and students share an understanding of the relationship between California's diverse populations and life styles and the challenge of improving the quality of the human condition. The common goal of each of the College's professional programs is to assist students in developing competence in professional practice and research methods that develop their expertise to gather information, plan, and evaluate professional actions. This commitment to students produces alumni who will continue to work effectively with our professional schools and departments to preserve and promote the well-being of individuals, groups, and communities.

Bachelor of Arts, Bachelor of Science, Master of Arts, Master of Science, Master of Public Health, Master of Social Work, and the Ph.D. in Public Health degrees are conferred. In addition, students may receive national accreditation, state credential or state licensure, and national or state professional certification depending upon the program and the legal requirements and obligations for practicing the profession. All programs also provide continuing education for professionals already in the field.

## Curricula Offered

Refer to the Courses and Curricula section of this catalog for a complete listing of program requirements and courses offered by departments within the College of Health and Human Services.

### Doctoral Program

Public Health

### Master's Degrees

Communicative Disorders (M.A.), Nursing (M.S.),  
Public Health (M.S., M.P.H.), Social Work (M.S.W.)

### Bachelor's Degrees

Health Science (B.S.), Nursing (B.S.), Social Work (B.A.),  
Communicative Disorders (B.A.), Gerontology (B.A.)

### Minors

Communicative Disorders, Gerontology,  
Health Science, Social Work.

## Certificate Programs

Early Intervention Specialist, Family Life Education, Gerontology, Human Services Paraprofessional, Preventive Medicine Residency, Professional Services Multicultural/Bicultural.

## Credential Programs

Clinical-Rehabilitative Services, Health Services, Special Education Specialist for the Communication Handicapped.

## Research Centers

### Interdisciplinary Center for Health and Human Services

Kathleen Hoffer, Director

The Interdisciplinary Center for Health and Human Services, administratively housed under the Department of Communicative Disorders, is a multidisciplinary training, research and service facility. It is located in the College of Health and Human Services, and its activities involve departments from all parts of the University. The Center promotes interdisciplinary educational and research opportunities for SDSU faculty and students.

Students from Communicative Disorders, Nursing, Psychology, Reading/Learning, and Social Work participate in the Center's Central Intake program. They learn the skills of interdisciplinary collaboration as well as those specific to their respective disciplines as they assess the behavioral, cognitive, communicative, educational and physical/mental health problems being experienced by clients of all ages. Central Intake is offered as a fee service to the San Diego community. In this, as well as in other Center programs, a high priority is placed on serving the needs of ethnically diverse and economically disadvantaged individuals and families.

The Center's Assistive Device Assessment Program provides language, cognitive, and technical assessments related to augmentative/assistive devices and systems. The Assistive Device Assessment Program is a multidisciplinary service which is oriented to the communicative, educational, physical, social, environmental and vocational needs of individuals who have communication disabilities. An intervention program (through the Department of Communicative Disorders) provides consultative services for clients and their clinicians regarding their communication devices.

The Center's Project B.E.S.T. (Better Elder Service Teams) coordinates two free Senior Health Fairs each semester. Included in the screenings are blood pressure readings, vision and hearing checks, glucose and hemoglobin tests, drug interaction analysis, health education and referral assistance. The Senior Health Fairs are a cooperative effort of the Interdisciplinary Center, Health Science, Communicative Disorders, Nursing, and Social Work.

These and other Interdisciplinary Center for Health and Human Services programs are used as vehicles for both experiential and didactic teaching. Lower division, upper division, and graduate students observe the clinical activities directly and/or on videotape as part of their preparation for professional practice.

Additional information about the Interdisciplinary Center for Health and Human Services programs is available at 594-6121.

## University Center on Aging

E. Percil Stanford, Director

The University Center on Aging is a multidisciplinary organization located in the College of Health and Human Services. The Center is active in such areas of aging as (1) supporting interdisciplinary educational and curriculum efforts; (2) undertaking research, demonstration, and evaluation activities; (3) providing technical assistance and agency consultation for the community; (4) coordinating workshops and seminars for faculty, students, and community members; and (5) providing opportunities for student involvement in aging activities on campus and the community. The Center has a commitment to include ethnic minority content in each area described.

The B.A. degree in gerontology is offered through the Center under the guidance of a multidisciplinary faculty steering committee.

Efforts are made to work with a variety of disciplines to give students an opportunity to focus on gerontology. Courses pertaining to aging are being offered within Communicative Disorders, Physical

Education, Psychology, Public Health, Social Work, Health Science, Sociology, Family Studies and Consumer Sciences, Anthropology, Recreation, Nursing, and Biology. Students wishing to organize a series of courses to meet their needs in the area of gerontology are encouraged to contact the Center Director or staff for more specific information on course offerings.

The Center is responsible for the coordination of a certificate program in conjunction with the College of Extended Studies. This program is geared toward individuals who are likely to be currently working in gerontologically related professions. In addition, the Center administers an undergraduate minor in gerontology.

Other major activities of the Center are the conducting of major research on health and functional status of the elderly, and the administering of a National Institute on Minority Aging, a national resource center for special aging populations, a geriatric education center (with UCSD), a summer Elderhostel program, and RAVE (Retired Active Volunteers in Education). The Center serves as a central point for the development and dissemination of minority aging data nationally.





# College of Professional Studies and Fine Arts

## Administration

Dean: Joyce M. Gattas  
Associate Dean for Budget and Planning: Darrell L. Pugh  
Assistant Dean for Academic Affairs: Myron W. Lustig  
Assistant Dean for Student Affairs: Carole A. Robasciotti

## General Information

The College of Professional Studies and Fine Arts is committed to the pursuit of excellence in academic and artistic endeavors geared to enhancing the human enterprise. Composed of 14 departments and schools, the college is recognized for its excellent academic programs that create a bridge between university and community life by preparing students for professional careers in a wide spectrum of cultural, educational, social, economic, and technical fields.

Bachelor's degrees, and master's degrees in most disciplines, are awarded in art, drama, family studies and consumer sciences, industrial technology, journalism, music, physical education, public administration and urban studies, recreation, speech communication, and telecommunications and film. Three ROTC programs (Air Force, Army, and Navy), which lead to commissioned officer status upon graduation, are also offered. Three research centers housed in the College provide students with opportunities for firsthand experience. They are the International Center for Communications, the Institute of Public and Urban Affairs, and the Institute for Leisure Behavior.

The college is uniquely positioned because of its dedication to and appreciation of traditional and non-traditional forms of scholarship and research. The college serves as a catalyst of creative and artistic excellence, and it maintains a strong relationship to the community through its programs in the fine and performing arts, communication, and public affairs. Additional community ties are fostered through internships that enhance the professional development of students and programs that focus on human performance.

## Curricula Offered

Refer to the Courses and Curricula section of this catalog for a complete listing of program requirements and courses offered by departments within the College of Professional Studies and Fine Arts.

### Master's Degrees

Art (M.A., M.F.A.), Child Development (M.S.), City Planning (M.C.P.), Drama (M.A., M.F.A.), Mass Communication (M.S.), Music (M.A., M.M.), Nutritional Sciences (M.S.), Physical Education (M.A.), Public Administration (M.P.A.), Speech Communication (M.A.), Telecommunications (M.A.).

### Bachelor's Degrees

Art (B.A.), Child Development (B.S.), Criminal Justice Administration (B.S.), Dance (B.A.), Drama (B.A.), Foods and Nutrition (B.S.), Home Economics (B.A.), Industrial Technology (B.S.), Journalism (B.A.), Music (B.A., B.M.), Physical Education (B.A.), Public Administration (B.A.), Telecommunications (B.A.), Television-Film Production (B.S.), Recreation Administration (B.A.), Speech Communication (B.A.), Urban Studies (B.A.).

## Minors

Aerospace Studies, Art, Art History, Child Development, Dance, Drama, Home Economics, Industrial Technology, Journalism, Military Science, Music, Naval Science, Physical Education, Public Administration, Radio-Television, Recreation, Speech Communication.

## Military Curricula

Aerospace Studies, Military Science, Naval Science

## Certificate Program

Family Life Education

## Research Centers

### 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."

### 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. Specifically, topics such as superpower confrontation, nuclear armaments, international conflict, sociopolitical violence, and global environmental issues as they relate to security are covered.

The Institute is a joint effort of the Colleges of Sciences, Arts and Letters, and Professional Studies and Fine Arts. 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 program, "International Security and Conflict Resolution," under the major in Liberal Studies—Emphasis in Three Departments. Students and faculty can obtain more information by calling the IISCOR office at 594-4352.

## 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, and 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.

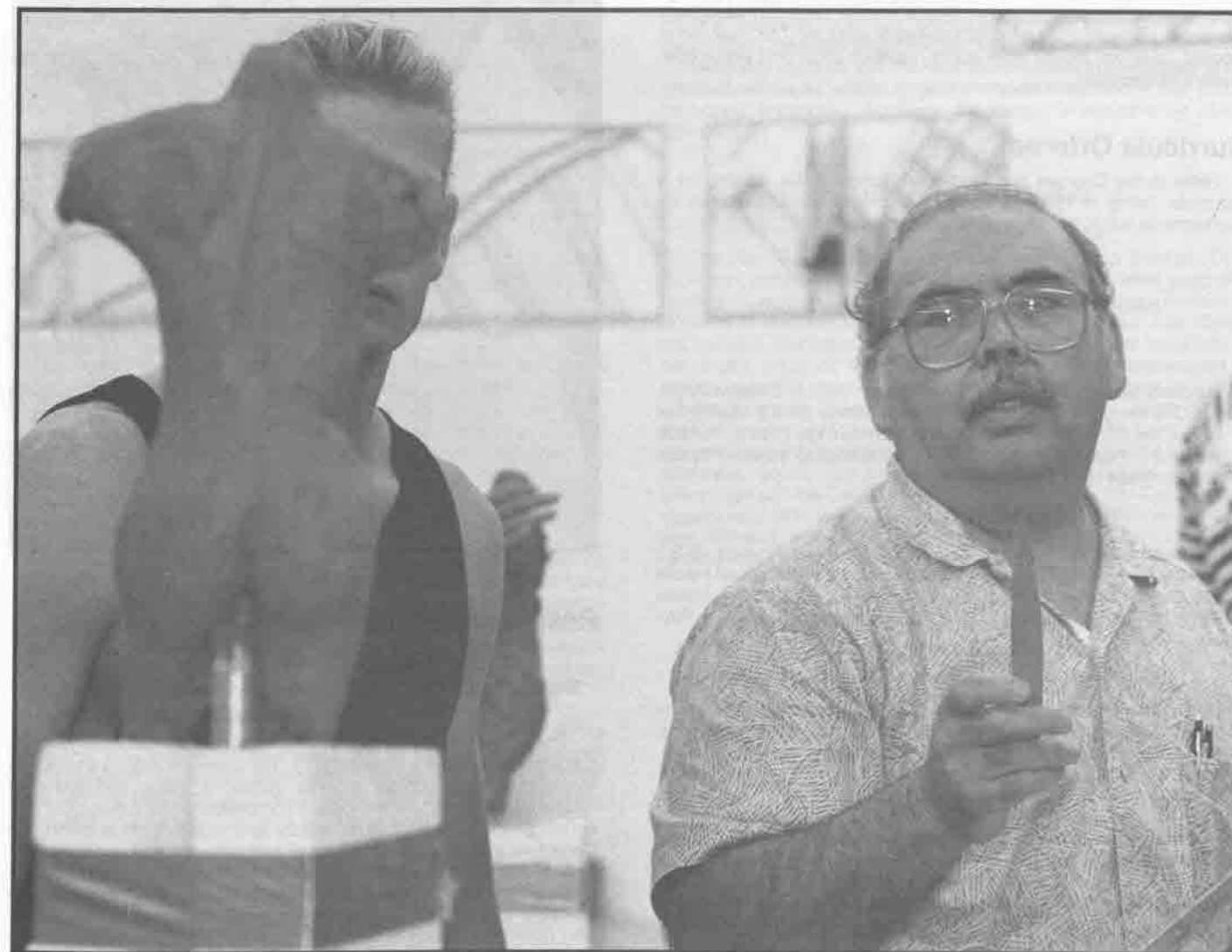
The Institute administers a variety of service programs within San Diego County. Camp Able, an aquatic-based camp for disabled children and adults, operates ten weeks during the summer at Silver Strand State Beach. The city of Santee contracts with the Institute for a nonfee-based program at school sites for children 6 to 16. And the Spring Valley Park and Recreation District (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.

## 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.



# College of Sciences

## Administration

Dean: Donald R. Short, Jr.  
Associate Dean: James W. Neel  
Associate Dean: Rebecca B. Bryson  
Associate Dean for External Relations: Gordon L. Shackelford  
Assistant Dean for Student Affairs: Celia L. Marshak

## General Information

The College of Sciences, composed of eight departments and various subprograms, offers bachelor's, master's, and doctoral degrees, and curricula for preprofessional students in medicine, veterinary medicine, and dentistry. The science curriculum is enhanced by research centers which provide field experience as well as special seminars with guest speakers. The off-campus sites include the Mt. Laguna Observatory, about 5,000 acres in three separate biological sciences research stations, and a marine research laboratory managed jointly with Sea World Research Institute. The majority of tenured Sciences faculty have active research programs which offer student involvement.

## Curricula Offered

Refer to the Courses and Curricula section of this catalog for a complete listing of program requirements and courses offered by departments within the College of Sciences.

### Doctoral Programs

Biology, Chemistry, Clinical Psychology, Ecology

### Master's Degrees

Applied Mathematics (M.S.), Astronomy (M.S.), Biology (M.A., M.S.), Chemistry (M.A., M.S.), Computer Science (M.S.), Geological Sciences (M.S.), Mathematics (M.A.), Microbiology (M.S.), Physics (M.A., M.S.), Psychology (M.A., M.S.), Radiological Health Physics (M.S.), Statistics (M.S.).

### Bachelor's Degrees

Astronomy (B.S.), Biology (B.A., B.S.), Chemical Physics (B.S.), Chemistry (B.A., B.S.), Computer Science (B.S.), Environmental Health (B.S.), Geological Sciences (B.S.), Mathematics (B.A., B.S.), Microbiology (B.A., B.S.), Physical Science (B.S.), Physics (B.A., B.S.), Psychology (B.A.).

### Minors

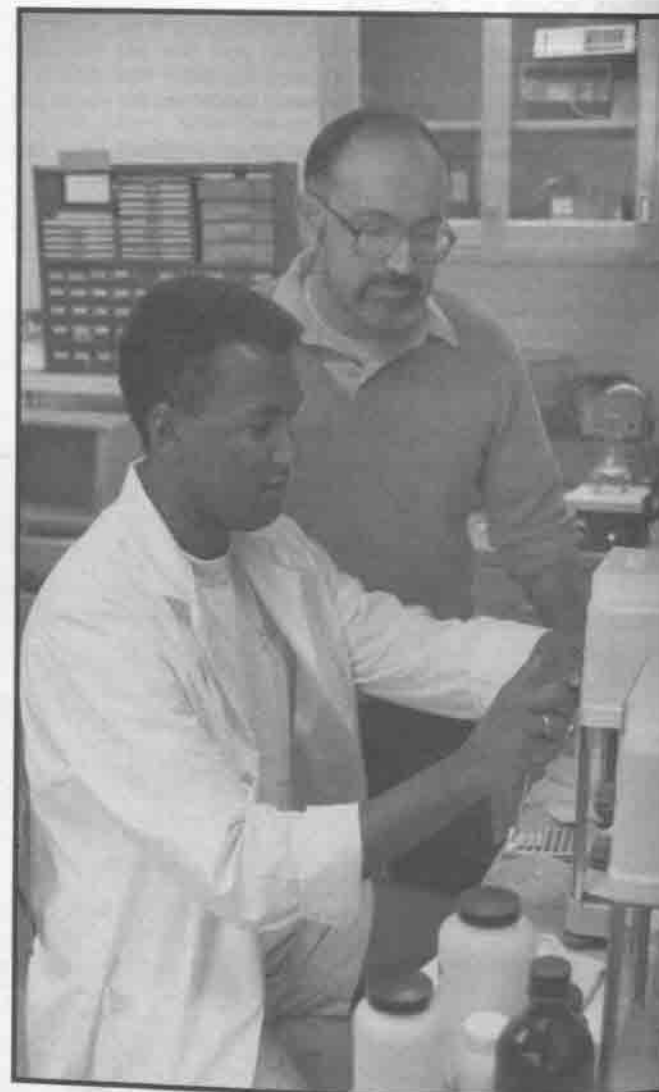
Astronomy, Biology, Chemistry, Computer Science, Energy Studies, Geological Sciences, History of Science and Technology, Mathematics, Oceanography, Physics, Psychology.

### Certificate Programs

Introductory Mathematics, Recombinant DNA Technology, Single Subject Mathematics.

### Other Curricula

Allied Health, Medical Technology and Public Health, Pre dental, Pre medical, Preveterinary.



## Research Centers

### The Edwin C. Allison Center for the Study of Paleontological and Geological Sciences

Ian M. Johnston, Director

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.

## Center for Behavioral and Community Health Studies

John P. Elder and Alan J. Litrownik, Co-Directors

The Center for Behavioral and Community Health Studies is housed at 6363 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 two 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 Health Science, Physical Education, 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 National Cancer Institute, the Henry J. Kaiser Family Foundation, the State of California Department of Health Services, the University of California Tobacco Research Account, 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 for project staff and graduate students involved in several training programs to participate in community interventions.

## Biological Field Stations

John D. Tenhunen, Director

SDSU operates three field sites to facilitate research and teaching in the chaparral and related ecosystems of San Diego County. These field sites, administered by the College of Sciences, support interdisciplinary research and educational activities in ecology and other areas of biology, soils, hydrology, geology, physics, geography and anthropology.

The field sites are the 4460-acre Santa Margarita Ecological Reserve near Temecula, the 4400-acre Sky Oaks Biological Research Station in Chihuahu Valley north of Warner Springs, and the 500-acre Fortuna Mountain Ecological Reserve north of Mission Gorge Road in San Diego.

The Santa Margarita Ecological Reserve, currently the focus of a major masterplanning effort, maintains laboratory and dormitory facilities, experimental plantings, and weather stations. The site provides a mosaic of riparian vegetation, oak woodlands, grasslands, coastal sage scrub, chamise chaparral, and mixed chaparral. While stands of older chaparral exist, much of the chaparral vegetation is young, having been burned in the 1969 Walker Basin fire. Abundant wildlife exists and the Santa Margarita River, a perennial stream, offers stream and riparian habitat for study.

The Sky Oaks Biological Research Station is adjacent to the Anza Borrego State Park, Cleveland National Forest, BLM lands, and private land. The proximity of these lands provides many research and teaching opportunities. This site offers a diversity of community types, including red shank-chamise chaparral, mixed chaparral, oak woodlands, grasslands, riparian communities, and pines. Most of the chaparral is old, having been burned in the 1927 fire, but aged communities of 2 and 85 years also exist on the property.

Students and faculty wishing to conduct research at one of the biological field sites or to use these areas for instructional purposes should contact the director through the campus Biological Field Stations office at 594-2896. Reports describing the ecology and development of the Santa Margarita and Sky Oaks sites are available.

## Coastal and Marine Institute

Joy B. Zedler, Director

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 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 at Carlsbad, 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 committee 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.

## Center for Effective Organizations

Robert Penn, Director

The Center for Effective Organizations was established to conduct applied research and development studies having the primary goal of improving human performance in public and private sector organizations. It focuses on the processes and strategies that enhance productivity and organizational effectiveness. In this context, organizational failures as well as successes are studied.

The Center also conducts evaluations of existing and planned programs and interventions designed to improve organizational performance.

The Center organizes symposia and conferences aimed at appraising the industrial, business, and governmental communities of the most recent developments pertinent to its mission.

Graduate students are afforded opportunities to participate in the research efforts as well as to gain important experiences that should be career enhancing. Additional information is available by calling 594-6680.

## 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. 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 area. 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.

## 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. Specifically, topics such as superpower confrontation, nuclear armaments, international conflict, sociopolitical violence, and global environmental issues as they relate to security are covered.

The Institute is a joint effort of the Colleges of Sciences, Arts and Letters, and Professional Studies and Fine Arts. 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 program, "International Security and Conflict Resolution," under the major in Liberal Studies—Emphasis in Three Departments. Students and faculty can obtain more information by calling the IISCOR office at 594-4352.

#### 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 Mathematical Sciences, Natural Science, Psychology, Teacher Education, and Physics. It is administered by a director appointed by the dean of the College of Sciences and an associate director appointed by the dean of the College of Education. Through its activities, CRMSE initiates, encourages, and supports the scholarly pursuit of important theoretical and applied problems in mathematics and science education. CRMSE supports faculty in their current research projects and in the preparation of manuscripts for publication and grant proposals for continued research. The Center also provides information and guidance to students intending to pursue graduate degrees or careers in mathematics or science education. CRMSE works closely with local, state, and national groups concerned with these issues. The Center is located at 6475 Alvarado Road, Suite 206; telephone 594-5090.

#### Microchemical Core Facility

Christopher C. Glembotski, 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 protein/DNA synthesis and sequencing, amino acid analysis, and protein/DNA purification services for cell and molecular biologists associated with any of the 20 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.

#### Molecular Biology Institute

A. Stephen Dahms, Director  
Sanford I. Bernstein, Associate Director

The Molecular Biology Institute was established to serve interested departments of the biological and physical sciences in the coordination, support and enhancement of research and instruction in the molecular biological sciences. Interests and activities of the MBI encompass all approaches which aim to explain biology at the molecular level. Currently, full members of the Institute are drawn from the Departments of Biology and Chemistry and participate in the respective Ph.D. programs. Associate members are drawn from a variety of disciplines that are cognate with the molecular biological sciences. The Institute is also constituted as the University unit authorized to administer the master's degree 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, Sea Grant (NOAA), the Department of Energy, the U.S. Department of Agriculture, and the California Metabolic Research Foundation. Additional information is available from the MBI office; telephone 594-2822.

#### Interdisciplinary Research Center for Scientific Modeling and Computation

Jose E. Castillo and Peter Salamon, Directors

The Interdisciplinary Research Center for Scientific Modeling and Computation (IRC) promotes and supports the interaction between applied mathematics and the disciplines of physics, chemistry, biology, and engineering by providing the necessary infrastructure for productive cross-disciplinary 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. Members and participants are drawn from the faculties of various departments in the Colleges of Science and Engineering.

The Center sponsors interdisciplinary seminars, colloquia, and workshops which draw participants from many fields. Scientists from industry and other universities in the U.S., Europe, and Japan visit the Center for both short and extended periods, to work on science and engineering problems that can benefit from interdisciplinary efforts.

The Center's activities significantly enhance the ties between mathematics and the other sciences at SDSU by involving faculty and students in projects closely connected to real applications. For more information call the IRC office at 594-7205.

#### Survey Research

Oscar Kaplan, Director

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

#### Systems Ecology Research Group

Ross A. Virginia, Director

The Systems Ecology Research Group (SERG) is an interdisciplinary research group established by the College of Sciences to conduct basic research and promote graduate education in ecosystem science. Members include faculty from the Departments of Biology, Mathematical Sciences, and Geography. Group expertise exists in plant and animal ecology, landscape ecology, micrometeorology, microbial ecology, soil science, community and statistical ecology, image processing and remote sensing, geographical information systems, computer science, applied mathematics, and simulation modeling. At present, major emphasis is on integrated research projects in desert, arctic tundra, and chaparral ecosystems with research on numerous aspects of soil ecology, ecosystem disturbance and reclamation, and ecosystem response to global climate change. Studies include plant production and water relations, phenology and population dynamics, herbivory, nutrient cycling, movement of genetically engineered microorganisms, and the effects of global increases in atmospheric carbon dioxide on plants and terrestrial ecosystems. Funding for research support is provided by both national and state agencies such as the National Science Foundation, U.S. Department of Agriculture, U.S. Environmental Protection Agency, U.S. Forest Service, U.S. Department of Energy, and the California Department of Transportation.

Additional information may be obtained at the SERG office, second floor, Physical Sciences, or by calling 594-5976.

## Imperial Valley Campus

### Administration

Dean: David Ballesteros  
Associate Dean: Pamela M. Balch  
Associate Dean: Dana W. Murphy  
Assistant Dean for Student Affairs: Cynthia D. Flores  
Director of Library Services:  
Academic Specialist: Kathleen Russum  
Business Manager: Emma Arguelles Odegard

### Faculty

Emeritus: Baldwin, Erzen, Franklin, Harmon, J. King, Lovely, Rodney, Smith, Spencer, Varela-Ibarra, Wilson  
Professors: Ayala, Balch, P.M., Dunn, Polkinhorn, Ryan, Simon  
Associate Professors: Polich, Reyes, Shenás, Stampfl  
Assistant Professors: Garrison, Hill, R., Neumann  
Lecturers: Anderholt, Anderson, Ashton-Coombs, Balch, P.E., Bowen, Briggs, Carpenter, Carrasco, Elizondo, Ferson, Fragale, Fuentes, Gomez-Montero, Gonzalez-Lopez, Hill, J., Horne, Jacklich, Jones, Livingston, Murray, Nunn, Palese, Parker, Roth, Rousseau, Shaver, Shinn, Spaulding, Stamon, Thompson, Travis  
Adjunct: Gonzalez

### 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 with a low student/faculty ratio, the Imperial Valley Campus offers students the advantages of small classes and individual contact with the faculty. Instructional television (ITFS) provides students in Calexico the opportunity to participate in some classes broadcast live from the main campus in San Diego. 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 9-12 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 more than 1,000,000 people. There are also many opportunities on the U.S. side of the border to be involved in a bilingual/crosscultural 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 a 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.

### Curricula Offered

#### Degrees

Major in criminal justice administration with the B.S. degree in applied arts and sciences.  
Major in English with the B.A. degree in liberal arts and sciences.  
Major in history with the B.A. degree in liberal arts and sciences.  
Major in Latin American studies with the B.A. degree in liberal arts and sciences.  
Major in liberal studies with the B.A. degree in liberal arts and sciences.  
Major in psychology with the B.A. degree in liberal arts and sciences.  
Major in public administration with the B.A. degree in applied arts and sciences.  
Major in social science with the B.A. degree in liberal arts and sciences.  
Major in Spanish with the B.A. degree in liberal arts and sciences.  
Minor in public administration.  
Minor in small business management.

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 and credentials. 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 Science degree in Counseling, Special Education Specialist credentials, the Master's degree in Social Work, and the Master's degree in Public Administration.

#### Certificate Programs

Art, Business Administration, Public Administration, Spanish Court Interpreting, Spanish Translation Studies

#### Teaching Credentials

Basic: Multiple Subject, Multiple Subject (bilingual emphasis), Single Subject  
Specialist: Administrative Services — in conjunction with the College of Education  
Special Education — in conjunction with the College of Education

For further information, see the Bulletin of the Imperial Valley Campus.

## Facilities

The campus is located on an eight-acre city block in the heart of Calexico's Civic Center, across from Rockwood Plaza. Originally, this was 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 media center which was dedicated in February 1983.

The library, located in the center of campus, is designed to facilitate research and to provide a pleasant atmosphere for study. It features open stacks and a variety of study areas including carrels, large tables, and comfortable, upholstered chairs. The collection of over 50,000 volumes supports the curricula offered on the Imperial Valley Campus and includes a large bilingual collection. The library receives over 500 periodical and serial titles as well as a significant collection of microfilm and microfiche resources. Among the services provided library patrons are reference assistance, photocopying machines for print and microforms, typing rooms, interlibrary and intercampus loans, and computerized information retrieval.

The Media Center provides assistance to the faculty in the use of educational technology. It has a wide range of equipment for use in the classroom. A modern language laboratory, computer laboratory, and tutoring center are available to the campus community.

A student union, bookstore, administration, student services, faculty office, and shop buildings complete the facilities on the campus.

## Admission and Registration

To apply for admission to the Imperial Valley Campus, students must file a complete application and transcripts as outlined elsewhere in this catalog. Both completed application forms and transcripts

should be sent to the Admissions Office, San Diego State University Imperial Valley Campus, 720 Heber Avenue, Calexico, California 92231. Please telephone (619) 357-5500 for further information. Because of the size of the campus, the registration process is easily accomplished in a short period of time.

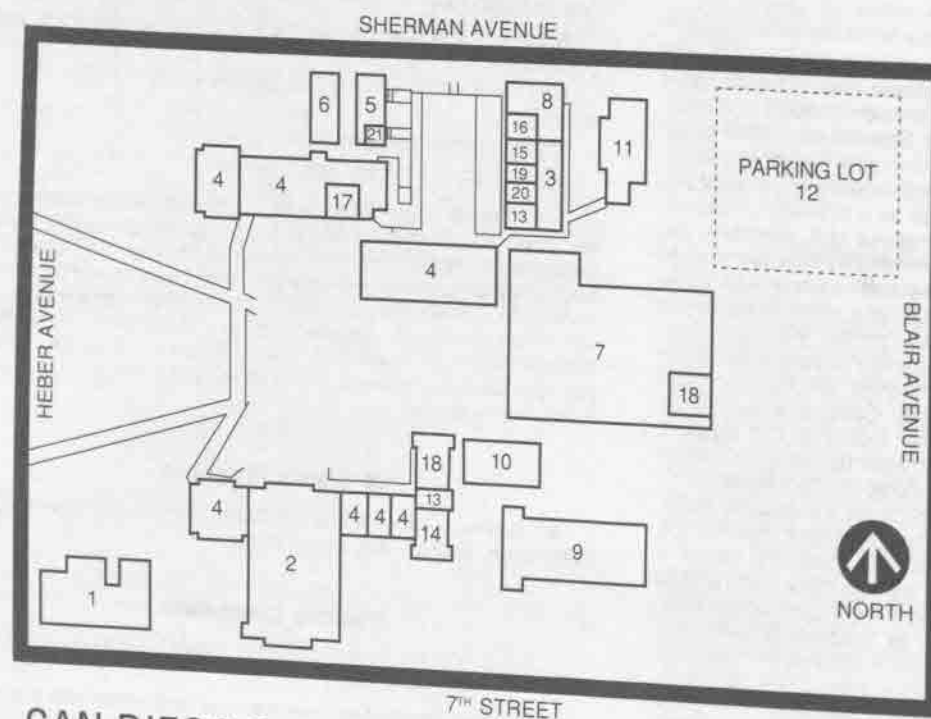
## Scholarships

The Imperial Valley Campus students were awarded \$20,000 in scholarships for the 1991-92 academic year. Information and applications for scholarships are available from the Office of Student Affairs. Following is a list of scholarships established at Imperial Valley Campus:

Academic Excellence Scholarship; American Business Women's Association; American Institute of Certified Public Accountants; Calexico Educational Foundation; Enrique Camarena Endowment; Dean's Endowment; Delta Kappa Gamma; Education Scholarship; Faculty/Student Mentor Endowment; Ruth Fifield; Ethel O. Gardner P.E.O.; Good Sport Howie Endowment; Government Agencies Credit Union Scholarship; Cleo and Elizabeth Green Scholarship; Holtville Rotary; Imperial Valley Campus faculty and staff; Imperial Valley Campus Fund; National Hispanic Scholarship; Jerry Pennington Endowment; Phi Delta Kappa; Pilot Club; San Diego Campus Scholarship; Soroptimists International, Calexico; Doris C. and Lowell W. Sutherland; Irene Westling Endowment.

## Commencement

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



## BUILDING LEGEND

1. ADMINISTRATION/  
BUSINESS OFFICE
2. AUDITORIUM
3. BOOKSTORE
4. CLASSROOMS
5. FACULTY OFFICES - EAST
6. FACULTY OFFICES - WEST
7. LIBRARY
8. INSTRUCTIONAL SERVICES
9. SHIPPING/RECEIVING/  
SHOPS
10. STUDENT AFFAIRS
11. STUDENT UNION
12. PARKING LOT
13. MEDIA CENTER/STUDIO
14. LANGUAGE LAB
15. LANGUAGE INSTITUTE
16. BORDER INSTITUTE
17. PSYCHOLOGY LAB
18. COMPUTER LAB
19. CENTER FOR FOOD AND  
HUNGER EDUCATION
20. FACULTY/STUDENT  
MENTOR PROGRAM
21. FACULTY OFFICES -  
PART-TIME

SAN DIEGO STATE UNIVERSITY  
IMPERIAL VALLEY CAMPUS  
CALEXICO, CALIFORNIA

# Academic Divisions and Special Programs

Division of  
Undergraduate Studies

Graduate Division

Nondegree Curricula

Preprofessional Programs

Certificate Programs



# Division of Undergraduate Studies

## Objectives and Functions

The Division of Undergraduate Studies serves to provide coordination and evaluation of the undergraduate programs at San Diego State University. It has general responsibility for the undergraduate curriculum and for academic standards and regulations that affect undergraduate students.

The Division has a special concern and responsibility for academic programs of a University-wide character. It administers the University Honors Program and Honors Exchanges, CSU International Programs, the Faculty/Student Mentoring Program, and the Servicemembers' Opportunity College. In addition, it sponsors the Liberal Studies majors.

Innovation contributes to the vitality of the University. The Division encourages and assists faculty in the development of new perspectives, programs, and curriculum, and in the preparation of grant proposals for academic improvement.

On significant matters of University-wide concern, the Division of Undergraduate Studies submits proposals to the University Senate for consideration and action.

Above all, the Division of Undergraduate Studies exists to promote the quality, diversity, and richness of the undergraduate programs at San Diego State University. It does so through the active involvement of students and faculty in the programs of the Division.

## Honors Program

### University Honors Program

The University Honors Program provides opportunities for students with demonstrated academic ability to find the stimulation and challenge that will help them develop their potential. The program offers courses which meet the General Education requirements common to all students; it does not offer work in specific majors. Students should anticipate enrolling in at least two honors courses each year, drawing their other work from the regular offerings of the University. The program is open to students in all majors, and involves small classes, special advising in both academic requirements and career options, opportunity for independent projects, and participation in student exchanges with similar programs across the nation.

Students may apply by contacting the Division of Undergraduate Studies (AD-223) at entrance, or during the first year at college. Eligibility at entrance is determined by an SAT score of approximately 1100 or above (ACT 26), or a high school GPA of 3.6, including successful completion of advanced high school courses; later eligibility is determined by a superior GPA at this University.

### Departmental Honors Courses

Some departments regularly offer honors classes which are independent of the University Honors Program; for these eligibility is determined according to achievement in the particular field. Students should consult the Class Schedule for such honors classes and contact the department or instructor for information.

## 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. To date, over 10,000 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 35 recognized universities and institutions of higher education in 15 countries, the International Programs also offers a wide selection of study locales and learning environments.

**Australia.** The University of Queensland (Brisbane)

**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 Bishop's University, i.a.)

**Denmark.** The DIS Study Program (the international education affiliate of the University of Copenhagen)

**France.** Institut des Etudes Françaises pour Etudiants Etrangers, Université de Droit, D'Économie et des Sciences D'Aix-Marseille (Aix-en-Provence)

**Germany.** Universität Heidelberg and Universität Tübingen

**Israel.** 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)

**New Zealand.** Lincoln University (Christchurch) and Massey University (Palmerston North)

**Spain.** Universidad Complutense de Madrid and Universidad de Granada

**Sweden.** Uppsala Universitet

**United Kingdom.** Bradford University, Bristol University, Kingston Polytechnic, Sheffield University, and University of Wales, Swansea

**Zimbabwe.** University of Zimbabwe (Harare)

The International Programs pays all tuition and administrative costs for participating 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. California Community Colleges transfer students are eligible to apply directly from their community college if they can meet this requirements. 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 300, Long Beach, California 90802-4275. Applications for the 1993-94 academic year overseas must be submitted by February 1, 1993.

## International Study Courses

San Diego State University provides the opportunity for students enrolled in The California State University International Programs to

receive credit for special study or for subjects taken at universities abroad. The numbers 200, 400, and 500 are used to designate lower division, upper division, and upper division also acceptable for graduate credit. Transcript designation will be **IS 200, 400, 500.**

## IS 200, 400, 500. Projects in Study Abroad

(Subject to be designated by Overseas Resident Director, International Programs) (1-6) I, II

Prerequisite: Open only to students in The California State University International Programs.

Coursework taken by students studying abroad under the auspices of the CSUIP. May be repeated with different content.

## Faculty/Student Mentoring Program

The Faculty/Student Mentoring Program (FSMP) provides academic support opportunities and encouragement for students from underrepresented groups to assist them in reaching their goals. This support is offered through student mentors trained by faculty. All Colleges and the Imperial Valley Campus are participants in the program. Students are matched with faculty and students who share similar educational interests and goals. Students may apply by contacting the Faculty Mentor in their respective colleges. Information is available from the Division of Undergraduate Studies (AD 223).





# Graduate Division

## Organization and Administration

All graduate work leading to advanced degrees is under the jurisdiction of the Graduate Division and Research. Responsibility for all graduate curricula is delegated to the Graduate Council under the chairship of the Graduate Dean, who also serves as the administrative officer of the Graduate Division and Research.

The Graduate Division and Research admits all students to the University and to authorized graduate degree curricula, determines students' eligibility to continue in such curricula and, in the cases of unsatisfactory performance, requires students to withdraw from graduate curricula and the University.

The Graduate Dean is the appropriate University authority for the administration of all matters related to graduate degree curricula, minimum requirements for which are specified in Section 40510 of the *California Code of Regulations*.

## Association Membership

San Diego State University is a member of the Western Association of Graduate Schools and the Council of Graduate Schools in the United States.

## Degrees Offered

All master's degrees are conferred by the Trustees of The California State University upon recommendation of the faculty of San Diego State University. These degree programs are designed to provide instruction for graduate students in the liberal arts and sciences, in applied fields, and in the professions including the teaching profession.

Doctoral degrees are awarded jointly by the Board of Regents of the University of California and the Board of Trustees of The California State University in the names of San Diego State University and the cooperating campus of the University of California; in Education, jointly by the Board of Trustees of The California State University and the Board of Fellows of the Claremont Graduate School.

### Doctor of Philosophy

The Doctor of Philosophy degree is offered in the following fields:

Biology	Engineering Sciences/
Chemistry	Applied Mechanics
Clinical Psychology	Geography
Ecology	Public Health
Education	

### Master of Arts

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

Anthropology	French	Music
Art	Geography	Philosophy
Asian Studies	History	Physical Education
Biology	Industrial and Technical	Physics
Chemistry	Studies*	Political Science
Communicative	Interdisciplinary Studies	Psychology
Disorders	Latin American	Russian*
Drama	Studies	Sociology
Economics	Liberal Arts	Spanish
Education	Linguistics	Speech Communication
English	Mathematics	Telecommunications

\* Admission suspended for the 1992-93 academic year.

### Master of Science

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

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

### 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

## Admission to Postbaccalaureate Study

Admission to San Diego State University for postbaccalaureate 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. Potential applicants should refer to the *Graduate Bulletin* under the departmental listings. Students are also advised to contact the departmental offices as soon as graduate work is contemplated in the final baccalaureate year for advice as to how to proceed. Some departments stop reviewing applications earlier than others because of the limited space available.

### Application Procedures

All applicants for postbaccalaureate study (e.g., advanced degree applicants, those seeking credentials or certificates, and those interested in taking courses for personal or professional reasons, etc.) must file a complete application within the appropriate filing period. **Second baccalaureate degree candidates should apply as undergraduate degree applicants.** A complete application for postbaccalaureate study includes all of the materials required for undergraduate applicants plus the supplementary graduate admissions application. Postbaccalaureate applicants, including those who completed undergraduate degree requirements and were graduated from this University, are also required to complete and submit an application and the \$55.00 nonrefundable application fee. Since applicants for postbaccalaureate programs may be limited to the choice of a single campus on each application, redirection to alternative campuses or later changes of campus choice will be minimal. In the event that a postbaccalaureate applicant wishes to be assured of initial consideration by more than one campus, it will be necessary to submit separate applications (including fees) to each. Applications may be obtained from the Admissions and Records Office or the Graduate Division of any California State University campus.

### General Admission Requirements

All applicants for any type of postbaccalaureate study at San Diego State University must: (a) hold an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or have completed equivalent academic preparation as determined by the Graduate Dean; (b) have attained a grade point average of at least 2.5 (when A equals 4) in the last 60 semester (90 quarter) units attempted; and (c) have been in good standing at the last 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 merit such action. **Each department or school offering an advanced degree program reserves the right of determining the admissibility of any student to that program even though the student may meet the general requirements for admission to postbaccalaureate study.**

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

### 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 or credential, 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.

A student who is 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 from the Graduate Division and Research. Reports of the GRE General test scores must be on file at the University before continuing students may apply for graduate standing (classified).

#### 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. Additionally, all students in advanced certificate programs must achieve a satisfactory score on the GRE General test. (Students holding an advanced degree from an institution that is a member of the Council of Graduate Schools are exempted from this requirement.) A student must also meet the professional, personal,

scholastic and other standards prescribed by the appropriate department. The applicant should contact the department 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:

- Achieve a satisfactory score on the GRE General test. (Students holding an advanced degree from an institution which is a member of the Council of Graduate Schools are exempted from this requirement; students applying to the College of Business Administration will take the Graduate Management Admission Test.)
- Have completed an undergraduate major appropriate to the field in which the prospective student desires to earn an advanced degree.
- Satisfy the special departmental or college requirements as stated in Part Three of the *Graduate Bulletin* under "Fields of Study and Courses of Instruction."
- Meet the professional, personal, and scholastic standards for graduate study established by the department and the Graduate Council.

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

#### Conditional Graduate Standing (Classified)

A student wishing to be admitted to a program of study leading to an advanced degree who meets the criteria specified under General Admission Requirements but who has deficiencies 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 will be accorded full graduate standing (classified).

## Graduate Bulletin

Complete details on the operation and administration of these requirements, together with other information on graduate study, will be found in the *Graduate Bulletin*, which is available at the Bookstore.



# Nondegree Curricula

## Preprofessional Programs

Entrance into professional schools is becoming increasingly competitive; therefore, it is imperative that students begin planning their curriculum at the earliest possible time in conjunction with the appropriate academic adviser.

### Preprofessional Health Advising Office

The preprofessional health advising office is responsible for advising premedical, pre dental and preveterinary students in their preparation and application to the professional schools of their choice. This office works in conjunction with the candidate's major department to establish a degree program coordinated with the preprofessional requirements of the professional schools. It is the communication link between the student and the profession, keeping the student apprised of changes in the requirements and procedures for acceptance. The advising office is located in Life Sciences, Room 105, (619) 594-6638; Cynthia Lewis, adviser.

### Predental Curriculum

The predental program is pursued in conjunction with a degree program. Students ordinarily elect to concentrate in biology, chemistry, or microbiology, with a major in one area and selected coursework in the others. Other departmental majors are permissible, however. **Predental students should confer with the predental adviser prior to initial registration and at least once each semester regarding their progress, and to obtain approval for their program for the coming semester.**

**Science requirements.** Regardless of the major, predental students should include the following courses in their program: Biology 201, 202, 215, 352, 356, 577, 590; Chemistry 200, 201, 231, 431; Mathematics 121 and 122, or 150, or 155 and 156; Physics 180A-182A and 180B-182B, or 195, 195L, 196, 196L, 197, 197L; Psychology 101 plus one upper division course in psychology. Each student should consult the major for level of course required when there are alternatives. **Biology 250B, Topics in Dentistry, is offered each spring semester and Biology 499, Preventive Dentistry, is offered every semester.**

**Recommended electives.** In addition to the courses listed, students should fulfill all requirements for their major and, if possible, take at least one advanced course recommended by their department such as: Chemistry 361A, 361B; Biology 350, 474, 522, 580. The students are also expected to obtain information from the preprofessional health advising office regarding the entrance requirements of specific dental schools.

**College preparation.** High school students planning to enter dentistry should include in their high school program the following subjects: elementary algebra, plane geometry, intermediate algebra, chemistry, physics, two or three years of French, German or Spanish, and four years of English.

**Admission.** Predental students must realize that although the pool of dental applicants has declined recently, there is competition for admission to schools of dentistry, particularly at University of California, Los Angeles and University of California, San Francisco. The average overall GPA of the entering class of 1989 to UCLA was 3.3. Minority students and students who wish to be considered under "disadvantaged" status must typically submit an additional petition or form to each school (such as University of California, San Francisco, Health Sciences Special Service Program).

Aptitude tests given by the American Dental Association should be taken not later than fall term one year before admission. Application to take this test must be made well in advance of the scheduled test date. A pamphlet describing the test, giving dates and places where it will be given, and providing application information is available in the preprofessional health advising office.

The committee letter is preferred by most schools of dentistry. It is San Diego State University's formal endorsement of your candidacy. Most schools also require three letters of evaluation, two of which should be from science professors from whom you have taken courses. Evaluation forms are available in the preprofessional health advising office.

The preprofessional health adviser will be available to high school or transfer students by appointment in June and during the August registration period. **All predental students should establish a personal file in Life Sciences, Room 105; 594-6638.**

### Prelegal Curriculum

The prelegal program is pursued in conjunction with a degree program. There is no specific prelaw program leading to a bachelor's degree. Students interested in the legal profession should consult with the University prelaw adviser regarding the entrance requirements of the specific law school they hope to attend.

The following curriculum is designed to meet the requirements of standard American schools of law for a broad and liberal education, while at the same time providing desirable flexibility in the individual program. There are two patterns of concentration which will usually be indicated for the prelegal student, either of which may be selected. In consultation with the adviser, to fit best the interests of the student. These are the major-minor pattern and the liberal studies major pattern. Subject to individual variation, the fields of economics, history, and political science should receive first consideration when choosing the pattern of concentration as being the most effective background for later professional study in law.

The following courses of study are recommended. Lower division: Accountancy 201 and 202; Economics 101 and 102; Political Science 101 and 102, and a year course in history. Upper division: In the junior and senior years students will plan their course with the counsel of their adviser in terms of the field of law in which they plan to work, but keeping in mind the entrance requirements and examinations for admission to schools of law. The following list should receive prime consideration by all prelegal students in the selection of courses, though it is to be thought of as flexible in accordance with student needs. Finance 340; Economics 338, 370; History 545A-545B; Political Science 301A-301B, 346, 347A-347B. Additional: Economics 380, History 536 and 547A-547B, Political Science 345 and 348.

In addition to the courses taken in the fields of concentration, upper division electives in English, philosophy, psychology, sociology, and speech communication are recommended. A mastery of English is essential.

Students interested in pursuing a legal career are counseled by the University prelaw adviser. Through this office, prelegal students receive information and advice concerning law school application and admission procedures. Guidance in undergraduate preparation for law study is also available. The University prelaw adviser can be contacted through the Department of Political Science.

### Premedical Curriculum

The premedical program is pursued in conjunction with a degree program. Students ordinarily elect to concentrate in biology, chemistry, or microbiology, with a major in one area and selected coursework in the others. Other departmental majors are permissible, however.

**Premedical students should confer with the premedical adviser prior to initial registration and at least once each semester regarding their progress, and to obtain approval for their program for the coming semester.**

**Science requirements.** Regardless of the major, premedical students should include the following courses in their program: Biology 201, 202, 215, 352, 356, 576 or 577 and 590; Chemistry 200, 201, 231, 361A, 361B, 431; Mathematics 121 and 122, or 150, or 155 and 156; Physics 180A-182A and 180B-182B, or 195, 195L, 196, 196L, 197, 197L. Each student should consult the major for level of course required when there are alternatives. **Biology 250A, Topics in Medicine, is offered each fall semester.**

**Recommended electives.** In addition to the courses listed, students must fulfill all requirements for their major and, if possible, take at least one advanced course recommended by their department such as: Biology 350, 474, 522; Psychology 101. Students are also expected to obtain information from the preprofessional health advising office regarding the entrance requirements of specific medical schools.

**College preparation.** High school students planning to enter medicine should include in their high school program the following subjects: elementary algebra, plane geometry, intermediate algebra, chemistry, physics, two or three years of French, German or Spanish, and four years of English.

**Admission.** Most medical schools give preference to students with baccalaureate degrees in academic subjects; **premedicine is not an academic major.** Any major is acceptable to medical schools, and recent research has demonstrated that there is no bias against the nonscience major in the selection process. Nor is there any significant difference between the science and the nonscience major in medical school performance or in eventual selection of residency. The specific requirements for various majors are found in this catalog under department and program headings.

Competition for admission to California medical schools has increased markedly in the past few years. Selection for admission is based on many factors beyond the satisfactory completion of minimum requirements including undergraduate grade point average, MCAT scores, and letters of evaluation. Courses taken to satisfy the science requirements must be taken on a graded basis. The credit/no credit option should be used sparingly on nonscience courses.

Nearly all medical schools also require applicants to take the MCAT, given early spring and fall each year. Reservations for this examination **must** be made at least one month in advance of the scheduled date; reservation blanks are available in the preprofessional health advising office.

The office also has a manual which describes the test and provides practice questions and suggestions for preparing for the test. Applicants are urged to take the test in the spring of the calendar year preceding the year of admission to medical school and not later than the fall term one year before anticipated admission.

The committee letter is preferred by most schools of medicine. It is San Diego State University's formal endorsement of your candidacy. Three to five letters of evaluation are also generally required by medical schools and used in the selection process. At least two letters should be from science faculty. The importance of these letters cannot be overemphasized. It is strongly recommended that premedical students secure letters from instructors immediately upon finishing courses, and that students see their adviser regularly so that the adviser can write knowledgeable recommendations when needed. Evaluation forms are available in the preprofessional health advising office.

The varying admission requirements of medical schools are listed in the publication *Medical School Admission Requirements* (available in the Bookstore). Since most students seek admission to about twenty medical schools, this book should be consulted during the year of application.

**Osteopathic medical schools** require basically the same minimum undergraduate program. Most schools also request letters of evaluation from practicing osteopaths.

## Nondegree Curricula

The preprofessional health adviser will be available to high school or transfer students by appointment in June and during the August registration period. **All premedical students should establish a personal file in Life Sciences, Room 105; 594-6638.**

### Preveterinary Curriculum

The preveterinary program is pursued in conjunction with a degree program. Students ordinarily elect to major in biology. Other departmental majors are permissible, however. Preveterinary students should confer with the preveterinary adviser prior to initial registration and at least once each semester regarding their progress, and to obtain approval for their program for the coming semester.

**Science requirements.** Regardless of the major, preveterinary students should include the following courses in their program: Biology 201, 202, 215, 352, 577; Chemistry 200, 201, 231, and 431; Mathematics 121 and 122, or 150, or 155 and 156; Physics 180A-182A or 195, 195L; three semesters of English; three semesters of humanities.

**Recommended electives.** In addition to the courses listed, students should fulfill all requirements for their major and, if possible, take at least one advanced course recommended by their department such as: Biology 350, 354, 356, 474, 522, 590; Chemistry 361A, **Biology 250C, Topics in Veterinary Medicine, is offered each fall semester.**

**College preparation.** High school students planning to enter veterinary medicine should include in their high school program the following subjects: elementary algebra, plane geometry, intermediate algebra, chemistry, physics and four years of English.

**Admission.** Competition for veterinary school admission continues to be great, with a 4 to 1 ratio of applicants to accepted students at University of California, Davis. All preveterinary students should consider applying to one or more out-of-state schools in addition to UC Davis as most now accept nonresidents. The 1990 UC Davis entering class had the following average statistics: cumulative undergraduate GPA, 3.3; required science coursework GPA, 3.2; last two years of undergraduate work GPA, 3.4; Graduate Record Examination general aptitude test scores - verbal 79%, quantitative 75%, advanced test in biology 74%.

Admission criteria at UC Davis include the following:

1. Academic factors (50%-60%). College undergraduate plus graduate (if applicable) GPA; GPA of required science coursework; GPA of last two years of undergraduate work; Graduate Record Examination.
2. Nonacademic factors (40%-50%).
  - a. Application narration (5%-20%)
  - b. Animal and veterinary science related experience (0%) (See preveterinary adviser.)
  - c. Letters of evaluation (5%-20%)
  - d. Interviews (0%-20%)
  - e. Written essay at time of the interview (0%-15%)

The committee letter is used by most schools of veterinary medicine. It is San Diego State University's formal endorsement of your candidacy. Two or three additional letters from veterinarians and faculty are also generally required and used in the selection process. The importance of these letters cannot be overemphasized.

A publication, *Veterinary Medical School Admission Requirements in the United States and Canada* is available in the preprofessional health advising office and the Bookstore.

The preprofessional health adviser will be available to high school or transfer students by appointment in June and during the August registration period. **All preveterinary students should establish a personnel file in Life Sciences, Room 105; 594-6638.**

### Allied Health Professions

The allied health professions include chiropractic medicine, dental hygiene, occupational therapy, optometry, pharmacy, physical therapy, and podiatric medicine.

San Diego State University does not offer specific degree programs in these fields, but the prerequisites for the various professional schools are available. The University pre-allied health professions adviser is available to counsel students on their undergraduate programs, to suggest particular courses of study, and to discuss careers in the allied health professions. The pre-allied health professions adviser can also advise students regarding application to undergraduate and graduate programs in their field.

The pre-allied health professions adviser is Dr. Celia Marshak (Assistant Dean for Student Affairs, College of Sciences). The advising office is located in Life Sciences, Room 105; telephone (619) 594-5350.

**Prechiropractic, Prepharmacy, Preoptometry, and Prepodiatric Medicine.** Students interested in these fields usually major in biology since this curriculum is most appropriate. Other majors, such as chemistry, may be used; however, students must complete the required courses regardless of which major is chosen. In general, all schools require the same courses in biology, chemistry, physics, and mathematics; the pre-allied health professions adviser has a list of these, but students should be in contact with the schools of their choice to determine any specific requirements.

**Typical Course Requirements for Entrance to a Professional Degree Program in One of the Above Allied Health Professions.** Biology 150, 201, 202, 350, 336L, 590; Chemistry 200, 201, 231, 431; English 100, 200; Mathematics 121, 122; Physics 180A-180B, 182A-182B; Psychology 101.

**Preoccupational Therapy.** Students interested in a career in occupational therapy may major in a variety of areas including psychology, art, or biology. There are several schools in California that offer B.S. or M.S. degrees in occupational therapy. Students must complete certain courses required by each school; in general, these include courses in the humanities, natural sciences and mathematics, and social sciences.

**Prephysical Therapy.** The prephysical therapy curriculum is pursued in conjunction with an academic major. Students ordinarily select a major in Physical Education (specialization in Athletic Training) and complete selected coursework in other departments. Other departmental majors often selected include biology and health science. Prephysical therapy students should confer with the athletic training adviser in the Department of Physical Education prior to initial registration, and at least once each semester regarding their program progress.

**Prephysical therapy requirements.** Course requirements for entry to physical therapy school vary according to the school. Generally, prephysical therapy students should include the following courses in their program: Biology 150, 201, 202, 210, 336, and 336L; Chemistry 200 and 201; Computer Science 101; Physics 180A, 180B and 182A, 182B; and Psychology 101, 270, and 350. Information regarding the required courses for specific physical therapy schools is available through the athletic training major adviser. Each student should consult the major adviser for the level of course required when there are alternatives.

**Recommended Electives.** In addition to the courses listed, students must complete requirements for their major. In order to enhance preparations for physical therapy, professional school students should consider completing one or more of the following courses: Biology 580 and 590; Chemistry 230; Mathematics 121; Physical Education 301, 303, 304, 307; Psychology 260 and 330.

**Admission:** Most physical therapy schools give preference to students with baccalaureate degrees in academic subjects. The accredited physical therapy programs in California and their entrance requirements are available in a handout from the athletic training adviser. A list of physical therapy schools in other states can be obtained from the American Physical Therapy Association in Washington, D.C.

Students are reminded that requirements for admission to physical therapy school are varied. Therefore, the student should consult the above sources and the school(s) of choice at least two years prior to expected application. Students should expect to fulfill the following general requirements for admission: (1) specific course requirements as outlined above, (2) volunteer experience in a hospital or clinical physical therapy program, and (3) satisfactory completion of the GRE examination. The athletic training adviser has a list of hospitals and clinics where students can gain volunteer non-professional experience in physical therapy.

#### Preparation for Other Professions

Full programs of professional study in other fields, such as agriculture, forestry, architecture, and theology, are not available at San Diego State University. However, students who may wish to take some undergraduate work in liberal arts at this university can also begin coursework in preparation for such programs. Students are advised to consult the catalog of the university to which they expect to transfer to determine requirements before arranging the program. Further information may be obtained from the Assistant Dean of Students in the appropriate college at San Diego State University.

### Certificate Programs

#### Basic Certificate

The purpose of the basic certificate program is to provide individuals whose educational objectives do not require a degree program the opportunity to participate in University academic activities designed to meet specific educational needs.

Ordinarily, credit certificate programs are available to matriculated and nonmatriculated students. Students seeking a certificate must apply for admission according to the guidelines set forth by the individual certificate programs.

Coursework for a basic certificate shall not duplicate in content and level the student's prior educational experience. Unless otherwise stated, a student may apply no more than three units of coursework from a basic certificate program toward a major or minor with the approval of the department.

For a complete listing of certificate programs offered by San Diego State University, refer to the Curricula Summary section of this catalog.

#### Advanced Certificate – Postbaccalaureate

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

For a listing of admission standards and specific certificate requirements, refer to the Graduate Bulletin.

#### Advanced Certificate – Post-Master's

The advanced certificate at the post-master's entry level provides students a program of coursework and supplemental 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.

For a listing of admission standards and specific certificate requirements, refer to the Graduate Bulletin.

# College of Extended Studies

## Continuing Education



# 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. Enrollment in Summer Sessions courses will be considered for students seeking reinstatement to the University; however, successful completion in such residence courses will not guarantee immediate reinstatement.

Several major sessions are scheduled each summer: two 3-week terms, one major 6-week term, and a variety of other terms. 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 and interesting coursework. Credit earned during Winter Session is applicable to graduation and residence requirements. Admission to the University

is not required for Winter Session attendance. Enrollment in Winter Session courses will be considered for students seeking reinstatement to the University; however, successful completion in such residence courses will not guarantee immediate reinstatement.

## 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 for admission, to a university in order to obtain a passport, a U.S. 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

A 10- to 16-week course for students planning to enter San Diego State or other colleges or universities. Classes are offered in reading, writing, grammar, English for specific purposes (e.g., English for Business and Economics, English for Science and Technology, English for Computers, and study skills). 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.

Advanced students may register for three to nine units in the Open University in addition to their English classes.

### Intensive English Communications

A 6- to 19-week course focusing upon 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 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; Seminar for International Teachers of English; GMAT, GRE and TOEFL preparation; MBA; 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, Executive English, 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.

## 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. 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 bachelor's degree requirements at San Diego State University is 24 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. Matriculated students may not enroll in Open University. Credit earned through one semester of Open University enrollment may be considered as residence credit for students who subsequently matriculate at the University in an advanced degree program. A maximum of 24 units from Open University may be applied to the bachelor's degree requirements. 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.

## PROFNET/Distant Learning Programs

PROFNET, a Distant Learning Program, delivers full-credit graduate courses from San Diego State University to leading corporations and government agencies. Using the telecommunications facilities of KPBS Television, PROFNET televises classes for live transmission to the worksite. Some of these courses are also offered via videotape to



member companies which are not linked to PROFNET's telecommunications network. Students employed by PROFNET member companies view their classes on television and interact with their professor during class via an audio link.

In addition to graduate courses, PROFNET offers satellite teleconferences, technical updates, and professional colloquia to the campus and corporate community.

No more than nine units of PROFNET coursework taken prior to formal admission to the University and to an advanced degree curriculum may be included subsequently on the official program of study. With the approval of the graduate adviser, there is no limit to the number of units of PROFNET coursework that can be taken after formal admission to the University.

## 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.

### 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. Credit certificate programs are offered in the following areas: Applied Gerontology, Construction Practices, Fire Protection Administration, Government Contract Management, Human Resources Management, Materials Management, and Accounting.

The Division also offers noncredit certificate programs in special interest areas.

### Custom On-Site Training

SDSU's Professional Development Division of the College of Extended Studies specializes in developing and implementing on-site training programs and consulting projects which meet specific needs of the San Diego business community.

The programs serve small as well as large businesses, with topics ranging from computer, team building, and communication skills to supervision and management 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.

### Center for Study of Data Processing and Management Development Center

The Centers offer a series of practical, intensive, noncredit training in the fields of data processing and management. The Division has established these programs in cooperation with the San Diego corporate community. The purpose of these unique cooperative programs is to provide quality, cost-effective continuing education for business, industry and government personnel in specific fields. The corporate members form a fellowship in which all participate in applying proven solutions to their education and training needs.

## Institute for Quality and Productivity

The Division, in association with the University of San Diego and the business community, developed this Institute which strives to improve the quality of work performed through the implementation of Total Quality Management (TQM). The committee of industry representatives and faculty members from USD and SDSU have designed a variety of education and training opportunities for industry which include:

- TQM/SPC Training: Overview, Basics and Advanced Levels
- Implementation Workshops and Consultation
- Executive Seminars and Workshops
- Facilitator Training
- Design of Experiments
- Seminars, briefings and conference on a variety of total quality management topics/issues
- Inhouse-Customized Training

## International Training Center

Previously named the Pacific Region 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 economic, 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.

Programs include INPEP (International Program for English Proficiency), a job and business specific language certification and training program currently being implemented in Mexico and other Latin American countries; INTERNNET (International Network), an interactive distant-learning program using microwave and satellite telecommunication linkages and other instructional technology resources for public and private entities abroad; and INTRAIN (International Training), a professional development program designed to be delivered in-country, with active participation of local experts using the relevant national language. Collaborative programs with SDSU's academic colleges include Summer Institutes on Mexico-U.S. Issues from Mexico's Perspective and the Teacher Training Institute for the Pacific Rim. A network of interested faculty provides permanent academic support for all ITC projects and activities.

The Center also serves as a facilitator/liaison for special-purpose seminar-visits of university administrators and other educators, business and government officials from selected countries, and promotes training and technology transfer projects with regional and international organizations such as the Organization of American States (O.A.S.). Research/data assistance on international economic, political, and human resource topics are also provided by the Center to interested students, faculty, and professionals.

## 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).

These programs are planned and instructed by senior adults who are interested in furthering lifelong learning.

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

# Regulations

## Admission and Registration General Regulations



# Admission and Registration

## Admission Procedures and Policies

Requirements for admission to San Diego State University are in accordance with Title 5, Chapter 1, Subchapter 3, of the *California Code of Regulations*. If you are not sure of these requirements, you should consult a high school or community college counselor or the Admissions Office. Applications may be obtained from the admissions office at any of the campuses of The California State University or at any California high school or community college.

## Importance of Filing Complete, Accurate, and Authentic Application for Admission 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 submit authentic and official transcripts of all previous academic work attempted. Failure to file complete, accurate, and authentic application documents may result in denial of admission, cancellation of academic credit, suspension, or expulsion (Section 41301, Article 1.1, Title 5, *California Code of Regulations*). This requirement is effective from initial contact with the University and throughout the period the academic record is maintained.

## Requirement and Use of Social Security Account Number

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

## Measles and Rubella Immunizations Health Screening Provisions

All new and readmitted students born after January 1, 1957 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 in CSU. 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 changes 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, 5300 Campanile Drive, San Diego, CA 92182. For those students unable to obtain acceptable proof of immunizations, Student Health Services will provide immunizations at no cost.

## Undergraduate Application Procedures

Prospective students applying for part-time or full-time programs of study, in day or evening classes, must file a complete application as described in the admissions booklet. The \$55 nonrefundable application fee should be in the form of a check or money order payable to The California State University and may not be transferred or used to apply to another term. Applicants need file only at their first choice campus. An alternate choice campus and major may be indicated on the application, but **applicants should list as alternate campus only that campus of The California State University that they can attend**. Generally, an alternate major will be considered at the first choice campus before an application is redirected to an alternate choice campus.

## Limitation of Enrollment

Admission to a state university must be restricted in relation to the number of students for whom an adequate education can be provided by the staff and facilities available. The Trustees have authority on this matter.

## Impacted Programs

The CSU designates programs to be impacted when more applications are received in the first month of the filing period (initial filing period) than the campus can accommodate. Some programs are impacted at every campus where they are offered; others are impacted at some campuses but not all. You must meet supplementary admissions criteria if applying to an impacted program.

The CSU will announce before the opening of the fall filing period which programs are impacted and the supplementary criteria campuses will use. That announcement will be published in the *CSU School and College Review*, distributed to high school and college counselors. Information about the supplementary criteria is also sent to program applicants.

You must file your application for admission to an impacted program during the first month of the filing period. Further, if you wish to be considered in impacted programs at two or more campuses, you must file an application to each.

The following majors are impacted at San Diego State University: Business Administration (upper division), Criminal Justice Administration, International Business (upper division), Journalism, Nursing, Public Administration, and Telecommunications and Film. In addition, San Diego State University has been granted impacted status if more applications are received in the initial filing period from freshmen, lower division, or upper division applicants than can be accommodated.

## Supplementary Admissions Criteria

Each department with an impacted major uses supplementary admissions criteria in screening applicants. Supplementary criteria may include ranking on the freshman eligibility index, the overall transfer grade point average, completion of general education

courses, and a combination of campus or departmentally developed criteria. If you are required to submit scores on either the SAT or the ACT, you should take the test no later than December if applying for fall admission.

It is unlikely that San Diego State University will receive more applications from freshmen, lower division or upper division transfer applicants in the initial filing period than can be accommodated. If applications do exceed campus quotas, supplementary criteria will include completion of college preparatory courses in English and mathematics for freshmen applicants, and completion of lower division general education courses for transfer applicants.

The supplementary admissions criteria used to screen applicants appear periodically in the *CSU School and College Review* and are sent to all applicants seeking admission to an impacted program.

Unlike unaccommodated applicants to locally impacted programs who may be redirected to another campus in the same major, unaccommodated applicants to systemwide impacted programs may not be redirected in the same major but may choose an alternate major either at the first choice campus or another campus.

## Graduate and Postbaccalaureate Application Procedures

All graduate and postbaccalaureate applicants (e.g., master's degree applicants, those seeking credentials, and those interested in taking courses for personal or professional growth) must file a complete application as described in the admissions booklet. Applicants who completed undergraduate degree requirements and graduated 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 alternate campuses or later changes of campus choice will be minimal. To be assured of initial consideration by more than one campus, it will be necessary for any applicant to submit separate applications (including fees) to each. Applications may be obtained from the Graduate Studies Office of any California State University campus in addition to the sources noted for undergraduate applicants.

## Application Filing Periods

Terms in 1992-93	Applications First Accepted	Student Notification Begins
Fall Semester 1992	November 1, 1991	January 1992
Spring Semester 1993	August 1, 1992	September 1992

## Filing Period Duration

San Diego State University accepts applications until capacities are reached. Impacted programs are open only one month for each semester (November for fall; August for spring). Undergraduate applicants to nonimpacted programs are strongly encouraged to apply during the first month as capacities may be reached after that date. For the 1992-93 year, applications will not be considered for postbaccalaureate students seeking a second bachelor's degree or a second major. Applicants for graduate programs are also encouraged to apply early, but capacities are usually reached at a later date for these programs.

## Application Acknowledgment

You may expect to receive an acknowledgment of your application from San Diego State University no later than nine weeks after filing the application. The acknowledgment will include a request for documents needed to determine your admission eligibility. Admission is not transferable to another term or to another campus.

## Filing of Records

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

1. Transcript from high school of graduation or last in attendance (not required of the graduate student who holds a bachelor's degree from an accredited institution, but is required of the student who holds a bachelor's degree from a nonaccredited institution).
2. Transcripts from EACH college attended (including extension, correspondence, summer session, or evening courses), even if no courses were completed. Graduate students must file transcripts **in duplicate** if they plan to enter a master's degree or credential program.
3. Photostat or true copy of the military separation form DD-214 (or equivalent) if applicant has had active military service. (Not required of graduate students.)

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. All records or transcripts received by the university become the property of the university and **will not be released nor will copies be made**.

## Undergraduate Admission Requirements

### Freshman Requirements

To be eligible for admission to San Diego State University, you

1. must be high school graduate,
2. have a qualifiable eligibility index (See "Eligibility Index," below), and
3. have completed with grades of C or better the courses in the comprehensive pattern of college preparatory subject requirements (See "Subject Requirements," following page). Courses must be completed prior to the first enrollment at San Diego State University.

### Eligibility Index

The eligibility index is the combination of your high school grade point average and your score on either the American College Test (ACT) or the Scholastic Aptitude Test (SAT). Your grade point average is based on grades earned during your final three years of high school (excluding physical education and military science) and bonus points for approved honors courses. (See "Honors Courses," following page.)

You can calculate your eligibility index by multiplying your grade point average by 800 and adding your total score on the SAT. Or, if you took the ACT, multiply your grade point average by 200 and add ten times the composite score from the ACT. If you are a California high school graduate (or a legal resident of California for tuition purposes), you need a minimum index of 2800 using the SAT or 694 using the ACT. (See "Eligibility Index Table for California High School Graduates," following page, for combinations of test scores and averages required.) If you neither graduated from a California high school nor are a resident of California for tuition purposes, you need a minimum index of 3402 (SAT) or 842 (ACT).

Applicants with grade point averages of 3.0 or above (3.61 for nonresidents) are exempt from the test requirement. However, you are urged to take the SAT or ACT since test results are used for advising and placement purposes.

Graduates of secondary schools in foreign countries must be judged to have academic preparation and abilities equivalent to applicants eligible under this section.

### Subject Requirements

San Diego State University requires that first-time freshman applicants complete, with grades of C or better, 15 units in a comprehensive pattern of college preparatory courses. A "unit" is one year of study in high school.



**English:** 4 years.

**Mathematics:** 3 years. Algebra, geometry, and intermediate algebra.

**US History or US History and Government:** 1 year.

**Science:** 1 year with laboratory. Biology, chemistry, physics, or other acceptable laboratory science.

**Foreign Language:** 2 years in the same language (subject to waiver for applicants demonstrating equivalent competence).

**Visual and Performing Arts:** 1 year. Art, dance, drama/theatre, or music.

**Electives:** 3 years, selected from English, advanced mathematics, social science, history, laboratory science, foreign language, visual and performing arts, and agriculture.

If you have completed at least 15 college preparatory units, you may offset a one-unit shortage in one subject area by completing an extra unit in another subject area. This option is available from fall 1992 through spring semester 1995. Although you will be granted regular admission under this option, you are strongly advised to complete all courses in the college preparatory pattern, especially mathematics and English, so that you will be adequately prepared to begin your university studies. Please see your high school counselor for further information.

**Subject Requirement Substitution for Students with Disabilities.** Disabled student applicants are strongly encouraged to complete college preparatory course requirements if at all possible. If an applicant is judged unable to fulfill a specific course requirement because of his or her disability, alternative college preparatory courses may be substituted for specific subject requirements. Students who are deaf and hearing impaired, have learning disabilities, or are blind and visually impaired, may in certain circumstances qualify for substitutions for the foreign language, mathematics, and laboratory science subject requirements. Substitutions may be authorized on an individual basis after review and recommendation by the applicant's academic adviser or guidance counselor in consultation with the director of a CSU disabled student services program. Although the distribution may be slightly different from the course pattern required of other students, students qualifying for substitutions will still be held for 15 units of college preparatory study. Students should be aware that course substitutions may limit later enrollment in certain majors, particularly those involving mathematics. For further information and substitution forms, please call the director of disabled student services at your nearest CSU campus.

### Honors Courses

Grades in up to eight semester courses, taken in the last two years of high school, that are designated honors in approved subjects receive additional points in grade point average calculations. Each unit of A in approved courses will receive a total of 5 points; B, 4 points; C, 3 points; D, 1 point; and none for F grades.

### Waiver of Foreign Language Subject Requirement

The foreign language subject requirement may be waived for applicants who demonstrate competence in a language other than

**Eligibility Index Table for California High School Graduates or Residents of California — Effective Fall 1988**

GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score
(---) <sup>1</sup>			2.66	17	680	2.32	23	950
2.99	10	410	2.65	17	680	2.31	24	960
2.98	10	420	2.64	17	690	2.30	24	960
2.97	10	430	2.63	17	700	2.29	24	970
2.96	11	440	2.62	17	710	2.28	24	980
2.95	11	440	2.61	18	720	2.27	24	990
2.94	11	450	2.60	18	720	2.26	25	1000
2.93	11	460	2.59	18	730	2.25	25	1000
2.92	11	470	2.58	18	740	2.24	25	1010
2.91	12	480	2.57	18	750	2.23	25	1020
2.90	12	480	2.56	19	760	2.22	25	1030
2.89	12	490	2.55	19	760	2.21	26	1040
2.88	12	500	2.54	19	770	2.20	26	1040
2.87	12	510	2.53	19	780	2.19	26	1050
2.86	13	520	2.52	19	790	2.18	26	1060
2.85	13	520	2.51	20	800	2.17	26	1070
2.84	13	530	2.50	20	800	2.16	27	1080
2.83	13	540	2.49	20	810	2.15	27	1080
2.82	13	550	2.48	20	820	2.14	27	1090
2.81	14	560	2.47	20	830	2.13	27	1100
2.80	14	560	2.46	21	840	2.12	27	1110
2.79	14	570	2.45	21	840	2.11	28	1120
2.78	14	580	2.44	21	850	2.10	28	1120
2.77	14	590	2.43	21	860	2.09	28	1130
2.76	15	600	2.42	21	870	2.08	28	1140
2.75	15	600	2.41	22	880	2.07	28	1150
2.74	15	610	2.40	22	880	2.06	29	1160
2.73	15	620	2.39	22	890	2.05	29	1160
2.72	15	630	2.38	22	900	2.04	29	1170
2.71	16	640	2.37	22	910	2.03	29	1180
2.70	16	640	2.36	23	920	2.02	29	1190
2.69	16	650	2.35	23	920	2.01	30	1200
2.68	16	660	2.34	23	930	2.00	30	1200
2.67	16	670	2.33	23	940	(---) <sup>2</sup>		

<sup>1</sup> Above 3.00 qualifies with any score.

<sup>2</sup> Below 2.00 does not qualify for regular admission.

English equivalent to or higher than expected of students who complete two years of foreign language study. Consult with your school counselor or any CSU campus admissions or relations with schools office for further information.

### Provisional Admission

San Diego State University may provisionally admit first-time freshman applicants based on their academic preparation completed through the junior year of high school and that planned for the senior year. San Diego State University will monitor the senior year of study to ensure that those so admitted complete their senior year of studies satisfactorily, including the required college preparatory subjects, and graduate from high school.

### High School Students

Students still enrolled in high school will be considered for enrollment in certain special programs if recommended by the principal and the appropriate campus department chair and if preparation is equivalent to that required of eligible California high school graduates. Such admission is only for a given program and does not constitute the right to continued enrollment.

### Transfer Requirements

You will qualify for admission as a transfer student if you have a grade point average of 2.0 (C) or better in all transferable units

attempted, are in good standing at the last college or university attended, and meet one of the following standards:

1. meet the freshman admission requirements in effect for the term to which you are applying (See "Freshman Requirements," preceding page).
2. were eligible as a freshman at the time of high school graduation and have been in continuous attendance in a regionally accredited college since high school graduation; or
3. were eligible as a freshman at the time of high school graduation except for the subject requirements, have made up the missing subjects, and have been in continuous attendance in a regionally accredited college since high school graduation.
4. have completed at least 56 transferable semester (84 quarter) units and have made up any missing subject requirements (See "Making Up Missing College Preparatory Subjects" section). Nonresidents must have a 2.4 grade point average or better.

Transferable courses are those designated for that purpose by the regionally accredited college or university offering the courses.

**Making Up Missing College Preparatory Subject Requirements.** Undergraduate transfer applicants who did not complete the subject requirements while in high school may make up the missing subjects in any of the following ways. One college course of at least three semester or four quarter units will be considered equivalent to one year of high school study.

1. Complete appropriate courses with a grade of C or better in adult school or high school summer session.
2. Complete appropriate courses in college with a grade of C or better.
3. Earn acceptable scores on specified examinations.
4. Applicants with 56 or more semester (84 quarter) units may complete, with a grade of C or better in each course, one of the following alternatives:
  - a. **1987 or earlier high school graduates:** complete the CSU general education requirements in communication in the English language (at least 9 semester units) and mathematics (usually 3 semester units) with a C or better in each course;
  - b. **1988 or later high school graduates:** complete a minimum of 30 semester (45 quarter) units, with a grade of C or better in each course, chosen from courses in English, arts and humanities, social science, science, and mathematics of a level at least equivalent to courses that meet general education requirements. Each student must complete all CSU general education requirements in communication in the English language (at least 9 semester units) and mathematics (usually 3 semester units) as part of the 30-unit requirement.

Please consult SDSU or any CSU campus admissions office for further information about alternative ways to satisfy the subject requirements.

### Test Requirements

Freshman and transfer applicants who have fewer than 56 semester or 84 quarter units of transferable college credit must submit scores from either the Scholastic Aptitude Test of The College Board (SAT) or the American College Test Program (ACT). If you are applying to an impacted program and are required to submit test scores, you should take the test no later than early December if applying for fall admission. Test scores are used for advising and placement purposes. You may get registration forms and the dates for either test from school or college counselors or from the SDSU Test Office. Or, you may write to or call:

The College Board (SAT)  
Registration Unit, Box 592  
Princeton, New Jersey 08541  
(609) 771-7588

American College Testing  
Program (ACT)  
Registration Unit, P.O. Box 168  
Iowa City, Iowa 52240  
(319) 337-1270

### TOEFL Requirement

All undergraduate applicants, regardless of citizenship, who do not have at least three years of full-time study in schools at the secondary level or above where English is the principal language of instruction must present a minimum score of 550 or above on the Test of English as a Foreign Language (TOEFL).

### Adult Students

As an alternative to regular admission criteria, an applicant who is 25 years of age or older may be considered for admission as an adult student if he or she meets one of the following conditions:

1. Possesses a high school diploma (or has established equivalence through either the Tests of General Educational Development or the California High School Proficiency Examination).
2. Has not been enrolled in college as a full-time student for more than one term during the past five years. Part-time enrollment is permissible.
3. If there has been any college attendance in the past five years, has earned a grade point average of C or better.
4. Test results verifying completion of current San Diego State University competency requirements in mathematics and writing. Current competency requirements and minimum test scores are published in the University General Catalog and each semester's Class Schedule; the most recent published scores will be required.

Applicants seeking admission as an adult student must submit a statement of no more than two pages describing the alternate preparation which the applicant feels has prepared him or her for successful university work. The statement should also describe the applicant's educational goals and what preparation has been made to pursue these goals. Consideration for admission will be based upon a judgment as to whether the applicant is as likely to succeed as a regularly admitted freshman or transfer student.

### Other Applicants

Applicants not admissible under one of the above provisions should enroll in a community college or other appropriate institution. Under unusual circumstances such applicants may be permitted to enroll. Applicants should submit a written statement to the Admissions Office describing their situation and why an exception should be made.

San Diego State University also offers a special program designed to expand educational opportunity for capable persons who, for a variety of reasons, have not previously had the opportunity. For detailed information regarding admission to this program, refer to the section of this catalog on the Educational Opportunity Program.

### Systemwide Tests Required of Most New Students

The California State University system requires new students to be tested in English and mathematics after they are admitted. These are not admission tests, but a way to determine eligibility to enroll in specific courses. Students might be exempted from one or both of the tests if they have scored well on other specified tests or completed appropriate transfer courses.

**English Placement Test (EPT).** The CSU English Placement Test must be completed by all new non-exempt undergraduates prior to placement in appropriate university English coursework. Exemptions from the test are given only to those who present proof of one of the following:

- A score of 3, 4, or 5 on either the Language and Composition or the Composition and Literature examination of The College Board Advanced Placement Program.
- A score on the CSU English Equivalency Examination that qualifies a student for exemption from the English Placement Test.
- A score of 470 or above on the Verbal section of The College Board Scholastic Aptitude Test (SAT-Verbal).
- A score of 22 or above on the ACT English Usage Test taken prior to October 1989.



- A score of 25 or above on the ACT English Test taken October 1989 and later.
- A score of 600 or above on The College Board Achievement Test in English Composition *with essay*.
- Completion of an acceptable college transfer course in English composition of four quarter or three semester units with a grade of C or better.

**Entry-Level Mathematics (ELM) Test.** The ELM examination tests for entry level mathematics skills acquired through three years of rigorous college preparatory mathematics coursework (normally Algebra I, Algebra II, and Geometry). All new undergraduate students must take the test or be exempted from it prior to placement in appropriate university mathematics coursework. Specific policies regarding retesting and placement will be determined by San Diego State University. Exemptions from the test are given only to those students who can present proof of one of the following:

- A score of 3 or above on the College Board Advanced Placement mathematics examination (AB or BC).
- A score of 560 or above on the mathematics section of the Scholastic Aptitude Test (SAT-Math).
- A score of 24 or above on the American College Test (ACT) Mathematics Test (Taken prior to October 1989).
- A score of 25 or above on the ACT Mathematics Test (Taken October 1989 and later).
- A score of 560 or above on the College Board Mathematics Achievement Test, Level 1 or Level 2.
- For transfer students, completion and transfer to San Diego State University of a college course that satisfies the General Education — Breadth Requirement in Quantitative Reasoning provided such course was completed with a grade of C or better.

Failure to take either of these tests, as required, before the end of the first semester of enrollment may lead to administrative probation, which, according to Section 41300.1 of Title 5, *California Code of Regulations* and CSU Executive Order 393, may lead to disqualification from future attendance.

San Diego State University students with an exemption from the EPT or ELM based on a transfer course will be required to take the SDSU Writing Competency Test or the Mathematics Placement Examination.

Information bulletins and registration materials for the EPT and ELM will be mailed to all students subject to the requirements. The materials may also be obtained from the Office of Admissions and Records.

### Acceptance of Transfer Courses

Courses taken at a regionally accredited college or university and designated as appropriate for baccalaureate credit by that institution will be accepted by San Diego State University for credit toward the baccalaureate degree. San Diego State University reserves the right to determine the extent to which such credit satisfies the specific and elective requirements of degree programs.

Courses completed at regionally accredited institutions not offering the baccalaureate and at special-purpose baccalaureate-granting institutions are acceptable if specifically certified by the institution or by San Diego State University as similar in level and rigor to SDSU courses.

Courses completed at institutions without regional accreditation or taken at a regionally accredited institution as part of a professional program, i.e., medical, dental, legal, veterinary, optical, etc. are not normally accepted by San Diego State University. Such courses may be accepted on an individual basis if a review by the appropriate department determines comparability to a course in the San Diego State University curriculum.

## Graduate and Postbaccalaureate Admission Requirements

### Admission Requirements

Graduate and postbaccalaureate applicants may apply for a degree objective, a credential or certificate objective, or may have no program objective. Depending on the objective, San Diego State University will consider an application for admission as follows:

### General Requirements

The general requirements for admission to graduate and postbaccalaureate studies at a California State University campus are in accordance with university regulations as well as Title 5, chapter 1, subchapter 3, of the *California Code of Regulations*. Specifically, a student shall: (1) have completed a four-year college course of study and hold an acceptable baccalaureate degree from an institution accredited by a regional accrediting association, or shall have completed equivalent academic preparation as determined by appropriate campus authorities; (2) be in good academic standing at the last college or university attended; (3) have attained a grade point average of at least 2.5 (A = 4.0) 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 (4) satisfactorily meet the professional, personal, scholastic, and other standards for graduate study, including qualifying examinations, as appropriate campus authorities may prescribe. In unusual circumstances, a campus may make exceptions to these criteria.

All applicants seeking admission to postbaccalaureate study at San Diego State University must apply and be accepted in one of the following categories (consult the *Graduate Bulletin* for detailed information):

- **Postbaccalaureate Unclassified.** To enroll in courses for professional or personal growth, you must be admitted as a postbaccalaureate unclassified student. By meeting the general requirements, you are eligible for admission as a postbaccalaureate unclassified student. Some departments may restrict enrollment of unclassified students because of heavy enrollment pressure. Admission in this status does not constitute admission to, or assurance of consideration for admission to, any graduate degree or credential program; or
- **Postbaccalaureate Classified.** If you wish to enroll in a credential or certificate program, you will be required to satisfy additional professional, personal, scholastic, and other standards, including qualifying examinations, prescribed by the campus; or
- **Graduate Conditionally Classified.** You may be admitted to a graduate degree program in this category if, in the opinion of appropriate campus authority, you can remedy deficiencies by additional preparation; or
- **Graduate Classified.** To pursue a graduate degree, you will be required to fulfill all of the professional, personal, scholastic, and other standards, including qualifying examinations, prescribed by the campus.

### 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 language of instruction must receive a minimum score of 550 on the Test of English as a Foreign Language (TOEFL).

## Second Bachelor's Degree

For the 1992-93 academic year, no students will be permitted to pursue a second bachelor's degree.

Second bachelor's degrees are awarded by most departments. Currently, Business Administration, International Business, Liberal

Studies—Emphasis in Three Departments, Mexican American Studies, and Telecommunications and Film 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 (criminal justice administration, journalism, nursing, and public administration) 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- and 700-numbered courses.

To receive a second bachelor's degree, the student must complete a minimum of 30 postbaccalaureate units in residence with a minimum grade point average of 2.0; at least 15 units must be upper division in the new major. Up to six upper division units from the previous major may be used in the new major, provided the student completed the same number of units above minimum requirements for the first degree. The student must fulfill all current requirements for the 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, students must submit an application for graduation with the Office of Admissions and Records, AD-127. The Class Schedule each semester specifies the exact dates for filing. (Refer to the section on Application for Graduation in this catalog for additional information and regulations.)

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

## Second Major for SDSU Graduates

For the 1992-93 academic year, no students will be readmitted to the University to pursue a second major, nor will continuing postbaccalaureate students be allowed to declare a second major as their objective. The following information is provided for future reference.

The second major is available to San Diego State University graduates in some departments and programs. Currently, Business Administration, International Business, Liberal Studies—Emphasis in Three Departments, Mexican American Studies, and Telecommunications and Film do not participate. Students not currently enrolled must apply for readmission to the University during the published filing period for undergraduate applicants to the intended second major.

Upon receipt of the admission application, students will be sent a separate application for a second major. Admission to the second major program is based on the following criteria: a 2.50 grade point average in the last 60 semester units of upper division courses attempted, prior completion of at least nine units in the second major with an overall major GPA of 2.50 or better, and approval of the second major department.

A second major is an undergraduate objective. Second major students are subject to all undergraduate policies and procedures, including rules governing deadlines, course forgiveness, and academic probation and disqualification. No course numbered 600 or 700 may be used to fulfill a second major requirement, and no credit

earned toward a second major may be applied toward an advanced degree. Students may pursue a second major and a teaching credential simultaneously.

To receive a second major, students must meet with the major adviser and develop a major outline detailing requirements for the second major. These include a minimum of 12 upper division units in the new major after approval in the program, a minimum grade point average of 2.0 in the major, and satisfaction of all current catalog requirements associated with the major including foreign language and upper division writing requirements where appropriate. Acceptance of second major courses completed during the first degree is subject to department review and approval. If taken some time ago, students may be required to take more than the minimum number of units needed in the discipline.

Awarding of the second major is not automatic. When students have completed all requirements on the major outline, the major adviser must review all records and notify the Office of Admissions and Records to add the new major. Notation of the second major is made to the postbaccalaureate record. Second major students are not eligible for honors for second major work or a new diploma.

For additional information and second major applications, contact the Office of Admissions and Records.

## 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 non-immigrant classifications. SDSU uses separate requirements and application filing dates in the admission of foreign students.

Applicants for admission as either graduates or undergraduates whose education has been in a foreign country should file an application for admission, official certificates, and detailed transcripts of record from each secondary school and collegiate institution attended several months in advance of the opening of the semester in which the applicant expects to attend. 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. Test scores must be received by the University before admission can be granted. Information as to the time and place at which this test is given may be obtained by writing to the 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 their performance on the placement test and their academic background, students may be required to enroll in one or more English language courses during their first year at San Diego State University. Foreign students admitted to the University will be subject to the same competency and placement examinations and standards as govern the rest of the student population.

**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.

Health insurance coverage is mandatory for international (foreign) students. Acceptable health insurance is available on campus at approximately \$350 per year.

Arrangements for housing should be completed well in advance of the student's arrival on the campus. Detailed information regarding housing may be obtained from the Housing and 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 and Scholarships.

Upon arrival at San Diego State University the students should contact the Office of International Student Services.

### Admission of Visiting Students Intrasystem Visitor Enrollment

Currently enrolled students at San Diego State University have the opportunity to register at other universities in The California State University system for one term. Students choosing to visit another campus will be on a leave of absence from San Diego State for the one term.

#### Eligibility Requirements

**Undergraduate:** You must have completed at least one term at San Diego State University as a matriculated student and earned at least twelve units. You must have a grade point average of 2.0 or better in all work completed at San Diego State University, be in good standing, and be eligible to register under continuing status at San Diego State University.

#### Enrollment Conditions

Approval will be for one term only and is subject to space availability and enrollment priority policies of the host campus. To remain beyond the term in which you are a visitor, a regular application must be filed. Visitor status will not be approved if the terms overlap on home and host campuses. Concurrent enrollment at another CSU campus is not possible while in visitor status. Financial aid is available to visitors only through the home campus and students eligible for veterans, rehabilitation, social security and other federal, state or county benefits must secure eligibility certification through the home campus. All required fees must be paid at the time of visitor registration. A record of credit earned at the host campus will automatically be sent to San Diego State University. Evidence of completion of course prerequisites may be required at time of enrollment (i.e., personal transcript copy or grade reports).

#### Procedures

You must complete an application and submit it to the Office of Admissions and Records at San Diego State University. San Diego State University completes Part II and forwards to host campus if approved, or returns to student if disapproved. Host campus provides registration instructions if application is accepted, or returns application with explanation if it cannot be accepted.

### Registration

San Diego State University students are afforded the opportunity to participate in a touch tone telephone registration system (RegLine). On-campus registration will not be conducted. The Class Schedule and Student Information Handbook, issued each semester and obtainable at the University bookstore prior to the registration period, contains specific information on registration, the courses offered for the term, and a listing of the fees required for registration. Fees are due and payable at the time of registration and depend on the number of units selected. Student will not be permitted to access RegLine until

fees are paid. Payment of fees by itself does not constitute registration. For policies governing registration after classes begin, consult the current Class Schedule.

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

### Determination of Residence for Nonresident Tuition Purposes

The Admissions and Records Office 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 *Education Code* Sections 68000-68090, 68121, 68123, 68124, 89705-89707.5, and 90408, 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 campus Admissions and Records Office.

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 the length of the student's stay in California.

In general, the 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 a minor cannot be changed by the minor or the minor's guardian, so long as the minor's parents are living.

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 for nonresident tuition, including:

1. Persons below the age of 19 whose parents were residents of California but who left the state while the student, who remained, was still a minor. When the minor reaches 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, not a parent, for the two years immediately preceding the residence determination date. Such adult must meet California residency requirements.

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.

6. Dependent off-spring of a California resident 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.

7. 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.

8. Certain credentialed, full-time employees of California public school districts.

9. 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.

10. Certain exchange students.

11. Children of deceased public law enforcement or fire suppression employees, who were California residents, and who were killed in the course of law enforcement or fire suppression duties.

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 Admissions and Records Office. Applications for a change in classification with respect to a previous term are not accepted.

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

### Academic Advising

Academic advising is organized according to major. All students must comply with advising requirements established for their major(s) and described with other major requirements in the Courses and Curricula section of this catalog. For additional help, students with a declared major or interest in a particular major should consult with the advising center or assistant dean for student affairs in the college of that major. Students who are undecided about their majors should consult with the University Advising Center. Besides the advising centers listed below, each department and academic program maintains advisers who may be consulted on specific questions related to their programs. These departmental and program advisers may be reached through any of the college advising centers listed below or through the University Advising Center. Most advising centers are open Monday through Friday between 9:00 a.m. and 4:30 p.m. Services are available either by appointment or on a drop-in basis.

#### College of Arts and Letters Advising Center (Nasatir Hall, Room 235)

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

In addition, all students who intend to major in the College of Arts and Letters and who have fewer than 56 units are required, before or during their first semester at San Diego State University, to consult with the College of Arts and Letters Student Advising Center (NH-235) for general education advising.

Africa and Middle East Studies	International Business
Africana Studies	Judaic Studies
American Indian Studies	Latin American Studies
American Studies	Linguistics and Oriental Languages
Anthropology	Mexican American Studies
Asian Studies	Philosophy
Classics and Humanities	Political Science
Comparative Literature	Religious Studies
Economics	Russian and East European Studies
English	Social Science
European Studies	Sociology
French and Italian	Spanish and Portuguese
Geography	Urban Studies
German and Russian History	Women's Studies

#### College of Business Administration Business Advising Center (Business Administration, Room 448)

Accounting	Management
Decision Systems	Marketing
Finance	Production and Operations Management
Financial Services	Real Estate
Human Resource Management	
Information Systems	

#### College of Education Center for Careers in Education (Education, Room 100)

Bilingual Education	Multicultural Education
Community College Teaching	Ph.D. in Education
Counseling	Reading Specialists
Educational Administration	Rehabilitation Counseling
Educational Technology	School Counseling
Elementary Teaching	School Psychology
Marriage, Family, and Child Counseling	Secondary Teaching
	Special Education



**College of Engineering Advising Center  
(College of Engineering, Room 426B)**

Aerospace Engineering	Electrical Engineering
Civil Engineering	Mechanical Engineering

**College of Health and Human Services Advising Center  
(Hepner Hall, Room 124)**

Communicative Disorders	Nursing
Gerontology	Public Health
Health Science	Social Work

**College of Professional Studies and Fine Arts  
(Professional Studies and Fine Arts, Room 212)**

Aerospace Studies	Music
Art	Naval Science
Dance	Physical Education
Drama	Public Administration and
Family Studies and Consumer	Urban Studies
Sciences	Recreation
Industrial Technology	Speech Communication
Journalism	Telecommunications and Film
Military Science	Urban Studies

**College of Sciences Advising Center  
(Life Sciences, Room 105)**

Astronomy	Geological Sciences	Physical Science
Biology	Mathematical Sciences	Physics
Chemistry	Microbiology	Psychology

**Areas of interest within the majors:** Animal behavior, chemical physics, computer science, counseling and clinical psychology, ecology, engineering geology, environmental health, entomology, genetics, geochemistry, geophysics, marine biology, marine geology, medical technology, oceanography, optics, paleontology, physiology, physiological psychology, radiological physics, statistics, teaching credential programs in life and physical sciences.

For preprofessional programs see section below.

**University Advising Center  
5194 College Avenue (CO-194)**

The University Advising Center (a) assists currently enrolled and prospective students with problems and planning about degree requirements, academic policies, and academic procedures; (b) counsels students with undeclared majors seeking an educational direction compatible with their interests, goals, and individual circumstances; (c) acquaints students with other campus services appropriate to their individual needs; and (d) provides advising for the Liberal Studies—Emphasis in Education major. The Center's hours are 9:00 a.m. to 4:00 p.m., Monday through Friday, except that it is open until 6:00 p.m. on Mondays in the fall and spring semesters.

**Imperial Valley Campus Advising**

It is recommended that Imperial Valley Campus students see an adviser prior to registration each semester. Students working towards a degree with a major in Liberal Studies or a California Teaching

Credential should make an appointment with Kathy Russum, Academic Specialist, 357-5538.

Students majoring in areas other than Liberal Studies should make an appointment with Cynthia Flores, Assistant Dean for Student Affairs, 357-5502.

**Advising for Graduate Programs, Teaching Credential Programs, and Preprofessional Programs**

**General requirements for the master's and doctoral degrees.** Advisement concerning general requirements (except for the major) is available from the Graduate Division in room 220 of the Administration Building. Office hours are from 9:00 a.m. to 4:30 p.m. on Monday through Friday. A departmental graduate adviser is available in all programs offering graduate degrees.

**Teaching credential requirements.** Advising for the Multiple Subject (elementary) and the Single Subject (secondary) teaching credential programs is available through the Center for Careers in Education, ED-100, 594-5964. Group advising sessions are regularly scheduled for students interested in either program. Students who are interested in the Spanish bilingual emphasis programs for the Multiple Subject or Single Subject teaching credentials can secure information from the Department of Policy Studies in Language and Cross-Cultural Education, ED-152, 594-5155. Students seeking the Single Subject credential with or without the bilingual emphasis should consult also with the credential adviser in their academic major department for specific course requirements in the subject area.

**Preprofessional Advising**

Advisement for students planning to attend professional schools is available for the following programs:

Pre dentistry	Life Sciences, Room 105
Premedicine	Life Sciences, Room 105
Preoccupational Therapy	Life Sciences, Room 105
Preoptometry	Life Sciences, Room 105
Prepharmacy	Life Sciences, Room 105
Prephysical Therapy	Life Sciences, Room 105
Preveterinary Medicine	Life Sciences, Room 105
Preeducation	University Advising Center (CO-194)
Prelaw	Nasatir Hall, Room 131

Advisers in prelaw are not available during the summer months.

**Additional Advisory Services Provided  
Through Following Programs**

**New student orientation.** As a new semester approaches, all incoming students are advised to attend a one-day orientation program called Academic Information Day. Academic advising is an important part of each program, including General Education and graduation requirements, group meetings with the assistant deans from the various colleges, and completion of the registration packet. Questions concerning orientation can be directed to the Student Resource Center, telephone 594-5933 or 594-5221.

EOP students are required to attend the EOP orientation program known as EOP-START. Attendance at an Academic Information Day or CONTACT is encouraged, but does not meet the EOP orientation requirement. Call EOP at 594-6298 for additional information.

# General Regulations

## Student Responsibility for Catalog Information

Students are held individually responsible for the information contained in this catalog. The requirements listed in the "Graduation Requirements" section of the catalog are those requirements which the University will make every effort to preserve for students subject to this catalog. All other parts of the catalog, including this "General Regulations" section, are subject to change from year to year as University rules, policies, and curricula change. Failure to keep informed of such changes will not exempt students from whatever penalties they may incur.

## Changes in Rules and Policies

Although every effort has been made to assure the accuracy of the information in this catalog, students and others who use this catalog 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 San Diego State University. 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. More current or complete 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 which are of importance to students.

Nothing in this catalog shall be construed, 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 catalog 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 San Diego State University is one governed by statute, rules, and policy adopted by the Legislature, the Trustees, the Chancellor, the President and their duly authorized designees.

## Privacy Rights of Students in Education Records

The federal Family 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 for Student Affairs. Among the types of information included in the campus statement of policies and pro-

cedures 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, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, 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 written objection from the student specifying information which the student requests not be released. Students shall be given an opportunity to restrict the release of "directory information" about themselves at the time of registration.

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

### Handicap

The California State University does not discriminate on the basis of handicap 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 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 Act in its implementing regulations. Inquiries concerning compliance may be addressed to this office at AD-231; telephone 594-5211.

### Race, Color, or National Origin

The California State University complies with the requirements of Title VI of the Civil Rights Act of 1964 and the regulations adopted thereunder. No person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program of The



## Assignment of Grades and Grade Appeals

1. Faculty have the right and responsibility to provide careful evaluation and timely assignment of appropriate grades.
2. There is a presumption that grades assigned are correct. It is the responsibility of anyone appealing an assigned grade to demonstrate otherwise.
3. Students who believe that an appropriate grade has not been assigned should first seek to resolve the matter informally with the instructor of record. If the matter cannot be resolved informally, the student may present the case to the appropriate campus entity, have it reviewed and, where justified, receive a grade correction.

## Courses

### Satisfaction of Requirements

Except as permitted in the Graduation Requirements section of the catalog, a course cannot be used to satisfy more than one requirement.

### Numbering of Courses

Courses numbered 80 through 99 are nonbaccalaureate level and are not acceptable for a bachelor's degree; 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 those offered only through Extension to meet specific academic needs of community groups. Courses numbered X-01 through X-79 are applicable as general elective credit toward an undergraduate degree at SDSU. 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. It is the prerogative of the academic department/college to determine if X-01 through X-79 level courses are applicable to a major, a minor, or toward specified electives. The X-01 through X-79 level courses are offered in conjunction with certificate programs only. Courses at the X-01 through X-79 level are not acceptable on advanced degree programs. Courses offered as X-397 are not acceptable toward an undergraduate or graduate degree.

Extended Studies students who eventually plan to pursue an undergraduate degree at SDSU should consult the sponsoring academic department to ascertain the applicability of X-01 through X-79 level courses offered in any certificate program toward their proposed course of study.

### California Articulation Number (CAN)

The California Articulation Number (CAN) identifies some of the transferable, lower division, introductory (preparatory) courses commonly taught within each academic discipline on California college campuses.

The system assures students that CAN courses on one participating campus will be accepted "in lieu of" the comparable CAN course on another participating campus. For example: CAN ECON 2 on one campus will be accepted for CAN ECON 2 on another participating campus.

Courses at San Diego State University that have qualified for CAN designations are listed parenthetically by the course description in the Courses and Curricula section of this catalog.

## Final Examinations

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

## Academic Credit Through Coursework

### Credit for Upper Division Courses

Normally, only juniors, seniors and graduate students enroll in upper division courses (numbered 300 and above). However, a freshman or sophomore may enroll in an upper division course for upper division credit if the instructor consents. Article 40405.2 of Title 5, *California Code of Regulations* specifically limits upper division general education credit to students who have achieved upper division status.

### Community College Credit

A maximum of 70 semester units earned in a community college may be applied toward the degree, with the following limitations: (a) no upper division credit may be allowed for courses taken in a community college; (b) no credit may be allowed for professional courses in education taken in a community college, other than an introduction to education course.

### 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 listed in the *Graduate Bulletin* as acceptable for master's degree programs, and certain 600- and 700-numbered courses approved by the department, with the remaining requirements for the bachelor's degree. Petitions may be obtained from the Graduate Division and must be submitted to the Evaluations 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, and the student must have on file a current graduation application for the bachelor's degree. The maximum number of units which may be earned as concurrent master's degree credit is determined by the difference between the number of units remaining for the bachelor's degree and 15.

### 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.

## Credit for Extension Courses

The maximum amount of extension and correspondence credit which may be accepted toward the minimum requirements for the bachelor's degree is 24 semester units. Extension and correspondence credit are not counted in satisfaction of the minimum residence requirement. A maximum of nine units in extension courses at San Diego State University may be accepted as part of the requirements for the master's degree, subject to limitations described in the Graduate Bulletin.

Continuing education courses offered by departments are of two kinds. The first includes regular courses listed in the General Catalog which are available for use by students in meeting college and university credit requirements of various kinds, and are usually at the upper division level. A second kind is offered by some departments at the X-01 through X-79 and X-397 level and serves to meet the needs of specific community groups.

Courses numbered 80 through 99 are nonbaccalaureate level and are not acceptable for a bachelor's degree; 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 postbaccalaureate 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 those offered only through Extension to meet specific academic needs of community groups. Courses numbered X-01 through X-79 are applicable as general elective credit toward an undergraduate degree at SDSU. 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. It is the prerogative of the academic department/college to determine if X-01 through X-79 level courses are applicable to a major, a minor, or toward specified electives. The X-01 through X-79 level courses are offered in conjunction with certificate programs only. Courses at the X-01 through X-79 level are not acceptable on advanced degree programs. Courses offered as X-397 are not acceptable toward an undergraduate or graduate degree.

Extended Studies students who eventually plan to pursue an undergraduate degree at SDSU should consult the sponsoring academic department to ascertain the applicability of X-01 through X-79 level courses offered in any certificate program toward their proposed course of study.

## Academic Credit Through Examination

San Diego State University grants credit for passing scores on The College Board Advanced Placement Examinations, on the CSU English Equivalency Examination, on certain tests in the College-Level Examination Program, and on Higher Level subjects in the International Baccalaureate program. It also grants credit for locally administered "credit by examination" tests. A total of 30 units will be allowed for credit earned through examination (excluding Advanced Placement). The details in each case are provided below.

## Credit for Advanced Placement Examinations

San Diego State University grants credit toward its undergraduate degrees for successful completion of examinations of the Advanced Placement Program of The College Board. Students who present scores of three or better will be granted college credit.

High school students who intend to participate in this program should make the necessary arrangements with their high schools and should indicate at the time they take the Advanced Placement Examinations that their test scores be sent to San Diego State University. To obtain credit and advanced placement, the student should contact the Evaluations Office.

The Advanced Placement Credit table on the following page indicates the units granted for the score attained and the course equivalents for each of the examinations offered.

## English Equivalency Examination

Students who pass the EEE at the level which results in six units of graduation credit will have those units applied as follows: (a) if passed before April 1984, three units in English 100 and three units in English 200; (b) if passed in April 1984 or later, three units in English 100 and three units in English 220. Passing scores on the EEE satisfy the Writing Competency requirement and exempt students from the CSU English Placement Test.

## Credit for College-Level Examination Program (CLEP)

The University grants credit (see table below) on four of the five CLEP General Examinations (Humanities, Mathematics, Natural Sciences, and Social Sciences) and on four of the CLEP Subject Examinations (Calculus with Elementary Functions, College Algebra and Trigonometry, General Chemistry, and Statistics).

Maximum credit of six units may be granted in each of the general examinations in social science, natural science, and humanities. Three units of credit are granted for the general examination in mathematics.

A total of thirty units of credit may be granted for all types of credit by examination. Credit is not allowed if coursework in the subject area has been completed. For further information, contact the Evaluations Office or the University Advising Center.

## GENERAL EXAMINATIONS

EXAMINATION	PASSING SCORE	MAXIMUM CREDIT GRANTED	GENERAL EDUCATION CREDIT
Natural Science	500 Sub-areas: 46-life science 47-physical science	6 units	3 units in life science 3 units in physical science
Social Science	500 Sub-areas: 48-social science 44-history	6 units	3 units in social science 3 units in history
Humanities	500 Sub-areas: 45-literature 48-fine arts	6 units	3 units in literature 3 units in fine arts
Mathematics	500	3 units	None. Satisfies Mathematics Competency requirement only.

## SUBJECT EXAMINATIONS

EXAMINATION	PASSING SCORE	MAXIMUM CREDIT GRANTED	SDSU COURSE EQUIVALENT	GENERAL EDUCATION CREDIT GRANTED
College Algebra/Trigonometry	49	3 units	None	Yes
Calculus with Elementary Functions	48	3 units	MATH 121	Yes
Statistics (Last offered 1984-85)	49	3 units	MATH 119	Yes
General Chemistry	48	3 units	CHEM 200	Yes



## Advanced Placement Credit

EXAMINATION	SEMESTER UNITS CREDIT TOWARD DEGREE	SDSU COURSE EQUIVALENTS*	REMARKS
Art History .....	3, 4, 5	6	Art 258 and 259
Art, Studio:			
General .....	3, 4, 5	6	Art 100 and 101
Drawing .....	3, 4, 5	6	Art 100 and 101
General and Drawing .....	3, 4, 5	12	Art 100, 101, 102, 103
Biology .....	3	4	Biology 100 and 100L
	4, 5	8	Biology 201, 202
Chemistry .....	3, 4, 5	10	Chemistry 200, 201
Classics:			
Vergil .....	3, 4	6	Classics 202L
	5	8	Classics 202L and 304L****
Latin Prose .....	3, 4	6	Classics 202L
	5	8	Classics 202L and 303L****
Latin Poetry .....	3, 4	6	Classics 202L
	5	8	Classics 202L and 304L****
Computer Science			
A** .....	3	3	Free electives
	4, 5	3	Computer Science 107
AB** .....	3	6	Computer Science 107 and free electives
	4, 5	6	Computer Science 107 and 108
Economics:			
Macro .....	3, 4, 5	3	Economics 101
Micro .....	3, 4, 5	3	Economics 102
English:			
Lang. and Comp. ....	3, 4, 5	6	English 100 and 200
Comp. and Lit. ....	3, 4, 5	6	English 100 and 220
French Language .....	3, 4, 5	6	French 200A and 200D
French Literature .....	3, 4, 5	6	French 305A and 305B
German Language .....	3	6	German 200A and 211
	4, 5	8	German 200A, 200B, and 211
German Literature .....	3, 4, 5	6	German 310 and 499
History:			
American .....	3, 4, 5	6	History 110A-110B
			Satisfies American History/Institutions and Ideals, and U.S. Constitution requirements. Does not satisfy Calif. government requirement.
European .....	3, 4, 5	6	History 105, 106
Mathematics:			
Calculus AB .....	3, 4, 5	6	Mathematics 150
Calculus BC .....	3, 4, 5	9	Mathematics 150 and 151
			Exempts from CSU Entry Level Mathematics Test and satisfies Mathematics Competency.
Music .....	3, 4, 5	6	Music 158A-158B**
Music Listening and Literature .....	3, 4, 5	6	Music 151 and 345
Physics:			
B .....	3, 4, 5	8	Physics 180A-180B and 182A-182B
C (Mechanics) .....	3, 4, 5	6	Physics 195, 195L
C (Electricity and Magnetism) .....	3, 4, 5	6	Physics 196, 196L
Political Science			
Govt./Politics: American .....	3, 4, 5	6	Political Science 101 and 102
Govt./Politics: Comparative .....	3, 4, 5	6	Political Science 101 and 102
Govt./Politics: American and Comparative .....	3, 4, 5	12	Political Science 101, 102, 103, 296
Spanish Language .....	3	7	Spanish 100C and 211
	4, 5	7	Spanish 202 and 212
Spanish Literature .....	3, 4, 5	6	Spanish 305A-305B
			Satisfies the foreign language requirement

\*Credit may not be earned at SDSU for courses which duplicate credit already allowed for examinations as listed under SDSU course equivalents.

\*\*Maximum combined credit six units allowed for Computer Science A and AB examinations.

\*\*\*Student must also take Music Placement Examination.

\*\*\*\*Satisfies the foreign language requirement.

## Credit for International Baccalaureate Certificates or Diplomas

San Diego State University normally grants six units of credit for each International Baccalaureate Higher Level subject examination passed with a score of 4 or better. To receive credit, students must request that their International Baccalaureate transcript of grades be sent to San Diego State University's Office of Admissions and Records.

## Credit by Examination

Students may challenge courses by taking examinations developed at San Diego State University. Up to 30 units will be awarded to those who pass the examinations successfully, and the grade(s) earned, including "F," will be used in San Diego State University grade point calculations. At the discretion of the department a grade of Cr/NC may be awarded instead of a letter grade; a maximum of 15 total Cr units may be applied toward an undergraduate degree.

Students interested in applying for credit-by-examination need to check with the appropriate department(s) since each department has the option of excluding any or all of its courses from credit by examination or of setting special conditions on the student requesting this option.

Approval to receive undergraduate credit-by-examination is granted at the discretion of the appropriate college authorities and under the following conditions:

1. The student must be matriculated, in good standing (not on probation), be registered in at least one regular course (not Extension) at the time credit-by-examination is authorized, and pay for additional units if cost exceeds fees already paid.

2. The student must register in the course for which credit by examination is being requested within the time limits for filing a change of program as listed in the Academic Calendar each semester.

3. Approval of the department chair and the dean of the college concerned is required prior to taking the examination. Forms for approval may be obtained from the Office of Admissions and Records.

4. Credit-by-examination is restricted to regular undergraduate courses listed in the General Catalog, does not include 600- and 700-numbered or Extension courses, and does not count toward the 30-unit minimum residency requirement.

5. Credit-by-examination is not treated as part of the student's study load and, therefore, is not considered by the Veterans Administration in the application of their regulations; and is not always accepted as transfer credit between collegiate institutions.

6. Credit-by-examination is restricted to the regular fall or spring semester. It is not allowed during summer or winter sessions.

## Credit for Instruction in Noncollegiate Settings

San Diego State University grants undergraduate degree credit for successful completion of noncollegiate instruction, either military or civilian, appropriate to the baccalaureate, that has been recommended by the Commission on Educational Credit and Credentials of the American Council on Education. The number of units allowed are those recommended in the *Guide to the Evaluation of Educational Experience in the Armed Services* and the *National Guide to Educational Credit for Training Programs*.

Credit will be considered to be elective units in most cases. Petitions for acceptance of credits toward specific requirements are available in the Admissions and Records Office. Applicability to specific degree requirements (General Education, Major, Minor, etc.) is subject to approval of the appropriate campus authority.

## Academic Credit for Military Service

The University is guided by the recommendations of the American Council on Education in granting undergraduate credit toward the

bachelor's degree for military service. Postgraduate credit is not granted.

To obtain credit for military service, the student must be fully matriculated, be enrolled at the University, and submit Form DD-214 or DD-295.

## Student Classification

A matriculated student is one who has complied with all requirements for admission to the university and has received his official Notice of Admission. All students taking courses in any regular semester must be matriculated students. Only in summer sessions, winter sessions, or extension courses may a student who has not matriculated be accepted for enrollment.

Each student who enrolls in one or more summer session classes shall be classified as a summer session student. Each student who enrolls in one or more extension classes shall for his extension class work be classified as an extension class student. Such students need not be matriculated students as a prerequisite for enrollment in classes.

**Freshman.** A student who has earned a total of fewer than 30 semester units.

**Sophomore.** A student who has earned a total of 30 to 59 semester units, inclusive.

**Junior.** A student who has earned a total of 60 to 89 semester units, inclusive.

**Senior.** A student who has earned a total of 90 semester units or more.

**Graduate.** A student who has completed a four-year college course with an acceptable baccalaureate degree from an accredited institution and who has been admitted to the University with postbaccalaureate standing. For information on classification of graduate students, see the Graduate Bulletin.

## Student Program and Records

## Transcripts of Record

A student may obtain an official transcript of his/her record by filing an application at the Cashiers Office. A fee is charged for all transcripts and must be paid in advance. Five to ten 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

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

## Full-Time Student Status

Requirement for Full-Time Student Status at SDSU is 12 units per semester. Graduate units taken by graduate students (500 level +) are weighted as 1½ units per unit. Thus, full-time enrollment for a graduate student is eight units of coursework numbered 500 to 899. The Public Information area of Admissions and Records verifies student enrollment for students in person with proper identification and through the mail with an authorized signature from the student.

## Prerequisites

Prerequisites will be enforced in all sections of courses listed in the Academic Policy pages of the current Class Schedule and Information Handbook. Enrollment will depend on the student's verification of completion of prerequisites.



## Change of Program

San Diego State University provides for change of program beginning the first day of classes every term. Change of program includes: dropping a class, adding a class, adding or reducing units of a class for which the student is already registered, changing a section of the same class, or changing grading options.

*Students are responsible for every course on their official study list filed at registration. If a student does not attend the first class meeting of the semester and is not present at the start of the second meeting, the professor may give that student's place to another student; however, if this occurs, the student must still take the necessary formal drop action personally. Changes of program cannot be effected by nonattendance in class; nonattendance without consequent formal drop action will result in a failing grade.*

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 serious and compelling reasons. Permission to drop a class during this period is granted only with the signature of the instructor, who indicates the student's grade status in the class, and the approval of the dean or designee of the college in which the class is located, and approvals are made in writing on prescribed forms. After the fourth week, the grade of "W" will appear on the student's permanent record for courses on which an official drop has been approved.

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 campus, 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 dean (or designee) of the college of the student's major.

**Change of grading option is not permitted after the end of the fifteenth day of instruction.**

## Deadlines

1. Dropping courses will be permitted with no penalty or restriction only until the end of the **tenth** day of classes.
2. Adding courses or complete withdrawal from the University will be allowed without penalty or restriction until the end of the **fifteenth** day of classes.
3. Change of grading option will NOT be permitted after the **fifteenth** day of classes.

## Change of Major or Curriculum

At the time of admission to the university, each undergraduate student is assigned to a major field or curriculum, or is designated as an undeclared major. After registration, all students wishing to change their major or curriculum should check with the department of their intended major for requirements and filing periods. Change of major forms are available at the Admissions and Records Office.

Veterans using veteran benefits must obtain appropriate approval from the Veterans Administration for necessary changes in letters of eligibility. Upon change or declaration of major, students must adopt the requirements of the major and any minors in effect at that time.

## Academic Renewal

Under certain circumstances the campus may disregard up to two semesters or three quarters of previous undergraduate coursework taken at any college from all considerations associated with requirements for the baccalaureate degree. These circumstances are:

1. The student has requested the action formally and has presented evidence that work completed in the term(s) under consideration is substandard and not representative of present scholastic ability and level of performance; and

2. The level of performance represented by the term(s) under consideration was due to extenuating circumstances; and

3. There is every evidence that the student would find it necessary to complete additional units and enroll for one or more additional terms in order to qualify for the baccalaureate if the request were not approved.

Final determination that one or more terms shall be disregarded in determination of eligibility for graduation shall be based upon a careful review of evidence by a committee appointed by the President which shall include the Vice President for Academic Affairs and consist of at least three members. Such final determination shall be made only when:

1. Five years have elapsed since the most recent work to be disregarded was completed; and
2. The student has completed at SDSU, since the most recent work to be disregarded was completed, 15 semester units with at least a 3.0 GPA, 30 semester units with at least a 2.5 GPA, or 45 semester units with at least a 2.0 GPA. Work completed at another institution cannot be used to satisfy this requirement.

When such action is taken, the student's permanent academic record shall be annotated so that it is readily evident to all users of the record that **no** work taken during the disregarded term(s), even if satisfactory, may apply toward baccalaureate requirements. However, all work must remain legible on the record ensuring a true and complete academic history.

The procedure for filing Petition for Academic Renewal is as follows:

1. Obtain the petition from the Division of Undergraduate Studies AD-223.
2. Fill in the form carefully and completely.
3. Attach statements and documentary evidence from doctors, lawyers, employers, parents, professors, or other appropriate persons to substantiate your claim that the request is justified.
4. Obtain all necessary clearances and signatures.
5. Return all materials to the Admissions and Records Office.

## Withdrawal, Leaves of Absence, Readmission, and Evaluation

## Withdrawal

Students who wish to withdraw from the University must initiate action formally through the Admissions and Records Office. Failure to file will result in a failing grade in all courses. 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 no longer considered a continuing student and may be required to apply for readmission. Refunds are obtainable only for the first 14 days after the semester begins. In order to receive a refund, the student must file an official withdrawal form and refund request at the Office of Admissions and Records within the first 14 days of the term.

A course will not appear on the permanent record if withdrawal occurs before the end of the fourth week of classes. After the fourth week, a grade of "W" will appear for courses on which an official drop has been approved. During the final three weeks of instruction, withdrawals are not permitted except in cases where the cause of withdrawal is due to circumstances clearly beyond the student's control. Credit or an incomplete may be assigned for courses in which sufficient work has been completed to permit an evaluation to be made. Refer to the Class Schedule for appropriate dates for the deadlines indicated above.

After the last day of the semester, a student who wishes to change assigned grades to "W" grades must request to withdraw from the full semester's work; no requests for individual classes will be accepted. 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.

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

**Educational Leave of Absence.** Students are permitted to take up to four consecutive semesters of approved leave of absence. An educational leave application is appropriate in those cases where students will be 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(s) they wish to be absent from school. If they wish to extend a leave for additional semesters, a separate application must be filed previous to the deadline for submitting leaves as outlined in the Academic Calendar.

Students who leave San Diego State University in order to attend up to four consecutive semesters at another accredited college or university need not apply for a leave of absence in order to maintain catalog requirements; however, such students absent from San Diego State University more than one semester must apply for readmission in order to return to the University.

A student must file an application for the leave at the Admissions and Records Office. Requests will be reviewed by appropriate officials designated by the Vice President for Academic Affairs. Students wishing to cancel a leave must do so prior to the first day of classes. The Class Schedule and Student Information Handbook contains specific procedures and 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 undergraduate students who have completed a minimum of one semester at San Diego State University and who are in good academic standing. Leaves will not be granted to students on probation, students who have been disqualified, or students who qualify for a change from undergraduate to graduate status.

## Readmission

A student who leaves 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.

Readmitted students may retain rights to graduation requirements in effect when leaving San Diego State University if the following conditions are met:

1. Enroll at least one semester (or two quarters) per year at an accredited institution, and
2. Be absent from San Diego State University for no more than two years, and

3. Remain in good standing (not academically disqualified) at all institutions attended.

In order to retain catalog rights for major requirements, a student must maintain the same major at any institution attended during absence from San Diego State University.

## Evaluation

An evaluation is a summary of college work completed and of requirements to be completed for a bachelor's degree. To be eligible for an evaluation, a student must be currently enrolled, have completed at least 56 units of acceptable college work, and have a declared major. An evaluation will not be done until official copies of all transfer credit are on file in the Office of Admissions and Records. Only one evaluation will be done for each major.

A student who has earned 56 semester units or more and has not received an evaluation should apply at the Evaluations Office for an official evaluation. The evaluation is made on the regulations in effect at the time the student declares the major, provided continuous enrollment has been maintained, except as otherwise provided in the *California Code of Regulations*, Chapter 5, Section 40401, Election of Regulations. (Further information is given in the section of this catalog on Graduation Requirements.)

## Credit and Study List Limits

A unit or credit hour represents 50 minutes of lecture or recitation combined with two hours of preparation per week throughout one semester of 15 weeks. Two hours of activity (as in physical education) or three hours of laboratory (as in the sciences) are considered equivalent to one hour of lecture.

At registration time, students will not be permitted to enroll for more than 18 units. After registration, units may be added, if desired, by means of the add-drop process, though if students are employed outside of college they are strongly advised to undertake a modest college program. Normally a student can expect to spend in class and study a total of three hours per week for each unit of college work attempted. A normal 16-unit load, therefore, represents a 48-hour week. Students must keep in mind the fact that some courses require far more than the average amount of time and that the workload in all courses can be expected to vary throughout the semester as examinations and major papers or projects come due.

## Graduation With Honors and Distinction

Graduation with honors is granted to those undergraduate students who achieve high grade point averages. Excellence is recognized at three levels: *cum laude* (3.50-3.64), *magna cum laude* (3.65-3.79), and *summa cum laude* (3.80-4.00).

The grade point average is computed on a minimum of 24 graded units taken at this institution, except that if the grade point average for work at other collegiate institutions is lower, those grades are included in the computation.

Grades for the final semester's work are included in calculation of eligibility for graduation with honors. Students are tentatively designated as eligible for graduation with honors if the grade point average meets required standards at the beginning of the fall semester for midyear graduates and at the end of the fall semester for May and summer session graduates. Notation of *cum laude*, *magna cum laude*, or *summa cum laude* on transcripts and diplomas is based on actual total achievement.

Upon recommendation of their major department, students doing superior work in their major field may be graduated with distinction in that field. To qualify for Distinction in the Major, a student must have a



minimum 3.50 grade point average in the major (upper division courses) by the beginning of the fall semester for midyear graduates and by the end of the fall semester for May and summer session graduates.

To be considered for computation of the major grade point average, grades for removal of Incomplete and all other grade changes must be received in the Admissions and Records Office no later than the end of the fifth week of the semester in which the student plans to graduate. All changes for summer session graduates must be received by the end of the fifth week of the spring semester prior to graduation.

### Dean's List

The Dean's List recognizes academic achievement within a single semester.

Students must place within the top ten percent of the college in which they are majoring and have a grade point average of at least 3.50 based on a minimum of 12 units of credit for courses in which letter grades were assigned. The computation of grade points will be made six weeks after the end of the semester to include students who complete Incomplete grades promptly.

Students will be recognized by the dean of their respective college; undeclared and liberal studies majors will be listed by the Dean of Undergraduate Studies.

## Academic Probation, Disqualification, and Reinstatement of Undergraduate Students

### Academic Probation

The purpose of probation is to warn students that their academic performance is below the state minimum required for graduation and to indicate that improvement is required before a degree can be granted. If students on probation allow their work to deteriorate to the point where it is unlikely that their grade point deficiency can be removed in the time remaining to complete their degree requirements, they will be subject to disqualification.

Undergraduate students will be placed on academic probation if at any time their cumulative grade point average in all college work attempted or their cumulative grade point average at SDSU falls below 2.0. Summer Sessions and Winter Session courses are included in the SDSU grade point average; Open University (concurrent enrollment) courses are calculated only in the overall grade point average.

The grade point average is computed by dividing the number of grade points accumulated by the number of graded units attempted. (See chart under "Plus/Minus Grading" for number of grade points assigned per unit in each grade category.)

Students will be removed from Academic Probation when their cumulative grade point average has been raised to 2.0 or higher in all college work attempted and in all work attempted at this University.

### Academic Disqualification

Undergraduate students on academic probation will be subject to disqualification when:

1. As a lower division student (with fewer than 60 semester units of college work completed) they fall 15 or more grade points below a 2.0 (C) average on all units attempted or in all units attempted at this campus.
2. As juniors (with 60-89 semester units of college work completed) they fall nine or more grade points below a 2.0 (C) average on all units attempted or in all units attempted at this campus.
3. As seniors (90 semester units of college work completed) they fall six or more grade points below a 2.0 (C) average on all units attempted or in all units attempted at this campus.

Grade point deficiencies below a 2.0 average are calculated in the following manner:

- +2 points for every unit of A
- +1 point for every unit of B
- 0 points for every unit of C
- 1 point for every unit of D
- 2 points for every unit of F
- 2 points for every unit of U
- 2 points for every unit if INC (after one calendar year)

### Reinstatement of Academically Disqualified Students

Disqualified students will ordinarily be considered for reinstatement to the University only when conditions causing the poor performance have been alleviated or sufficient academic work at another college or university has been completed at a level indicating that the student is capable of returning to SDSU and successfully satisfying the requirements for a degree.

Students may be considered for reinstatement only after filing an application for reinstatement by the published deadline and furnishing transcripts of all college work taken since disqualification. Reinstatement is not automatic. Each applicant will be considered on an individual basis. Because criteria for reinstatement vary, disqualified students should immediately contact the Assistant Dean of the college of their major to find out what criteria will be used to determine their eligibility for reinstatement.

Students accepted for reinstatement will reenter on academic probation and those out one or more semesters will be subject to catalog requirements in effect at the time they resume study at SDSU or a California community college and remain in continuous attendance (see "Election of Regulations for Graduation" under "Graduation Requirements"). They are not guaranteed reentry into their previously declared majors. Consideration for reentrance into the previously declared major is done on an individual basis at the discretion of the major department.

### Disqualified students should be aware of the following:

1. Grades of less than 2.0 (C) for courses taken at SDSU will not be replaced if repeated at another college or university. These courses should be repeated only in resident enrollment at SDSU. (Extension and Open University are not considered resident enrollment.)
2. Grades earned at other accredited colleges or universities or through SDSU Extension or Open University do not reduce the SDSU grade point deficiency or change the SDSU grade point average, but are used in the reinstatement process as indicators of the student's future academic success. They will be used for calculating the overall GPA.
3. Courses traditionally considered "nonacademic" are inappropriate as indicators of future academic success.
4. Normally, students who have been disqualified twice from this institution will not be considered for reinstatement a third time.

## Administrative Academic Probation and Disqualification

### Administrative Academic Probation

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

1. Withdrawal from all or a substantial portion of a program of studies in two successive terms or in any three terms.
2. Repeated failure to progress toward the stated degree or objective or other program objective (when such failure appears to be due to circumstances within the control of the student).

3. Failure to comply, after due notice, with 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-Athlete Satisfactory Academic Progress Requirement

In order to remain eligible for intercollegiate competition, a student-athlete must be enrolled in an academic program leading to a recognized degree, must be making satisfactory progress toward that degree under the rules of the institution and the NCAA, and must achieve at least the minimum cumulative GPA standards found in the WAC Minimum Cumulative Grade Point Average Requirement Table.

## 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 of Title 5, *California Code of Regulations*, Sections 41301 through 41304. 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 dangerous drugs, restricted dangerous drugs, or narcotics as those terms are used in California statutes, except when lawfully prescribed pursuant to medical or dental care, or when lawfully permitted for the purpose of research, instruction or analysis.

- (i) Knowing possession or use of explosives, dangerous chemicals or deadly weapons on campus property or at a campus function without prior authorization of the campus president.
- (j) Engaging in lewd, indecent, or obscene behavior on campus property or at a campus function.
- (k) Abusive behavior directed toward, or hazing of, a member of the campus community.
- (l) Violation of any order of a campus president, notice of which had been given prior to such violation and during the academic term in which the violation occurs, either by 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, sling-shot, 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 Aztec Center.

#### 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.

Lindey, 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.

# Graduation Requirements

Competency  
Upper Division Writing  
Major and Minor  
American Institutions  
Foreign Language  
Units  
Residence  
Grade Point Average  
General Education  
Application for Graduation



# Graduation Requirements for the Bachelor's Degree

The requirements in this "Graduation Requirements" section of the catalog are those requirements which the University will make every effort to preserve for students subject to this catalog according to the provisions enumerated below. All other parts of the catalog are subject to change from year to year as University rules, policies, and curricula change. It is the students' responsibility to keep informed of such changes; failure to do so will not exempt students from whatever penalties they may incur.

The requirements appearing in this catalog are applicable to students under the following circumstances:

- Students may remain with the graduation requirements in effect during the academic year in which they entered SDSU, another campus in the CSU system, or a California community college, so long as they have remained in attendance at least one semester or two quarters within a calendar year in either the CSU or community college system. Absence due to an approved educational leave or for attendance at another regionally accredited institution of higher learning shall not be considered an interruption in attendance if the absence does not exceed two years. If students change or declare their majors in subsequent years, however, they must adopt the major and minor requirements in effect at the time of such change or declaration. They may continue with the earlier catalog only with regard to General Education and other graduation requirements.

Students who are disqualified from San Diego State University and not immediately reinstated shall maintain catalog rights for General Education purposes by enrolling immediately in a California community college, SDSU Open University, or another CSU campus. If disqualified students are subsequently reinstated after a break in continuous enrollment, they are subject to the requirements of the *General Catalog* in effect during the semester in which they reenroll in the CSU system, SDSU Open University, or a California community college.

- At the students' option, they may change to the catalog in effect in the year in which they graduate. Thus, students graduating in December 1992, May 1993, or in the 1993 summer sessions may adopt this catalog by so indicating on their application for graduation.

Applications for graduation are available in the Office of Admissions and Records. Deadlines by which applications must be received are published each year in the fall semester *Class Schedule*.

The declaration of a major can occur in either of two ways: (a) by entering it on an *Application for Admission-Readmission*, or (b) by obtaining and filing a *Change or Declaration of Major* form at the Office of Admissions and Records. Majors which require a master plan may require that the master plan be filed before considering the change of major to be official. Students are advised to check with appropriate departments if they wish to declare an impacted major.

## I. Competency Requirements: Writing and Mathematics

Competency in standard written English and in basic mathematics is essential to successful university study. All students pursuing a baccalaureate degree must satisfy two writing requirements and two mathematics requirements:

- the CSU English Placement Test requirement

- the SDSU Writing Competency requirement
- the CSU Entry-Level Mathematics Examination requirement
- the SDSU Mathematics Competency requirement

These requirements **must be satisfied** BEFORE students may enroll in baccalaureate level writing, mathematics, statistics, and selected health science, and telecommunications courses.

Failure to **verify** an exemption from or to **take** the appropriate examinations in writing and mathematics **within one semester** of attendance at the San Diego campus of SDSU will result in the withholding of registration privileges for a second semester. Failure to **verify** an exemption from or to **pass** the appropriate examinations **within two semesters** will result in the withholding of registration privileges for future semesters. All competency requirements **must be satisfied** prior to a student's graduation.

Students enrolled at the Imperial Valley Campus of SDSU must satisfy the SDSU Writing Competency requirement and the SDSU Mathematics Competency requirement by the beginning of their second semester at SDSU Imperial Valley Campus. If these requirements are not satisfied, students must then register for and attempt to pass the appropriate Academic Skills courses.

All courses for which fulfillment of writing and/or mathematics requirements is an enforced prerequisite are listed in the "Prerequisite Enforcement and Provisional Enrollment" section of the *Class Schedule*.

## WRITING REQUIREMENTS

All students **must satisfy** both the CSU English Placement Test (EPT) requirement and the SDSU Writing Competency requirement **before** enrolling in baccalaureate level writing courses and selected telecommunications courses, and before satisfying the Upper Division Writing requirement.

Furthermore, failure to **attempt** the CSU English Placement Test and the SDSU Writing Competency Test or to register in Academic Skills 92A or 97A, or to verify satisfaction of the two requirements by other methods listed below, **within one semester** of attendance at the San Diego campus of SDSU will result in the withholding of registration privileges for a second semester. Failure to **satisfy** the competency requirements by passing the appropriate examinations or Academic Skills courses **within two semesters** or by being enrolled and making satisfactory progress in the appropriate Academic Skills courses during the second semester will result in the withholding of registration privileges for future semesters.

Test dates and times are listed in the "Special Tests" section of the current *Class Schedule*.

### 1. CSU English Placement Test (EPT) requirement.

Students must satisfy the CSU English Placement Test (EPT) requirement by one of the following methods:

- Completion of the CSU English Placement Test (EPT) at SDSU or at another CSU campus.
- Completion of an acceptable college transfer course in English composition of three semester or four quarter units with a grade of C or better.
- Score of 470 or above on the Verbal section of the Scholastic Aptitude Test (SAT).
- Score of 22 or above on the English Usage section of the American College Test (ACT) taken prior to October 1989.
- Score of 25 or above on the English section of the American College Test (ACT) taken October 1989 or later.
- Satisfactory score on the CSU English Equivalency Examination (EEE).

- Score of 3 or above on either the Language and Composition or the Composition and Literature examination of The College Board Advanced Placement Program (AP).
- Score of 600 or above on The College Board Achievement Test in English Composition with Essay (ES).

### 2. SDSU Writing Competency requirement.\*\*

Students must satisfy the SDSU Writing Competency requirement by one of the following methods:

- Essay score of 7 **and** total score of 150 on the CSU English Placement Test (EPT).\*
- Satisfactory score on the SDSU Writing Competency Test.
- Score of 470 or above on the Verbal section of the Scholastic Aptitude Test (SAT).\*
- Score of 22 or above on the English Usage section of the American College Test (ACT) taken prior to October 1989.
- Score of 25 or above on the English section of the American College Test (ACT) taken October 1989 or later.
- Satisfactory score on the CSU English Equivalency Examination (EEE).
- Score of 3 or above on either the Language and Composition or the Composition and Literature examination of The College Board Advanced Placement Program (AP).
- Score of 600 or above on The College Board Achievement Test in English Composition with Essay (ES).
- Credit for Academic Skills 92A or 92B or 94 or 95 or 97A or 97B at SDSU.

Students may attempt the Writing Competency Test twice; after two unsuccessful attempts, students must make a substantial effort to improve their writing skills (for example, by taking Academic Skills 92A or 97A) before being allowed a third attempt.

Students who fail to pass the SDSU Writing Competency Test or who wish to take a course to prepare themselves for the examination may take Academic Skills 92A or 97A within two semesters of admission. The final examination in the course is a competency examination. Students who do not score at an adequate level on that examination may advance to Academic Skills 92B or 97B, which also uses a competency examination as a final examination. A grade of Cr (Credit) in Academic Skills 92B or 97B will satisfy the SDSU Writing Competency requirement. Credit earned in Academic Skills 92A and 92B or 97A and 97B is not applicable to the baccalaureate degree.

## MATHEMATICS REQUIREMENTS

All students must satisfy two mathematics requirements: the CSU Entry-Level Mathematics Examination (ELM) requirement and the SDSU Mathematics Competency requirement. Students must satisfy both the CSU ELM and SDSU Mathematics Competency requirements **before** enrolling in selected health science courses. In addition to satisfying the ELM and Mathematics Competency requirements, students must also satisfy the appropriate part(s) of the SDSU Mathematics Departmental Placement Examination **before** enrolling in baccalaureate-level mathematics and statistics courses.

Failure to attempt the ELM or the appropriate part of the SDSU Mathematics Departmental Placement Examination, or to verify satisfaction of the two requirements by the methods listed below within one semester of attendance at SDSU will result in the withholding of registration privileges for a second semester. Failure to satisfy the CSU ELM and SDSU Mathematics Competency requirements by passing the appropriate examinations or courses within two semesters or by being enrolled and making satisfactory progress in the appropriate Academic Skills courses during the second semester will result in the withholding of registration privileges for future semesters.

Test dates and times are listed in the "Special Tests" section of the current *Class Schedule*.

### 1. CSU Entry-Level Mathematics Examination (ELM) requirement.

Students must satisfy the ELM requirement by one of the following methods:

- A passing score on the ELM.

- Score of 560 or above on the mathematics section of the Scholastic Aptitude Test (SAT-Math).
- Score of 24 or above on the American College Test (ACT) Mathematics Test taken prior to October 1989.
- Score of 25 or above on the ACT Mathematics Test taken October 1989 and later.
- Score of 3 or above on the College Board Advanced Placement mathematics examination (AB or BC).
- Score of 560 or above on the College Board Mathematics Achievement Test, Level 1 or Level 2.
- For transfer students, completion and transfer to SDSU of a college course that satisfies the General Education - Breadth Requirement in Quantitative Reasoning with a grade of "C" or better.

Students who fail to pass the CSU Entry-Level Mathematics Examination may satisfy the requirement by one of the following methods:

- Retake ELM and pass.
- Pass SDSU's Academic Skills 91 with a grade of "Cr" or
- Pass a transfer course in intermediate algebra with a "C" or better.

### 2. SDSU Mathematics Competency requirement.\*\*

Students must satisfy the SDSU Mathematics Competency requirement by one of the following methods:

- A passing score on the CSU Entry-Level Mathematics Examination (ELM).
- Satisfactory score on any section of the SDSU Mathematics Departmental Placement Examination.
- Score of 560 or above on the Mathematics section of the Scholastic Aptitude Test (SAT-Math).
- Score of 24 or above on the American College Test (ACT) Mathematics Test taken prior to October 1989.
- Score of 25 or above on the ACT Mathematics Test taken October 1989 or later.
- Score of 3 or above on the College Board Advanced Placement mathematics examination (AB or BC).
- Score of 560 or above on the College Board Mathematics Achievement Test, Level 1 or Level 2.
- Satisfactory score on the College Level Examination Program's Mathematics General, College Algebra-Trigonometry, Calculus and Analytic Geometry, or Statistics examinations.
- Credit for Academic Skills 90B, 91 or 99B at SDSU.

### 3. Mathematics Departmental Placement Examination.

In addition to satisfying the CSU ELM and SDSU Mathematics Competency requirements, students wishing to enroll in any mathematics or statistics course must pass the appropriate part of the Mathematics Departmental Placement Examination. These examinations assess mathematical preparation beyond the elementary level. Part IA tests knowledge of intermediate algebra; Part P tests knowledge of college algebra; Part III tests knowledge of trigonometry. Students may attempt any part of the Mathematics Departmental Placement Examination three times. After three unsuccessful attempts, students must make a substantial effort to improve their mathematical skills (for example, by taking a course - SDSU Academic Skills 91 for Part IA, SDSU Mathematics 140 for

\* These scores are appropriate only to those students who satisfy the requirement upon matriculation in this catalog year or who take the examinations during this catalog year.

\*\* Exemption from the English Placement Test does not automatically satisfy the Writing Competency requirement.

\* Exemption from the Entry-Level Mathematics Examination does not automatically satisfy the Mathematics Competency Requirement.



Part P, and SDSU Mathematics 104 for Part III). Equivalent transfer courses will not grant exemptions from any part of the Placement Examination.

## II. Upper Division Writing Requirement

All students must demonstrate competency in writing skills as mandated by the major and included in each major description.

### Before attempting to satisfy this requirement, students must:

1. Have completed or be completing 60 units;
2. Have fulfilled the Writing Competency requirement; and
3. Have completed the General Education Communication and Analytical Reasoning requirement in Written Communication.

**Failure to complete these prerequisites precludes satisfying the requirement by any means.** Proof of completion of prerequisites is required for enrollment in courses listed below. When offered in a three-week session, students must, on the first day of class, demonstrate in a diagnostic test that their language skills are sufficiently high to give them a reasonable opportunity to pass the course in shortened format.

Students whose majors do not specify any particular course or procedure may select from the following options:

1. Demonstrating the required proficiency by passing the University Upper Division Writing Examination.
2. Passing with a grade of C or C (2.0) or better one of the following courses:

Anthropology 396W	Industrial Technology 396W
Commun Disorders 396W	Info and Dec Sys 396W
English 305W	Info and Dec Sys 490W
English 306W	Linguistics 305W
English 500W	Linguistics 396W
English 503W	Mex Amer Studies 396W
English 508W	Recreation 396W
English 581W	Religious Studies 396W
English 584W	Sociology 396W
History 430W	Teacher Education 396W

(Note: Several of these courses are limited to majors in the indicated department or have additional prerequisite requirements. Courses required for the major must be taken for a letter grade.)

Students who transfer from another CSU campus having fulfilled the Upper Division Writing requirement will not be required to repeat it. Please note, however, that a course listed above may be required for the major.

## III. Major and Minor Requirements

**A. Preparation for the Major.** Every major requires a set of introductory and/or skills courses designed to prepare the student for upper division study in that field. Courses taken for this purpose can also be used to satisfy General Education requirements.

**B. Major.** Completion of a departmental or an interdisciplinary major is required. Students must meet major requirements in effect at time of declaration of major; provided continuous enrollment has been maintained, except as otherwise provided in the **California Code of Regulations**, Chapter 5, Section 40401, Election of Regulations. A major is an area of specialized study which provides the student with extensive knowledge of the subject matter and its organizing concepts. It consists of 24 or more upper division units for the Bachelor of Arts, Bachelor of Music, and Bachelor of Vocational Education degrees; and of 36 or more units for the Bachelor

of Science degree. At least half of the units must be completed at SDSU unless specifically waived by the department; however, in no case shall a student be allowed to complete fewer than 12 units in the major at SDSU. Units received through SDSU extension courses, with the exception of courses offered for resident credit during Summer Sessions and Winter Session, are not applicable to the residency requirement. Unless otherwise stated, a student may (with the approval of the department) apply no more than three units of coursework from a basic certificate program toward a major or minor.

A summary list of all majors appears at the close of this chapter; the full statement of requirements for each major can be found through the Index. Courses taken in the major department or in satisfaction of the major cannot be used to meet requirements in a minor or in General Education. A maximum of three upper division units in excess of 24 for the B.A. degree and 36 for the B.S. degree required for the major but taught outside the major department may be used to satisfy requirements both for General Education and the major if such courses have been approved for General Education. Courses graded credit (Cr) may not be used to fulfill upper division requirements in the major except for those courses identified in the course listing as graded Cr/NC.

A student may wish to major in two departments. If so, the requirements for both majors must be satisfied. Units for courses which could satisfy the requirements in both majors can be counted only once. Only one diploma will be granted but the diploma and transcript will note the completion of each major.

A student may earn two majors in one department only where the specific combinations of majors are authorized in the catalog. All requirements for both majors must be satisfied; units for courses which could satisfy requirements in both majors can be counted only once. In most cases, students pursuing two majors in one department will be required to file with the Evaluations Office a master plan approved by the major department.

### Time Limit on Completion of Requirements for the Major.

As authorized by Title 5, **California Code of Regulations**, Section 40401, departments may require that specific academic requirements be met within seven years of granting an undergraduate degree. Such requirements will consist of advanced courses and examinations in areas of knowledge changing so rapidly that information may be obsolete after seven years. In those cases in which a student is required to repeat a course taken more than seven years previously, only the last grade will be used in computation of grade-point averages.

**C. Minor.** Completion of a minor is necessary if required by the major; the decision otherwise to have, or not to have, a minor is left with the student. Like the major, the minor offers an integrated and coherent pattern of coursework, combining lower and upper division coursework in proportions appropriate to the various disciplines. The minor shall consist of 15-24 units. Normally, 12 units of coursework in the minor will be upper division units. A minimum of six upper division units must be completed at SDSU. The minimum grade point average for awarding a minor at the time of graduation is 2.0 (C) or better in all units applicable toward a minor, including those accepted by transfer from another institution. Courses graded credit (Cr) may not be used to fulfill upper division requirements in the minor except for those courses identified in the course listing as graded Cr/NC. Courses numbered 296, 496, 596 may be applicable to the minor only with approval of the department chair. A summary list of all minors appears at the close of this chapter; the full statement of requirements for each minor can be found through the Index. Because special prerequisites must be met to qualify for certain minors, checking with the minor department before taking courses is advised. Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and General Education requirements. Declaration of a minor occurs by obtaining and filing a Declaration of Major or Minor form at the Office of Admissions and Records.

## IV. American Institutions Requirement

The American Institutions requirement can be satisfied in any of three ways:

### A. Courses:

Africana Studies 170A-170B	Political Sci 101 and 102
History 110A-110B	Political Sci 101 and 320
History 110A-310B	Political Sci 102 and 305
History 115A-115B	Political Sci 102 and 321
History 310A-310B	Political Sci 102 and 422
History 310A-110B	Political Sci 305 and 320
History 410A-410B	Political Sci 305 and 321
History 547A-547B	Political Sci 305 and 422
Mex Amer Studies 120A-120B	Political Sci 320 and 321
Mex Amer Studies 141A-141B	Political Sci 320 and 422
	Women's Studies 341A-341B

**B. Examination and courses:** By passing the California State and Local Government Test (1 hour) or coursework listed in B.3 AND completing coursework appropriate to the remaining two areas. Courses applicable to each area are listed below.

1. **American History, Institutions and Ideals:** All pairs of courses listed in IV.A above and History 537A-537B, 544A-544B, 545A-545B.
2. **United States Constitution:** Africana Studies 170A; History 110A, 115A, 310A, 410A, 531, 545A, 545B, 547A; Mexican American Studies 120A, 141A; Political Science 102, 305, 320, 347A-347B; Women's Studies 341A.
3. **California State and Local Government:** Africana Studies 170B; History 110B, 115B, 310B, 410B, 541B, 547B; Mexican American Studies 120B, 141B; Political Science 102, 320, 321, 422; Women's Studies 341B.

**C. Transfer credit:** By providing certification on a transcript or other official document from a regionally accredited California university, liberal arts college, or community college that the requirement as outlined in Title 5, **California Code of Regulations**, Article 5, Section 40404 has been satisfied. No partial certification of American Institutions or certification based on high school work can be accepted. Three units of transfer credit for a college-level course used to satisfy American Institutions may be used for General Education only if that course is equivalent to an approved SDSU American Institutions course listed above.

## V. Foreign Language Requirement

Students whose majors lead to the Bachelor of Arts degree in liberal arts and sciences or the Bachelor of Music degree must satisfy a Foreign Language requirement as indicated below. Speech Communication majors (noncredential candidates) must satisfy a foreign language requirement or an additional mathematics requirement. Refer to the Speech Communication section of this catalog for details. Students whose majors lead to other degrees are not subject to this requirement.

**Exclusion:** Conversation courses may not be used to meet this requirement.

Native speakers from foreign countries where English is not the principal language and who have finished high school or the equivalent in that country will be considered to have satisfied the Foreign Language requirement and will not be given credit for taking lower division courses in their native language except with advance approval from the department.

**A. The Bachelor of Arts degree in liberal arts and sciences and the speech communication major** (see exceptions above) require competency in one foreign or American Indian language. Such competency can be demonstrated by:

1. Successfully completing the third college semester or fifth college quarter in one foreign language;
2. Successfully completing the fourth year level of high school courses in one foreign language;
3. Successfully completing a third-semester equivalent proficiency examination in one foreign language;

4. Graduating from high school (other than an American high school) in a non-English speaking country.

Conversation courses may not be used in satisfying this requirement.

Students who are majoring in **art history, European studies, humanities, and linguistics** should also read the section on Foreign Language requirement under their respective majors for special conditions and limits pertaining to those majors.

Courses offered at San Diego State University which satisfy the Foreign Language requirement are:

Chinese 101, 102, and 201
Classics 101G, 202G, and 303G (Greek)
Classics 101L, 202L, and 301L (Latin)
French 100A, 100B, and 200A or 200B or 200C or 200D or 200E
German 100A, 100B, and 200A or 200B or 200C
Hebrew 101, 102, and 201
Italian 100A, 100B, and 200A or 200B
Japanese 111, 112, and 211
Portuguese 101, 301, and 302
Russian 100A, 100B, and 200A
Spanish 100A, 100B, and 100C, or 203 and 204

**B. The Bachelor of Music degree** (except the specialization in Jazz) requires equivalent knowledge demonstrated in a test of reading knowledge administered by the foreign language department concerned in consultation with the Department of Music or by completion of the appropriate language course as follows:

1. **Vocalists** — one semester each of French, German, and Italian.
2. **Music history and literature students** — three semesters of one foreign language chosen from French, German, or Italian.
3. **All others** — two semesters of one foreign language chosen from French, German, or Italian (except that classical guitar students may substitute Spanish).

## VI. Unit Requirements

**A. Total unit requirement.** The total number of units necessary for a bachelor's degree (excluding courses numbered 99 and below; also courses numbered 397) is as follows:

1. Bachelor of Arts degree in Applied Arts and Sciences	124
2. Bachelor of Arts degree in Liberal Arts and Sciences	124
3. Bachelor of Science degree in Applied Arts and Sciences	128
* 4. Bachelor of Science degree in Geological Sciences	132
5. Bachelor of Science degree in Engineering	133
6. Bachelor of Music degree	132
7. Bachelor of Vocational Education degree	124

The degree which applies to a particular student is determined by the student's choice of major. Each student should therefore consult the statement of his or her major to establish the applicable degree. The full statement of each major can be found by consulting the Index.

\* Applies to all options except General Geology and Paleontology which require 128 units.

**B. Upper division unit requirement.** The total number of upper division units necessary for a bachelor's degree is as follows:

1. Bachelor of Arts degree in Applied Arts and Sciences	40
2. Bachelor of Arts degree in Liberal Arts and Sciences	45
* 3. Bachelor of Science degree in Applied Arts and Sciences (except majors in the College of Business Administration)	45
4. Bachelor of Science degree in Applied Arts and Sciences (all majors in the College of Business Administration)	60
5. Bachelor of Music degree	47-51
6. Bachelor of Vocational Education degree	40

\* 36 units required for students subject to 1980-81 and earlier General Education requirements.



Courses offering upper division credit are those numbered 300 through 599. All units from upper division courses (except those numbered 397 in any department) are applicable to the upper division unit requirement, including units from courses in the major and the minor, and from courses used to satisfy the American Institutions and the General Education requirements.

**C. Unit limit totals.** The maximum number of special units accepted for a bachelor's degree is as follows:

1. From transferable community and junior college courses	70
2. From credit by examination	30
3. From extension, Open University, and correspondence courses	24
4. From courses graded credit (Cr)	15
5. From topics courses numbered 296, 496, 596	9
6. From General Studies courses numbered 200 and 400	6
7. From courses numbered below 100, and courses numbered 397	0
8. From Academic Skills 296	3
9. From Aerospace Studies, Military Science, and Naval Science courses	24
10. From courses numbered 499	9
11. From Music 170-189, 370-389, 569-589 (for non-major and music major for B.A. degree with credential)	8
12. From Music 170-189, 370-389, 569-589 (for music major for B.A. degree)	9
13. From Music 170-189, 370-389, 569-589 (for music major for B.M. degree)	12

\* Upper division courses in the major and minor must be taken for a letter grade unless they are offered only credit/no credit.

**D. Units in one department.**

- Bachelor of Arts degree in Liberal Arts and Sciences.** The maximum number of units in any one department, lower and upper division combined, which can be applied toward the Bachelor of Arts degree in Liberal Arts and Sciences is 48, except in those majors outlined below:
  - For students majoring in Spanish 49
  - For students majoring in social work 51
  - For students completing the single subject teaching credential program in French or Spanish 52
  - For students completing the single subject teaching credential program in Russian 54
  - For students majoring in art with an emphasis in studio arts 57
  - For students majoring in dance 64
- Students majoring in journalism may not accumulate more than 33 units of credit in journalism courses. A minimum of 90 units of coursework applicable to the bachelor's degree in journalism must be completed outside the areas of journalism, film, broadcasting, television, photography, and mass communication.
- Bachelor of Music degree.** The maximum number of units in upper division music courses acceptable toward the Bachelor of Music degree is 70.
- Bachelor of Science degree in Business Administration.** The minimum number of units in business administration and economics courses necessary for a Bachelor of Science degree in any of the ten business majors is 52 (40 percent of 128 units). In addition, the minimum number of units from departments outside of business administration and economics is likewise 52 (40 percent of 128 units).

## VII. Residence Requirements

To qualify for a bachelor's degree, each of the following unit requirements must be completed at this university:

- A minimum of 30 units total, of which at least 24 units must be in upper division courses (numbered 300-599).

B. At least half of the upper division units required for the major, unless waived by the major department; however, in no case shall the unit total be fewer than 12 upper division units.

C. If a minor is completed, a minimum of six upper division units in the minor.

D. At least nine units in General Education courses.

**Note:** Courses taken in extension, Open University, and units earned through credit-by-examination may not be applied to these requirements.

## VIII. Grade Point Average Requirements

Four averages, each 2.0 or higher, are required for graduation:

- An average based on all courses attempted at SDSU.
- An average based on all courses attempted at SDSU and transferable courses at other universities, liberal arts colleges, and community colleges.
- An average based on all upper division courses attempted in the major department or required for the major.
- An average based on all units applicable to a minor, if a minor is being completed for the degree.

Information on the computation of averages can be found in the chapter General Regulations under these headings: Grade Point Average, Grades, Incomplete Grade, and Repeated Course.

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## IX. General Education\*

As an important part of your undergraduate education, you will spend approximately one-third of your college years studying in the General Education program. Coursework in General Education is intended to give an enriching perspective to your overall academic program, to complement your major, and to equip you for life-long understanding, integrated physiological, and psychological development. In recognition of the importance of social integration into a multicultural society, material on racism, sexism, and nondominant groups in American society is incorporated into General Education Foundations courses.

The program has four major objectives: (1) to develop your intellectual capabilities necessary to the enterprise of learning; (2) to introduce you to modes of thought characteristic of diverse academic disciplines; (3) to help you understand the conditions and forces that shape you as a human being and influence your life; and (4) to help you apply critical and informed judgments to the achievements of your own and other cultures.

The program consists of 49 units divided into four sections: I, Communication and Analytical Reasoning; II, Foundations; III, American Institutions; IV, Explorations. The sections should be taken in sequence so that you master skills needed to understand the academic disciplines of the University, and to prepare you for the more specialized or interdisciplinary courses in Section IV (Explorations).

Each section has specific educational objectives and courses designed to meet these objectives. For example, courses in Section I, Communication and Analytical Reasoning, are designed to develop your skills in the areas of written and oral communication, and in mathematics and reasoning. Courses in Section II, Foundations, use the skills developed in Section I, and provide an introduction to various areas of study. The knowledge you gain in Foundations will help prepare you to live in our multicultural society. Section III, American Institutions courses provide you with knowledge of American democracy and enable you to contribute as a responsible and constructive citizen. Section IV, Explorations, courses are upper division and should not be taken before you reach junior standing (passing 60 units). Explorations courses build on the knowledge you gained in the first three sections, and provide more specialized or thematic study in the disciplines included in Foundations.

\* Engineering, Liberal Studies—Emphasis in Education, and Nursing majors should refer to the Courses and Curricula section of the General Catalog for a listing of General Education requirements.

## Requirements and Limitations

You must complete all requirements in Sections I, II, III, and IV for a total of 49 units. Because you must be a junior (60 units) to satisfy the upper division Section IV requirement, you should not register for upper division GE courses until the semester in which you complete 60 units.

Within these 49 units, the following limitations apply:

- No more than 12 units from one department can be used in General Education.
- No more than 7 units from one department can be used in Sections II, III, and IV combined (Foundations, American Institutions, and Explorations).
- Courses in your major department cannot be used in Section IV (Explorations).
- A three-unit General Education course required for your major but not in your major department may be used in Section IV, Explorations **only if** your major requires at least three units more than 24 units for the B.A. degree or at least three units more than 36 units for the B.S. degree.
- Explorations courses may not be taken sooner than the semester in which you pass 60 units.
- Credit/No Credit grades cannot be used in Section I (Communication and Analytical Reasoning).

## Transfer Students—Additional Information

If you fall into one of the following four categories, you must complete only Section IV (Explorations) to satisfy your General Education requirements.

- You transferred from a California community college and have **completed** the Intersegmental General Education Transfer Curriculum (IGETC), or
- You transferred from a California community college and are certified as having **completed** the 39 lower division CSU General Education pattern (Sections I, II, and III), or
- You transferred from another California State University campus and have completed all lower division General Education requirements at the CSU campus, or
- You transferred from a University of California campus and have completed all lower division General Education requirements at the UC campus.

Your previous college must provide SDSU with proof of completion, either a GE certification or a statement of completion from a University of California campus. Remember, you may not take Explorations courses sooner than the semester in which you complete 60 units.

If you transferred from a California community college or from a CSU or UC campus without completing all lower division General Education requirements, you must complete the requirements listed below. Transfer courses will be used in the appropriate area of the SDSU General Education pattern.

If you transferred from a private college or university in California or from a non-California college or university, you must meet the requirements listed below. A transfer course will be used only when equivalent to the listed SDSU course.

## I. COMMUNICATION AND ANALYTICAL REASONING (12 units)

You may **not** use Credit/No Credit grades in this section.

**A. Written Communication.** Complete one course from each area.

- Composition**
  - Africana Studies 120: Composition (3)
  - English 100: College Composition (3)
  - Linguistics 100: English Composition for International Students (3)
  - Mexican American Studies 111B: Written Communication (3)

## 2. Intermediate Composition

Africana Studies 200: Intermediate Expository Writing and Research Fundamentals (3)  
English 200: Intermediate Composition (3)  
Linguistics 200: Advanced English for International Students (3)

**B. Oral Communication.** Complete one course.

Africana Studies 140: Oral Communication (3)  
Mexican American Studies 111A: Oral Communication (3)  
Speech Communication 103: Oral Communication (3)

**C. Logic, Mathematics, Statistics.** Complete one course.

Economics 201: Statistical Methods (3)  
Mathematics 118 or higher numbered course (3), excluding computer programming courses.  
Philosophy 120: Logic (3)  
Political Science 201: Elementary Statistics for Political Science (3)  
Psychology 270: Statistical Methods in Psychology (3)  
Sociology 201: Elementary Social Statistics (3)

## II. FOUNDATIONS (25 units)

**A. Natural Sciences.** Complete one course from each area. If listed in two areas, a course will meet both requirements.

### 1. Life Sciences

+ Anthropology 101: Human Biocultural Origins (3)  
Biology 100: General Biology (3)  
Biology 101: Animal Biology (3)  
Biology 120: Microbiology and Man (3)  
Biology 130: Plants and Man (3)  
Natural Science 110B: Energy in Nature with Laboratory (4)

### 2. Physical Sciences

Astronomy 101: Principles of Astronomy (3)  
Chemistry 100: Introduction to General Chemistry with Laboratory (4)  
Chemistry 110: Chemistry and Life (3)  
+ Geography 101: Principles of Physical Geography (3)  
+ Geography 103: Principles of Meteorology (3)  
Geological Sciences 100: General Geology (3)  
Natural Science 100: Physical Science (3)  
Natural Science 102: Physical Science with Laboratory (4)  
Natural Science 110A: Energy in Nature with Laboratory (4)  
Physics 103: Conceptual Physics (3)  
Physics 107: Introductory Physics with Laboratory (4)

### 3. Laboratory

Astronomy 109: Astronomy Laboratory (1)  
Biology 100L: General Biology Laboratory (1)  
Biology 101L: Animal Biology Laboratory (1)  
Biology 120L: Microbiology and Man Laboratory (1)  
Biology 130L: Plants and Man Laboratory (1)  
Chemistry 100: Introduction to General Chemistry with Laboratory (4)  
Geography 101L: Physical Geography Laboratory (1)  
Geography 103L: Principles of Meteorology Laboratory (1)  
Geological Sciences 101: General Geology Laboratory (1)  
Natural Science 102: Physical Science with Laboratory (4)  
Natural Science 110A: Energy in Nature with Laboratory (4)  
Natural Science 110B: Energy in Nature with Laboratory (4)  
Physics 107: Introductory Physics with Laboratory (4)

+ Only one of these three courses may be taken for General Education credit.

## Special Provision for Majors in the Sciences and Related Fields

Some majors require or recommend coursework in astronomy, biology, chemistry, geological sciences, or physics in preparation for



## Graduation Requirements

the major. If you have declared one of these majors you may substitute those courses for courses listed under either Life Sciences or Physical Sciences (as appropriate) in Section II, A above.

**B. Social and Behavioral Sciences.** Complete two courses taken from different departments (6 units).

- Africana Studies 101A. Introduction to Africana Studies: Social and Behavioral Sciences (3)
- Anthropology 102. Introduction to Cultural Anthropology (3)
- Economics 100. Contemporary Economic Problems (3)
- Economics 101. Principles of Economics (3)
- Economics 102. Principles of Economics (3)
- Geography 102. Principles of Cultural Geography (3)
- Linguistics 101. Introduction to Language (3)
- Political Science 103. Introduction to Comparative Government (3)
- Psychology 101. Introductory Psychology (3)
- Sociology 101. Introductory Sociology: The Study of Society (3)

Women's Studies 201. Women and the Social Sciences (3)

**C. Humanities.** Complete a course in each of four of the following five areas (12 units). If you do not complete a course in each of areas 1 through 4, you will be required to take an upper division course in Explorations in the area missed.

### 1. Literature

- Comparative Literature 270A. World Literature (3)
- Comparative Literature 270B. World Literature (3)
- English 220. Introduction to Literature (3)

### 2. Art, Classics, Dance, Drama, Humanities, and Music

- Africana Studies 101B. Introduction to Africana Studies: Humanities (3)
- American Indian Studies 110. American Indian Heritage (3)
- Art 157. Introduction to Art (3)
- Art 258. Appreciation and History of Art (3)
- Art 259. Appreciation and History of Art (3)
- Classics 140. Our Classical Heritage (3)
- Dance 181. Introduction to Dance (3)
- Drama 100. Theatre and Western Civilization (3)
- Drama 120. Heritage of Dramatic Literature (3)
- Humanities 101. Introduction to Humanities (3)
- Humanities 130. The Jewish Heritage I (3)
- Humanities 140. Mythology (3)
- Mexican American Studies 100. The Mexican American Heritage (3)

@ Music 151. Introduction to Music (3)

Women's Studies 205. Women in Western Civilization (3)

### 3. History

- History 100. World History (3)
- History 101. World History (3)
- % History 105. Western Civilization (3)
- \$ History 106. Western Civilization (3)

### 4. Philosophy and Religious Studies

- Philosophy 101. Introduction to Philosophy: Values (3)
- Philosophy 102. Introduction to Philosophy: Knowledge and Reality (3)
- Philosophy 103. Historical Introduction to Philosophy (3)
- Religious Studies 101. World Religions (3)
- Religious Studies 102. Introduction to Religion (3)

### 5. Foreign Language

- Chinese 101. Elementary Chinese I (5)
- Chinese 201. Intermediate Chinese I (5)
- Chinese 202. Intermediate Chinese II (5)
- Classics 101G. Elementary Greek I (5)
- Classics 101L. Elementary Latin I (5)
- Classics 120. English from Latin and Greek (3)
- Classics 202G. Elementary Greek II (5)
- Classics 202L. Elementary Latin II (5)
- French 100A. Elementary (5)
- French 100B. Elementary (5)

French 200B. Reading French (3)

French 200C. Writing French (3)

French 200D. The Grammar of Spoken French (3)

French 200E. Readings in Commercial French (3)

German 100A. First Course in German (5)

German 100B. Second Course in German (5)

German 200B. Expository German for Reading Comprehension (3)

German 200C. Literary German for Reading Comprehension (3)

German 211. Conversation (2) Cr/NC

Hebrew 101. Elementary (4)

Hebrew 102. Elementary (4)

Italian 100A. Elementary (5)

Italian 100B. Elementary (5)

Italian 200A. Intermediate Grammar and Composition (3)

Italian 200B. Reading and Speaking Italian (3)

Japanese 111. Elementary Japanese I (6)

Japanese 112. Elementary Japanese II (6)

Japanese 202. Intermediate Japanese II (4)

Japanese 211. Intermediate Japanese I (6)

Japanese 212. Intermediate Japanese II (6)

Portuguese 101. Elementary/Intensive (5)

Russian 100A. First Course in Russian (5)

Russian 100B. Second Course in Russian (5)

Russian 200A. Third Course in Russian (5)

Russian 200B. Fourth Course in Russian (5)

Russian 211. Conversation (2)

Russian 212. Conversation (2)

Spanish 100A. First Spanish Course (4)

Spanish 100B. Second Spanish Course (4)

Spanish 100C. Third Spanish Course (4)

Spanish 202. Intermediate Spanish (4)

Spanish 203. Intermediate Spanish for U.S. Hispanic Students I (3)

Spanish 204. Intermediate Spanish for U.S. Hispanic Students II (3)

Spanish 211. Intermediate Conversation and Writing (3)

Spanish 212. Intermediate Conversation and Writing (3)

@ No credit given to music majors or minors.

% Not open to students with credit in History 305A.

\$ Not open to students with credit in History 305B.

## III. AMERICAN INSTITUTIONS (3 units)

You may use three units of the six units of required coursework to meet the American Institutions graduation requirement in General Education, excluding courses numbered 500 and above:

Africana Studies 170A-170B. Afro-American History (3-3)

History 110A-110B. American Civilization (3-3)

History 115A-115B. Comparative History of the Americas (3-3)

History 310A-310B. United States History (3-3)

History 410A-410B. United States History for Teachers (3-3)

Mexican American Studies 120A-120B. The Mexican American Role in the American Political System (3-3)

Mexican American Studies 141A-141B. History of the United States (3-3)

Political Science 101. Introduction to Politics and the American Political System (3)

Political Science 102. Introduction to American and California Government and Politics (3)

Political Science 305. American Political Thought (3)

# Political Science 320. American Institutions (3)

Political Science 321. State Politics (3)

Women's Studies 341A-341B. Women in American History (3-3)

\* Refer to section of catalog on American Institutions Requirement for approved sequences.

# Not open to students with credit in Political Science 102.

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### IV. EXPLORATIONS

Courses in this area must not be taken sooner than the semester in which you achieve upper division standing (60 units passed.)

Complete one course each in areas A, B, and C (9 units). One course must be a course in cultural diversity, designated by an \*. (Majors in the College of Sciences may replace the area A course with an additional course from area B or C.)

**A. Natural Sciences.** Complete one course.

- Astronomy 301. Cosmology and Gravitational Collapse (3)
- Biology 307. Biology of Sex (3)
- Biology 315. Ecology and Human Impacts on the Environment (3)
- Biology 319. Evolution (3)
- Biology 320. Dinosaurs (3)
- Biology 321. Human Heredity (3)
- Biology 324. Life in the Sea (3)
- Biology 330. Natural History of Animals and Plants (3)
- Biology 336. Principles of Human Physiology (3)
- Biology 339. Sociobiology (3)
- Biology 341. The Human Body (3)
- Biology 362. Plants, Medicines, and Drugs (3)
- Biology 454. Conservation of Wildlife (3)
- Biology 480. Biology of Aging (3)
- Engineering 350. Control of the Human Environment (3)
- # General Studies 340. Confronting AIDS (3)
- Geological Sciences 301. Geology of National Parks and Monuments (3)
- Geological Sciences 302. Fossils: Life Through Time (3)
- Geological Sciences 303. Natural Disasters (3)
- Mathematics 303. History of Mathematics (3)
- Natural Science 305. Modern Physical Science (3)
- Natural Science 315. History of Science I (3)
- Natural Science 316. History of Science II (3)
- Natural Science 317. Development of Scientific Thought (3)
- Natural Science 333. Technology and Human Values (3)
- Natural Science 431. The Origins of Life (3)
- Oceanography 320. The Oceans (3)
- Physics 301. Energy and Conservation (3)
- Physics 305. Quantum Reality—From Quarks to Quasars (3)

**B. Social and Behavioral Sciences.** Complete one course.

- Africana Studies 320. Politics and Economics of Black Urban Development (3)
- \* Africana Studies 321. Black Political Participation in America (3)
- Africana Studies 322. African American Political Thought (3)
- \* Africana Studies 325. Public Policy and Afro-American Community (3)
- Africana Studies 341. Cultural Patterns and African American Identity (3)
- \* Africana Studies 380. Blacks in the American Justice System (3)
- \* Africana Studies 420. Afro-Americans and the Politics of Urban Education (3)
- \* Africana Studies 445. Ethnicity and Social Psychology (3)
- \* American Indian Studies 320. American Indians in Contemporary Society (3)
- \* Anthropology 350. World Ethnography (3)
- Anthropology 410. Language in Culture (3)
- Anthropology 432. Principles of Personality in Culture (3)
- \* Anthropology 442. Cultures of South America (3)
- \* Anthropology 445. Ethnology of North America (3)
- \* Anthropology 446. Southwestern Ethnology (3)
- \* Anthropology 448. Cultures of Oceania (3)

- \* Anthropology 449. Cultures of Sub-Saharan Africa (3)
- \* Anthropology 450. Cultures of India (3)
- \* Anthropology 452. Japanese Society (3)
- Economics 330. Comparative Economic Systems (3)
- \* Economics 464. Economic Problems of Latin America (3)
- \* Economics 465. Economic Problems of South and East Asia (3)

- Economics 489. Economics and Population (3)
- Education 350. Education in American Society (3)
- General Studies 300. Global Systems (3)
- General Studies 301. Conflict and Conflict Resolution (3)
- General Studies 310. Our Global Future: Values for Survival (3)
- General Studies 320. Nuclear Arms Dilemma (3)
- General Studies 330. Plagues Through the Ages (3)
- General Studies 420. Disability and Society (3)
- \* Geography 312. Culture Worlds (3)
- \* Geography 321. United States (3)
- \* Geography 323. Middle America (3)
- \* Geography 324. South America (3)
- Geography 336. Europe (3)
- Geography 337. Soviet Union (3)
- Geography 354. Geography of Cities (3)
- Geography 370. Environmental and Natural Resource Conservation (3)
- # Health Science 353. Sexually Transmitted Diseases (3)
- \* Health Science 362. International Health (3)
- Journalism 408. Mass Communication and Society (3)
- Linguistics 354. Language and Computers (3)
- Linguistics 420. Linguistics and English (3)
- † Management 456. Conceptual Foundations of Business (3)
- \* Mexican American Studies 301. Political Economy of the Chicano People (3)
- \* Mexican American Studies 303. Mexican American Community Studies (3)
- \* Mexican American Studies 320. Mexican American Life Styles (3)
- \* Mexican American Studies 355. The United States-Mexico International Border (3)
- Political Science 301A. History of Western Political Thought (3)
- Political Science 301B. History of Western Political Thought (3)
- Political Science 302. Modern Political Thought (3)
- Political Science 356. Governments of Continental Europe (3)
- \* Political Science 361. Governments and Politics of the Developing Areas (3)
- \* Political Science 362. Governments and Politics of East Asia (3)
- \* Political Science 363. Governments and Politics of the Middle East (3)
- Political Science 370. Political Violence (3)
- Psychology 330. Developmental Psychology (3)
- Psychology 340. Social Psychology (3)
- Psychology 351. Psychology of Personality (3)
- Recreation 304. Challenges of Leisure (3)
- Recreation 305. Wilderness and the Leisure Experience (3)
- \* Social Work 350. Cultural Pluralism (3)
- Social Work 360. Perspectives on Human Behavior and the Social Environment (3)

# Only one of these two courses may be taken for General Education credit.

\* Cultural diversity course.

† Majors in the College of Business Administration may not use this course to satisfy requirements for General Education.



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- Sociology 320. Sex/Gender Roles in American Society (3)
- Sociology 335. Mass Communication and Popular Culture (3)
- Sociology 338. Sociology of Religion (3)
- Sociology 350. Population and Contemporary Issues (3)
- Sociology 355. Minority Group Relations (3)
- Sociology 410. Social Psychology: Mind, Self, and Society (3)
- Sociology 421. The American Family and Its Alternatives (3)
- Sociology 430. Social Organization (3)
- Sociology 450. Social Change (3)
- Speech Communication 475. Intercultural Communication (3)
- Women's Studies 310. Women in Cross-Cultural Perspective (3)
- Women's Studies 320. Socialization of Women (3)
- Women's Studies 325. Psychology of Women (3)
- Women's Studies 370. Women and the Law (3)
- Women's Studies 375. Sex, Power, and US Politics (3)
- Women's Studies 485. Women's Work (3)

**C. Humanities.** Complete one course. If you did not complete a course in each of areas 1 through 4 in Foundations, you must take your Explorations course from the area not completed.

### 1. Literature

- Africana Studies 365. African American Literature (3)
- Africana Studies 460. Black Images in Western Literature (3)
- Africana Studies 463. Black Literatures of the World (3)
- Africana Studies 464. Caribbean Literature (3)
- American Indian Studies 300. American Indian Oral Literature (3)
- American Indian Studies 430. American Indian Poetry and Fiction (3)
- Classics 302L. Readings in Latin Prose (3)
- Classics 304G. Readings in Greek Poetry (3)
- Classics 320. Classical Literature (3)
- Comparative Literature 405. The Bible as Literature (3) [Same course as English 405.]
- Comparative Literature 440. African Literature (3)
- Comparative Literature 445. Modern Latin American Literature (3)
- Comparative Literature 455. Classical Asian Literature (3)
- Comparative Literature 460. Modern Asian Literature (3)
- Comparative Literature 470. Folk Literature (3) (Maximum GE credit 3 units)
- English 301. The Psychological Novel (3)
- English 302. Introducing Shakespeare (3)
- English 405. The Bible as Literature (3) [Same course as Comparative Literature 405.]
- English 494. Modern American Fiction (3)
- French 305A. Survey of French Literature (3)
- French 305B. Survey of French Literature (3)
- German 310. Introduction to German Literature (3)
- Italian 305A. Italian Literature (3)
- Italian 305B. Italian Literature (3)
- Mexican American Studies 335. Mexican American Literature (3)
- Mexican American Studies 380. US/Mexico Borderlands Folklore (3)
- Russian 305A. Survey of Russian Literature (3)
- Russian 305B. Survey of Russian Literature (3)
- Spanish 305A. Survey Course in Spanish Literature (3)
- Spanish 305B. Survey Course in Spanish Literature (3)
- Spanish 306A. Survey of Spanish American Literature (3)
- Spanish 306B. Survey of Spanish American Literature (3)
- Women's Studies 352. Women in Literature (3)

### 2. Art, Classics, Drama, Humanities, Music

- Africana Studies 385. African American Music (3)
- American Indian Studies 300. American Indian Oral Literature (3)
- American Indian Studies 310. American Indian Music (3)
- Anthropology 422. Music and Culture (3)
- Classics 330. Classical Drama (3)
- Drama 460A. History of the Theatre (3)
- Drama 460B. History of the Theatre (3)
- French 421. French Civilization (3)
- French 422. Contemporary France (3)
- Humanities 310. French Civilization (3)
- Humanities 320. German Civilization (3)
- Humanities 330. Russian Civilization (3)
- Humanities 331. Russian Civilization (3)
- Humanities 340. Italian Civilization (3)
- Humanities 350. Spanish Civilization (3)
- Humanities 375. Moral Issues of War and Peace (3)
- Humanities 400. Civilization Through Travel Study (1-3) (Maximum GE credit 3 units)
- Humanities 401. The Medieval Heritage (3)
- Humanities 402. The Renaissance (3)
- Humanities 403. The Baroque and the Enlightenment (3)
- Humanities 404. The Modern European Heritage (3)
- Humanities 450. Arab-Islamic Civilization (3)
- Humanities 460. African Civilizations (3)
- Mexican American Studies 310. Mexican and Chicano Music (3)
- Mexican American Studies 357. US/Mexico Border: Urbanism and Architecture (3)
- Music 345. Music in Contemporary Life (3)
- Music 351A. Musical Masterpieces of the Eighteenth and Nineteenth Centuries (3)
- Music 351B. Musical Masterpieces of the Twentieth Century (3)
- Music 351C. Masterpieces of Grand Opera (3)
- Music 351D. Jazz History and Appreciation (3)
- Spanish 440. Spanish Civilization (3)
- Spanish 441. Spanish American Civilization (3)
- Spanish 442. Mexican Civilization (3)
- Telecommunications and Film 363. International Cinema (3) (Maximum GE credit 3 units)

### 3. History

- Africana Studies 470. Comparative History: Afro-American and African Heritage (3)
- Africana Studies 472. Slavery (3)
- American Indian Studies 440. American Indian History (3)
- Asian Studies 458. Asian Traditions (3)
- Asian Studies 459. Contemporary Asian Cultures (3)
- Classics 340. Classical Civilization (3)
- % History 305A. Sources of Western Civilization (3)
- % History 305B. Sources of Western Civilization (3)
- History 407A. Modern Europe (3)
- History 407B. Modern Europe (3)
- History 415A. Latin America (3)
- History 415B. Latin America (3)
- History 420. Asia's Dynamic Traditions (3)
- History 421. Asia's Emerging Nations (3)
- History 422. Southeast Asian and Filipino Experience in America (3)
- History 440. The Holocaust and Western Civilization (3)

\* Cultural diversity course.

# Only one of these two courses may be taken for General Education credit.

% Not open to students with credit in History 105A.

% Not open to students with credit in History 105B.

@ English 503 may not be used in place of English 302 for General Education credit.

## Graduation Requirements

- History 441. Environmental Problems in Historical Perspective (3)
- History 442A. People Out of Our Past (3)
- History 442B. People Out of Our Past (3)
- History 473A. Middle Eastern History from the Rise of Islam to the Present (AD 600-AD 1600) (3)
- History 473B. Middle Eastern History from the Rise of Islam to the Present (AD 1600-present) (3)
- History 475A. Africa (3)
- History 475B. Africa (3)
- History 480. History of Corporations in the Modern World (3)
- History 488. Modern Jewish History (3)
- Linguistics 410. History of English (3)
- Mexican American Studies 350A. Chicano History (3)
- Mexican American Studies 350B. Chicano History (3)
- Mexican American Studies 375. US/Mexico Border History (3)
- Mexican American Studies 376. Mexican American Culture and Thought (3)
- Women's Studies 340. Women in Modern European History (3)

### 4. Philosophy and Religious Studies

- American Indian Studies 470. Roots of Indian Tradition (3)
- Anthropology 424. Primitive Religion (3)
- Classics 310. Classical Mythology (3)
- Philosophy 305. Classics of Western Philosophy (3)
- Philosophy 310. Philosophy and Human Nature (3)
- Philosophy 329. Social Ethics (3)
- Philosophy 330. Medical Ethics (3)
- Philosophy 332. Environmental Ethics (3)
- Philosophy 333. Philosophy of Technology (3)
- Philosophy 334. Philosophy of Literature (3)
- Philosophy 351. Chinese Philosophy (3)
- Religious Studies 301. Hebrew Scriptures (3)
- Religious Studies 305. The New Testament (3)
- Religious Studies 320. Judaism (3)
- Religious Studies 325. Christianity (3)
- Religious Studies 340. Islam (3)
- Religious Studies 350. Dynamics of Religious Experience (3)
- Religious Studies 353. The Human Dimension of Religion and Psychology (3) (Maximum GE credit 3 units)
- Religious Studies 354. Religion and Society (3)
- Religious Studies 363. Religion and the Sciences (3)
- Religious Studies 401. Religions of India (3)
- Religious Studies 403. Religions of the Far East (3)

### 5. Foreign Language

- Classics 301L. Readings in Latin Poetry (3)
- Classics 303G. Readings in Greek Prose (3)
- French 301. Advanced Grammar and Composition (3)
- French 302. Translation and Stylistics (3)
- German 301. Grammar and Composition (3)
- German 302. Grammar and Composition (3)
- Italian 301. Advanced Oral and Written Composition (3)
- Japanese 301. Third Year Japanese I (3)
- Japanese 302. Third Year Japanese II (3)
- Portuguese 301. Advanced Oral and Written Composition (3)

\* Cultural diversity course.

- Portuguese 302. Advanced Oral and Written Composition (3)
- Russian 301. Advanced Grammar and Composition (3)
- Russian 302. Advanced Grammar and Composition (3)
- Spanish 301A. Advanced Reading and Writing (3)
- Spanish 301B. Advanced Oral and Written Composition (3)
- Spanish 302. Advanced Oral and Written Composition (3)

## Application for Graduation

Graduation is not automatic upon the completion of requirements. Students who intend to graduate must take the initiative. When they believe they are eligible, they should file an application with the Office of Admissions and Records. Deadlines by which applications must be received in Admissions and Records are published each year in the fall semester Class Schedule. An application fee of \$32.00, which is nonrefundable, is required.

All requirements must be completed by the graduation date. Candidates for graduation are not eligible to register for terms subsequent to the graduation date unless an application for readmission as a postbaccalaureate student has been filed with Admissions and Records.

Students not completing requirements must cancel the current application at the earliest possible date and reapply for graduation during the appropriate filing period. Candidates who wish to change their projected graduation date between May and August may do so by submitting a Graduation Term Transfer Form. Changes between December and May or August graduation dates require a new application. Both term transfer and reapplication require a \$16 graduation evaluation and diploma fee.

Graduation requirements will be determined by the continuous enrollment regulations outlined in this catalog. After the degree is granted no changes can be made to the undergraduate record.

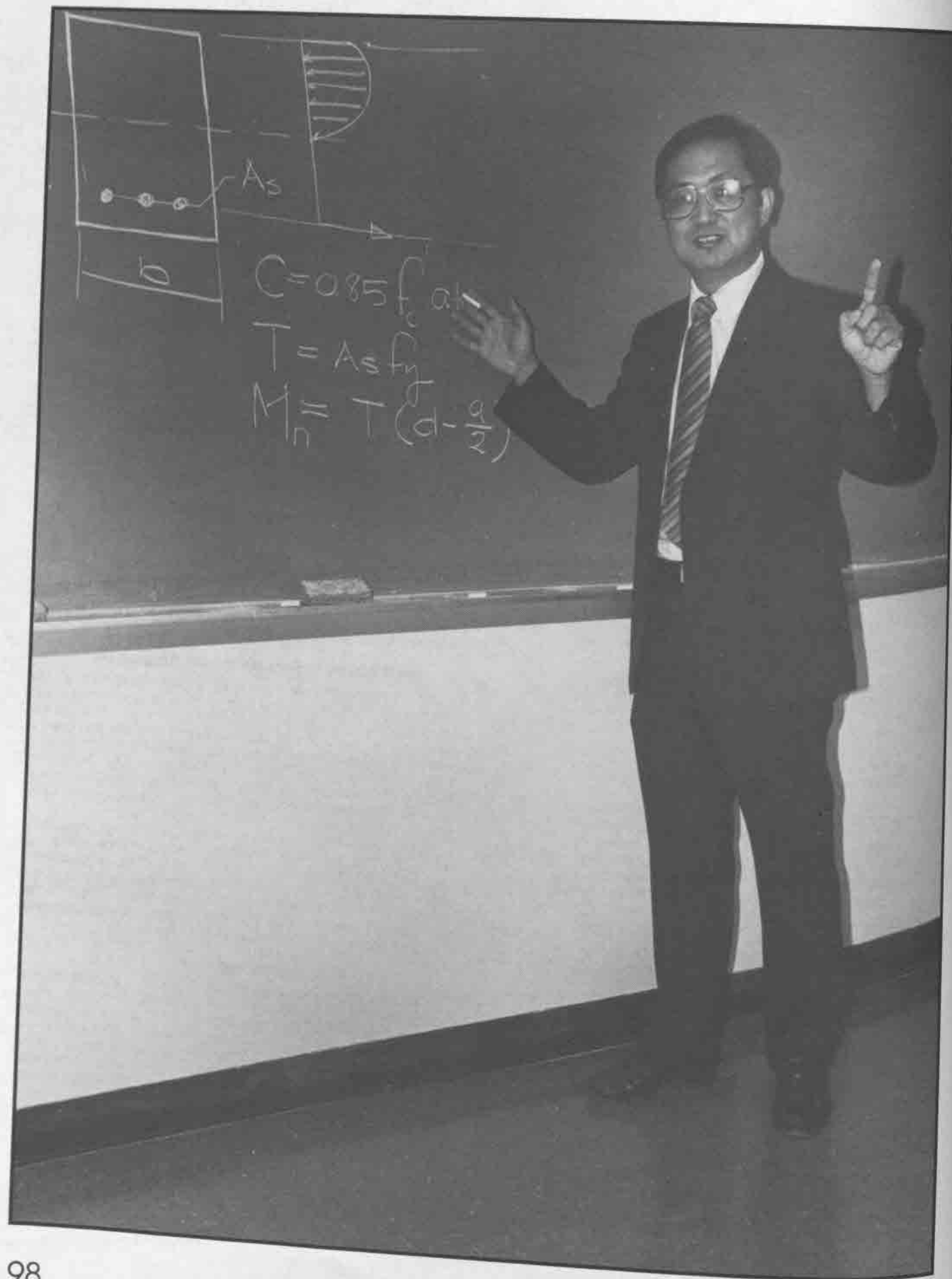
## Election of Regulations for Graduation

An undergraduate student remaining in attendance in regular session at any California State University campus, any California community college, or any combination of California community colleges and campuses of The California State University may, for purposes of meeting graduation requirements, elect to meet the requirements in effect at San Diego State University either at the time the student began such attendance or at the time of entrance to the campus or at the time of graduation. Substitutions for discontinued courses may be authorized or required by the proper authorities.

"Attendance" is defined here as attendance in at least one semester or two quarters within a calendar year. Absence due to an approved educational leave or for attendance at another accredited institution of higher learning shall not be considered an interruption in attendance if the absence does not exceed two years. When students change or declare their majors, they must adopt the requirements of the major and any minors in effect at that time.

## Commencement

Commencement exercises are held once a year at the end of the spring semester for students who were graduated at mid-year, those graduating at the end of the spring semester, and undergraduate students who expect to complete requirements for graduation in the summer session. The President of the University, by the authority of the Trustees and on recommendation of the faculty, awards the degrees. Brochures giving details regarding the exercises are mailed to prospective participants in early May.



## Curricula Summary



# Summary of Curricula Offered

Majors	Applied Arts and Sciences		Liberal Arts and Sciences	Graduate Curricula		
	BA	BS	BA	MA, MFA	MS	PhD
Accountancy					MS	
Accounting		BS				
Aerospace engineering		BS			MS	
Afro-American studies			BA			
American studies			BA			
Anthropology			BA	MA		
Applied mathematics					MS	
Art	BA			MA, MFA		
Asian studies			BA	MA		
Astronomy		BS	BA			
Biology		BS	BA	MA	MS	PhD
Business administration				MBA	MS	
Chemical physics		BS			MS	
Chemistry		BS				
Child development		BS	BA	MA	MS	PhD
City planning		BS			MS	
Civil engineering		BS			MCP	
Classics					MS	
Communicative disorders			BA			
Comparative literature			BA	MA		
Computer science		BS	BA			
Counseling					MS	
Creative writing					MS	
Criminal justice administration		BS		MFA		
Dance						
Decision Systems		BS	BA			
Drama	BA					
Ecology				MA, MFA		
Economics						PhD
Education			BA	MA		
Electrical engineering				MA		PhD
Engineering		BS			MS	
English						PhD
Environmental health		BS	BA	MA		
European studies						
Finance		BS	BA			
Financial services		BS				
Food and nutrition		BS				
French		BS				
Geography			BA	MA		
Geological sciences			BA	MA		PhD
German		BS				
Gerontology			BA		MS	
Health science			BA			
History		BS	BA			
Home economics			BA	MA		
Humanities		BS				
Human resource management			BA			
Industrial technology		BS				
Information systems		BS				
International business		BS				
Journalism			BA			
Latin American studies			BA			
Liberal arts			BA	MA		
Liberal studies				MA		
Linguistics			BA	MA		
Management			BA	MA		
Marketing		BS				
Mass communication		BS				
Mathematics					MS	
Mechanical engineering		BS	BA	MA		
Mexican American studies		BS				
Microbiology			BA		MS	
Music	BA	BS	BA		MS	
Nursing		BS		MA	MM	
Nutritional sciences		BS			MS	
Philosophy					MS	
Physical education			BA	MA		
Physical science		BS	BA			
Physics		BS				
Political science	BA	BS				
Production and operations management			BA	MA	MS	
Psychology		BS				
Public administration			BA	MA		
Public health	BA					
Radiological health physics					MS	PhD
Real estate					MPA	
Recreation administration		BS			MPH, MS	PhD
Rehabilitation counseling		BS				
Religious studies						
Russian						
Russian and East European studies			BA	MA	MS	

## An emphasis within the B.S. in Business Administration.

## Summary of Curricula Offered — continued

Majors	Applied Arts and Sciences		Liberal Arts and Sciences	Graduate Curricula		
	BA	BS	BA	MA, MFA	MS	PhD
Social science			BA			
Social work			BA		MSW	
Social work/public health					MSW/MPH	
Sociology			BA	MA		
Spanish			BA	MA		
Special major				MA	MS	
Speech communication	BA			MA		
Statistics					MS	
Telecommunications			BA	MA		
Television-film production		BS				
Urban studies		BVE	BA			
Vocational arts						
Women's studies			BA			

### Emphases, Options, and Concentrations

An emphasis, option, or concentration is defined as an aggregate of courses within a degree major designed to give a student specialized knowledge, competence, or skill. Completion of an emphasis, option, or concentration is noted on the student's transcript and diploma for undergraduate students.

#### BACCALAUREATE MAJORS

**Art** (BA, Liberal Arts and Sciences)

**Emphases:**  
art history  
studio arts

**Art** (BA, Applied Arts and Sciences)

**Emphases:**

applied design  
environmental design  
graphic design  
interior design  
painting, printmaking, and photography  
sculpture

**Biology** (BS, Applied Arts and Sciences)

**Emphases:**  
biochemistry  
entomology

**Chemistry** (BS, Applied Arts and Sciences)

**Emphasis:**  
biochemistry

**Classics** (BA, Liberal Arts and Sciences)

**Emphases:**

classical humanities  
Greek  
Latin  
Greek and Latin

**Drama** (BA, Applied Arts and Sciences)

**Emphases:**

children's drama  
design for drama  
design for television and film performance

#### Geological Sciences

(BS, Applied Arts and Sciences)

**Options:**

engineering geology  
geochemistry  
geology  
geophysics  
hydrogeology  
marine geology  
paleontology

**Health Science** (BS, Applied Arts and Sciences)

**Emphasis:**

community health education

**Home Economics** (BS, Applied Arts and Sciences)

**Emphasis:**

fashion merchandising

**Journalism** (BA, Liberal Arts and Sciences)

**Emphases:**

advertising  
news-editorial  
public relations  
radio-TV news

**Liberal Studies** (BA, Liberal Arts and Sciences)

**Emphases:**

Three Departments  
Education

**Mathematics** (BS, Applied Arts and Sciences)

**Emphases:**

applied mathematics  
computer science  
statistics

**Microbiology** (BS, Applied Arts and Sciences)

**Emphasis:**

medical technology and public health microbiology

**Public Administration**

(BA, Applied Arts and Sciences)

**Emphasis:**

city planning

#### Recreation Administration

(BS, Applied Arts and Sciences)

**Emphases:**

outdoor recreation  
recreation systems management  
recreation therapy

**Social Science** (BA, Liberal Arts and Sciences)

**Emphases:**

Africa and the Middle East  
environment

#### GRADUATE MAJORS

**Art** (MA)

**Concentrations:**  
studio arts  
art history

**Biology** (MA or MS)

**Concentrations:**

ecology  
genetics  
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  
management science  
marketing  
production and operations  
management  
real estate  
taxation

**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:**

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

#### Geography (MA)

**Concentrations:**

resources and environmental quality  
transportation

#### Nursing (MS)

**Concentrations:**

community health nursing  
critical care nurse specialist  
nursing systems administration

#### Psychology (MS)

**Concentrations:**

clinical psychology  
industrial and organizational psychology

#### 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
- Single subject

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 rehabilitative
- Health (school nurse)
- Pupil personnel
- School psychology

Minors for the Bachelor's Degree

- Accounting
- Aerospace studies
- African studies
- Afro-American studies
- American Indian studies
- American studies
- Anthropology
- Art
- Art history
- Asian studies
- Astronomy
- Biology
- Chemistry
- Child development
- Chinese
- Classics
- Communicative disorders
- Comparative literature
- Computer science
- Dance
- Decision systems
- Drama
- Economics
- Educational technology
- Energy studies
- Engineering
- English
- Environment and society
- European studies
- Finance
- French
- Geography
- Geological sciences
- German
- Gerontology
- Health science
- History
- History of science and technology
- Home economics
- Human resource management
- Humanities
- Industrial technology
- Information systems
- Italian
- Japanese
- Judaic studies
- Journalism
- Latin American studies
- Linguistics
- Management
- Marketing
- Mathematics
- Mexican American studies
- Middle East studies
- Military science
- Music
- Naval science
- Oceanography
- Philosophy
- Physical education
- Physics
- Political science
- Portuguese
- Production and operations management
- Psychology
- Public administration
- Radio-television
- Real estate
- Recreation
- Religious studies
- Russian
- Small business management (Imperial Valley Campus only)
- Social work
- Sociology
- Spanish
- Speech communication
- Women's studies

Special Curricula

Preprofessional Curricula

- Pre dental
- Pre legal
- Pre medical
- Pre veterinary

Military Curricula

- Aerospace studies (AFROTC)
- Military science (ROTC)
- Naval science (NROTC)

Certificate Programs (nondegree)

- Certificate in accounting
- Certificate in applied linguistics and English as a second language (ESL)
- Certificate in art (Imperial Valley campus only)
- Certificate in bilingual (Spanish) special education
- Certificate in business administration (Imperial Valley campus only)
- Certificate in children's literature
- Certificate in early intervention specialist
- Certificate in family life education
- Certificate in geographic information systems
- Certificate in human services paraprofessional
- Certificate in instructional microcomputer software design
- Certificate in instructional technology
- Certificate in introductory mathematics
- Certificate in language development specialist
- Certificate in personal financial planning
- Certificate in preventive medicine residency
- Certificate in professional services bilingual/multicultural
- Certificate in public administration (Imperial Valley Campus only)
- Certificate in recombinant DNA technology
- Certificate in rehabilitation administration
- Certificate in single subject mathematics
- Certificate in Spanish court interpreting (Imperial Valley campus only)
- Certificate in Spanish translation studies
- Certificate in supported employment and transition specialist
- Certificate in teaching the emotionally disturbed
- Certificate in technical and scientific writing
- Certificate in United States-Mexico border studies

The following programs are available through Extension only.

- Certificate in applied gerontology
- Certificate in construction practices
- Certificate in fire protection administration
- Certificate in government contract management
- Certificate in human resources management
- Certificate in materials management
- Certificate in training systems design and administration

Major and Credential Codes\*

MAJOR CODE KEY:

- U = Undergraduate
- G = Graduate
- + = Emphasis within another bachelor's degree
- c = Concentration within another master's degree

MAJOR	MAJOR CODE	MAJOR	MAJOR CODE
Accountancy	05021 G	German	11031 U
+ Accounting	05021 U	Gerontology	21043 U
Afro-American Studies	22111 U	Health Science	12011 U
American Studies	03131 U	History	22051 U & G
Anthropology	22021 U & G	Home Economics	13011 U
Applied Mathematics	17031 G	Humanities	15991 U
Art	10021 U & G	+ c Human Resource Management	05151 U
+ c Art History	10031 U & G	Industrial Technology	08394 U
+ Graphic Design	10091 U	+ c Information Systems	07021 U & G
+ Interior Design	02031 U	Interdisciplinary Studies	49993 G
Art - MFA	10022 G	c International Business	05131 U & G
Asian Studies	03011 U & G	c Preinternational Business	80000 U
Astronomy	19111 U & G	Journalism	06021 U
Biology	04011 U & G	Prejournalism	06020 U
c Botany	04021 G	Latin American Studies	03081 U & G
Business Administration	05011 U & G	Liberal Arts	49017 G
Business Administration and Latin American Studies (concurrent program)	49061 G	+ Liberal Studies—In Three Departments	49011 U
+ c Chemical Physics	19081 U	Liberal Studies—Bilingual Emphasis	49014 U
Chemistry	19051 U & G	Liberal Studies—Emphasis in Education	49015 U
+ Biochemistry	19051 U	Liberal Studies—Pre-emphasis in Education	49012 U
Child Development	08231 U & G	Linguistics	15051 U & G
City Planning	02061 G	+ c Management	05061 U & G
Classics	15041 U	c Management Science	05072 G
Clinical Psychology	20031 G	+ c Marketing	05091 U & G
Communicative Disorders	12201 U & G	Mass Communication	06011 G
Comparative Literature	15031 U	Mathematics—A.B. degree	17011 U & G
Computer Science	07011 U & G	Mathematics—B.S. degree	17031 U
Counseling	08261 G	Mexican American Studies	22131 U
Creative Writing	15071 G	Microbiology	04111 U & G
c Criminal Justice Administration	21051 U & G	c Molecular Biology	04161 G
Precriminal Justice Administration	21050 U	Music	10052 U
Dance	10081 U	Music—Performance	10041 U & G
+ Decision Systems	05072 U	Music—Liberal Arts	10051 G
Drama	10071 U & G	Nursing	12031 U & G
Drama - MFA	10072 G	Prenursing	12030 U
c Ecology	04201 G	Nutritional Sciences	13061 G
Economics	22041 U & G	c Personnel & Industrial Relations	05151 G
Education	08011 G	Philosophy	15091 U & G
c Educ. Administration & Supervision	08271 G	Physical Education	08351 U & G
c Educational Research	08241 G	Physical Science	19011 U
c Educational Technology	08992 G	Physics	19021 U & G
c Elementary Curriculum & Instruction	08021 G	c Physiology	04101 G
c Policy Studies in Language and Cross-Cultural Education	08994 G	Political Science	22071 U & G
c Postsecondary Educational Leadership & Instruction	08061 G	+ c Production Operations Management	05064 U & G
c Reading Education	08301 G	Psychology	20011 U & G
c Secondary Curriculum & Instruction	08031 G	Public Administration	21021 U & G
c Special Education	08081 G	Prepublic Administration	21020 U
Engineering		Public Health	12141 G
Aerospace Engineering	09021 U & G	Radiological Health Physics	12251 G
Civil Engineering	09081 U & G	+ c Real Estate	05111 U & G
Electrical Engineering	09091 U & G	Recreation Administration	21031 U
Mechanical Engineering	09101 U & G	Rehabilitation Counseling	12221 G
English	15011 U & G	Religious Studies	15101 U
Environmental Health	12142 U	Russian	11061 U & G
European Studies	03101 U	Russian and East European Studies	03071 U
+ c Finance	05041 U & G	Social Science	22011 U
+ c Financial Services	05043 U & G	Social Work	21041 U & G
Foods and Nutrition	13061 U	Social Work & Public Health (concurrent prog.)	12991 G
French	11021 U & G	Sociology	22081 U & G
c Genetics	04221 G	Spanish	11051 U & G
Geography	22061 U & G	Speech Communication	15061 U & G
Geological Sciences	19141 U & G	+ Statistics	17021 U & G
		c Systematics and Evolutionary Biology (Zoology)	04071 G
		c Taxation	05022 G
		Telecommunications	06031 U & G
		Television—Film Production	06031 U
		Undeclared	00000 U
		Urban Studies	22141 U
		Vocational Education	08395 U
		Women's Studies	49991 U

\* See following page for NUMERICAL LISTING OF MAJOR CODES and CREDENTIAL CODES.



## NUMERICAL LISTING OF MAJOR CODES

MAJOR CODE	MAJOR
00000 U	Undeclared
02031 U	+ Interior Design
02061 G	City Planning
03011 U & G	Asian Studies
03071 U	Russian and East European Studies
03081 U & G	Latin American Studies
03101 U	European Studies
03131 U	American Studies
04011 U & G	Biology
04021 G	Botany
04071 G	Systematics and Evolutionary Biology (Zoology)
04101 G	Physiology
04111 U & G	Microbiology
04161 G	Molecular Biology
04201 G	Ecology
04221 G	Genetics
05011 U & G	Business Administration
05021 G	Accountancy
05021 U	+ Accounting
05022 G	Taxation
05041 U & G	+ Finance
05043 U & G	+ Financial Services
05061 U & G	+ Management
05064 U & G	+ Production Operations Management
05072 U	+ Decision Systems
05072 G	Management Science
05091 U & G	+ Marketing
05111 U & G	+ Real Estate
05130 U	Preinternational Business
05131 U & G	International Business
05151 U & G	+ Human Resource Management
05151 G	Personnel & Industrial Relations
06011 G	Mass Communication
06020 U	Prejournalism
06021 U	Journalism
06031 U & G	Telecommunications
06031 U	Television-Film Production
07011 U & G	Computer Science
07021 U & G	+ Information Systems
08011 G	Education
08021 G	Elementary Curriculum & Instruction
08031 G	Secondary Curriculum & Instruction
08061 G	Postsecondary Educational Leadership & Instruction
08081 G	Special Education
08231 U & G	Child Development
08241 G	Educational Research
08261 G	Counseling
08271 G	Educ. Administration & Supervision
08301 G	Reading Education
08351 U & G	Physical Education
08393 G	Industrial and Technical Studies
08394 U	Industrial Technology
08395 U	Vocational Education
08992 G	Educational Technology
08994 G	Policy Studies in Language and Cross-Cultural Education
09021 U & G	Aerospace Engineering
09081 U & G	Civil Engineering
09091 U & G	Electrical Engineering
09101 U & G	Mechanical Engineering
10021 U & G	Art
10022 G	Art - MFA
10031 U & G	+ Art History
10041 U & G	Music-Performance
10051 G	Music-Liberal Arts
10052 U	Music
10071 U & G	Drama
10072 G	Drama - MFA
10081 U	Dance
10091 U	+ Graphic Design
11021 U & G	French
11031 U	German
11051 U & G	Spanish
11061 U & G	Russian
12011 U	Health Science
12030 U	Pre nursing
12031 U & G	Nursing

## MAJOR CODE

## MAJOR

12141 G	Public Health
12142 U	Environmental Health
12201 U & G	Communicative Disorders
12221 G	Rehabilitation Counseling
12251 G	Radiological Health Physics
12991 G	Social Work & Public Health (concurrent prog.)
13011 U	Home Economics
13061 U	Foods and Nutrition
13061 G	Nutritional Sciences
15011 U & G	English
15031 U	Comparative Literature
15041 U	Classics
15051 U & G	Linguistics
15061 U & G	Speech Communication
15071 G	Creative Writing
15091 U & G	Philosophy
15101 U	Religious Studies
15991 U	Humanities
17011 U & G	Mathematics-A.B. degree
17021 U & G	+ Statistics
17031 G	Applied Mathematics
17031 U	Mathematics-B.S. degree
19011 U	Physical Science
19021 U & G	Physics
19051 U & G	Chemistry
19051 U	Biochemistry
19081 U	Chemical Physics
19111 U & G	Astronomy
19141 U & G	Geological Sciences
20011 U & G	Psychology
20031 G	Clinical Psychology
21020 U	Prepublic Administration
21021 U & G	Public Administration
21031 U	Recreation Administration
21041 U & G	Social Work
21043 U	Gerontology
21050 U	Precriminal Justice Administration
21051 U & G	Criminal Justice Administration
22011 U	Social Science
22021 U & G	Anthropology
22041 U & G	Economics
22051 U & G	History
22061 U & G	Geography
22071 U & G	Political Science
22081 U & G	Sociology
22111 U	Afro-American Studies
22131 U	Mexican American Studies
22141 U	Urban Studies
49011 U	+ Liberal Studies-In Three Departments
49012 U	Liberal Studies-Pre-emphasis in Education
49014 U	Liberal Studies-Bilingual Emphasis
49015 U	Liberal Studies-Emphasis in Education
49017 G	Liberal Arts
49061 G	Business Administration and Latin American Studies (concurrent program)
49991 U	Women's Studies
49993 G	Interdisciplinary Studies
80000 U	Preinternational Business

## CODES FOR CREDENTIALS

CREDENTIAL	CREDENTIAL CODE
Single Subject Instruction	00100
Multiple Subject Instruction	00200
Reading Specialist	00410
Bilingual/Cross-cultural Specialist	00440
Special Education: Communication Handicapped	00461
Special Education: Physically Handicapped	00462
Special Education: Learning Handicapped	00463
Special Education: Severely Handicapped	00464
Special Education: Gifted	00465
Administrative Services	00500
Health Services	00600
Counseling (Pupil Personnel Services)	00800
School Counseling	
School Psychology	
Clinical Rehabilitative Services	00900
School Psychology	00950
Adapted Physical Education Emphasis	00980

Courses  
and  
Curricula

# Courses and Curricula

## Numbering of Courses

Courses numbered 80 through 99 are nonbaccalaureate level and are not acceptable for a bachelor's degree; 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 those offered only through Extension to meet specific academic needs of community groups. Courses numbered X-01 through X-79 are applicable as general elective credit toward an undergraduate degree at SDSU. 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. It is the prerogative of the academic department/college to determine if X-01 through X-79 level courses are applicable to a major, a minor, or toward specified electives. The X-01 through X-79 level courses are offered in conjunction with certificate programs only. Courses at the X-01 through X-79 level are not acceptable on advanced degree programs. Courses offered as X-397 are not acceptable toward an undergraduate or graduate degree.

Extended Studies students who eventually plan to pursue an undergraduate degree at SDSU should consult the sponsoring academic department to ascertain the applicability of X-01 through X-79 level courses offered in any certificate program toward their proposed course of study.

## The Unit or Credit Hour

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

## Prerequisites for Undergraduate Courses

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.

Prerequisites will be enforced in all sections of courses listed in the Prerequisite Enforcement and Provisional Enrollment section of the current Class Schedule and Information Handbook. Enrollment will depend on the student's verification of completion of prerequisites.

## Semester in Which Courses Are Offered

In the listing of courses that follows, Roman numeral I indicates a course offered in the fall semester; Roman numeral II indicates a course offered in the spring semester. An "S" indicates a course offered in the summer.

Following the course title are designations of credit and the semester in which the course is offered.

### Examples:

- (3) I ..... Three units. Offered in fall semester.  
 (3) II ..... Three units. Offered in spring semester.  
 (3-3) ..... Three units each semester. Year course normally beginning in fall semester  
 (3-3) I, II ..... Three units each semester. Year course beginning either semester

Although the University fully expects to carry out the arrangements planned in the list of courses, it reserves the right to make changes. Classes in which the enrollment does not come up to the minimum number set by the Trustees of The California State University may not be offered or may be postponed.

## Common Courses

### Experimental or Selected Studies or Topics or Workshop Courses (96, 296, 496, 596)

Courses offered by departments under the numbers 296, 496, 596 are subject to the following conditions: no more than nine units of such courses shall be applicable toward a bachelor's degree; such courses may be applicable toward the minor or toward preparation for the major only with the approval of the department chair.

Topics courses may be offered by the departments under the number 96. These courses are nonbaccalaureate level and are not acceptable for a bachelor's degree or General Education.

### Special Study (299, 499, 599)

These courses provide opportunity for individual study of a subject not offered in the regular curriculum. The student does this outside of the classroom and must secure the consent of an instructor to supervise the study *before* registering for the course. The student should discuss the topic with the instructor and come to an understanding on the amount of time to be devoted to the topic, the credit to be earned, and the mode of investigation and report to be used. As with regular courses, the expectation is that the student will devote three hours per week to the subject for each unit of credit. A maximum combined credit of nine units of 299, 499, and 599 is applicable to a bachelor's degree.

A 499 or 599 number cannot be used to offer lower division coursework. Also, 299, 499, and 599 cannot be used to extend internships, to award academic credit in place of pay, for work experience, or for class-sized groups.

## Credit/No Credit Courses

Courses which are offered for credit/no credit are indicated by the symbols Cr/NC in the course title.

# Academic Skills

In the College of Arts and Letters

OFFICE: Professional Studies and Fine Arts 141  
TELEPHONE: (619) 594-6515

## Faculty

Emeritus: MacDonald  
 Director: Basile  
 Professors: Basile, Denman, Johns  
 Associate Professor: Sweedler-Brown  
 Assistant Professor: Poole  
 Lecturers: Allister, Friberg, Johnson, M., Johnson, P., Keesey, Maggio, Miller, Morgan, Nower, Williams

## Offered by the Academic Skills Center

Courses in mathematics, reading, writing, and learning skills.  
 Major or minor work in academic skills is not offered.

## Academic Skills Center

The principal role of the Academic Skills Center is to prepare students to satisfy San Diego State University's competency requirements in basic mathematics and written English. Passing the final examination for Academic Skills 90B, 99B, or 91 satisfies the SDSU Mathematics Competency requirement. Credit in Academic Skills 91 also satisfies the ELM and SDSU Mathematics Departmental Placement Examination, Part IA, requirement necessary for students enrolling in designated mathematics and statistics courses. Attaining a minimum score of 8 on the Writing Proficiency Test, the final examination in the academic skills writing courses (92A, 92B, 94, 95, 97A, 97B), satisfies the SDSU Writing Competency requirement. For more information on the writing and mathematics competency requirements, refer to the "Graduation Requirements" section of this catalog.

In addition to the competency courses, the Academic Skills Center offers one-, two-, and three-unit reading improvement and study skills courses which are open to all students.

**The units awarded a student who earns a grade of "Credit" in an academic skills course (with the exception of Academic Skills 296) are not applicable to the baccalaureate degree.**

## Courses

### LOWER DIVISION COURSES

Academic skills courses may not be used to satisfy general education requirements and no more than three units of 296 may be applied towards a bachelor's degree.

### 90A. Fundamentals of Mathematics (3) I, II, S Cr/NC/SP

Prerequisite: Appropriate score on the Academic Skills diagnostic test or other standardized mathematics examination.

Review of arithmetic and elementary algebra; topics from geometry covered in adjunct workshops (Academic Skills 98A). Students earning "credit" should enroll in Academic Skills 90B or 91. Students earning "SP" or "No Credit" should repeat Academic Skills 90A. May be repeated with consent of instructor. Maximum credit six units.

### \*90B. Basic Algebra Review (3) I, II, S Cr/NC/SP

Prerequisite: "Cr" (credit) in Academic Skills 90A or appropriate score on the Academic Skills diagnostic test or other standardized mathematics examination.

Designed for students who have attained "Cr" (credit) in Academic Skills 90A but have not satisfied the CSU Entry-Level Mathematics Examination (ELM) or SDSU Mathematics Competency requirement.

Topics covered include elementary algebra, intermediate algebra, and geometry. Prepares students for CSU Entry-Level Mathematics Examination (ELM), but does not satisfy ELM requirement. Course final examination is SDSU Mathematics Departmental Placement Examination, Part C; a passing score on the final examination gives "Cr" (credit) and satisfies Mathematics Competency requirement.

### 91. Intermediate Algebra (3) I, II, S Cr/NC

Prerequisite: Appropriate score on the Academic Skills diagnostic test.

Designed to prepare students for Mathematics Departmental Placement Examination, Part IA, which is given as final examination for course. A review of intermediate algebra skills. Topics include rational and radical expressions, quadratic equations, set and function notations, logarithms, and complex numbers. Credit in Academic Skills 91 satisfies Mathematics Departmental Placement Examination, Part IA, requirement, Mathematics Competency, and Entry Level Mathematics Examination.

### 92A. Writing Development: Fundamentals of Writing (3) I, II, S Cr/NC/SP

Academic prose, emphasizing the purpose, structure, and style of academic essays. Designed to improve student skills in planning, drafting, revising, and editing essays. Open to students who have not satisfied the Writing Competency requirement. Students who do not meet the Writing Competency requirement may receive an "SP" (satisfactory progress) grade. Credit in Academic Skills 92A satisfies the SDSU Writing Competency requirement. Students not passing the final examination should enroll in Academic Skills 92B. Not open to students with credit in Academic Skills 97A.

### \*\*92B. Writing Development: Intermediate (3) I, II, S Cr/NC/SP

Prerequisite: Open to students who have earned "SP" (satisfactory progress) in Academic Skills 92A but have not satisfied the Writing Competency requirement.

Individualized instruction in intermediate writing skills. Credit in Academic Skills 92B satisfies the SDSU Writing Competency requirement. Not open to students with credit in Academic Skills 97B.

### 93. Academic Reading (3) I, II Cr/NC

Improvement of individual reading effectiveness, emphasizing textbook mastery and incorporating texts from the General Education curriculum. Reading comprehension—not speed—is stressed.

### 94. English for International or Bilingual Students (3) I, II Cr/NC/SP

Intermediate written English with emphasis on problems of non-native speakers; discussion of sentence, paragraph, and essay writing skills. Open only to ESL students who have not satisfied the SDSU Writing Competency requirement. Students attaining a score of 8 or better on the final examination earn a grade of "Cr" and satisfy the lower division writing competency requirement. Students attaining a score of 7 or less with completion of all course requirements earn a grade of "SP." Students receiving an "SP" should enroll in Academic Skills 95.

\* Academic Skills 90B and 99B is not offered at the Imperial Valley Campus. Students who do not attain a Cr in Academic Skills 90A at the Imperial Valley Campus should repeat Academic Skills 90A.

\*\* Academic Skills 92B is not offered at the Imperial Valley Campus. Students who do not attain a Cr in Academic Skills 92A at the Imperial Valley Campus should repeat Academic Skills 92A.



**95. English for International or Bilingual Students (3)**  
**I, II Cr/NC/SP**

Advanced written English with emphasis on problems of nonnative speakers; discussion of audience, purpose, and style; advanced grammar and essay writing. For students who have attained Satisfactory Progress (SP) in Academic Skills 94, but have not satisfied the SDSU Writing Competency requirement. Students attaining a score of 8 or better on the final examination earn a grade of "Cr" and satisfy the lower division writing competency requirement. Students not passing the final examination should enroll in Academic Skills 92A.

**97A. Writing Development: Fundamentals (Intensive Learning Experience) (4) I Cr/NC/SP**

Three lectures and two hours of activity.  
Students enrolled in Academic Skills 97A must also be enrolled in the Intensive Learning Experience, which integrates instruction in the writing process and academic prose with the content of a General Education course. Academic Skills 97A is designed to provide students with writing and critical thinking skills essential to academic achievement. Emphasizes individualized instruction to meet the unique needs of each student.

The final examination in Academic Skills 97A is the Academic Skills Center Writing Proficiency Examination. Students who do not pass the examination but fulfill course requirements may receive a grade of "SP" (satisfactory progress). A grade of "Cr" (credit) in Academic Skills 97A indicates that the student has both fulfilled course requirements and passed the proficiency examination, thereby meeting the SDSU Writing Competency requirement. Students who do not pass the proficiency examination should enroll in Academic Skills 97B the following semester. Not open to students with credit in Academic Skills 92A. (Formerly numbered Academic Skills 100 and 110.)

**97B. Writing Development: Intermediate (Intensive Learning Experience) (4) II Cr/NC/SP**

Three lectures and two hours of activity.  
Prerequisites: Open only to students who earned "SP" (satisfactory progress) in Academic Skills 97A but have not satisfied the SDSU Writing Competency requirement.

Individualized instruction in intermediate writing skills. Credit in Academic Skills 97B satisfies the SDSU Writing Competency requirement. Not open to students with credit in Academic Skills 92B. (Formerly numbered Academic Skills 150.)

**98. Mini-Course: Selected Topics (1) Cr/NC**

Assorted short courses which will meet three hours a week for five weeks and will cover a variety of academic skills through intensive lectures and laboratory work.

Suggested topics: Research paper, communication skills, research tools, vocabulary development, learning skills, spelling, grammar, and speed reading. See Class Schedule for specific content. Credit earned in courses from this series is not applicable to a bachelor's degree. (Formerly numbered Academic Skills 96.)

- |                    |                         |
|--------------------|-------------------------|
| A. Learning Skills | C. Research Paper       |
| B. Grammar         | D. Communication Skills |

**99A. Fundamentals of Mathematics/Intensive Learning Experience (4) I, II Cr/NC/SP**

Three lectures and two hours of activity.  
Prerequisite: Appropriate score on Academic Skills diagnostic test or other standardized mathematics examination and freshman class standing.

Review of arithmetic and basic algebra. Topics from geometry are covered in adjunct workshops (Academic Skills 98A). In addition, students attend one hour reinforcement workshops each week. Students earning "credit" should enroll in Academic Skills 99B. Students receiving "SP" or "no credit" should repeat Academic Skills 99A. May be repeated with consent of instructor. Maximum credit six units.

**\*99B. Fundamentals of Mathematics/Intensive Learning Experience (4) I, II Cr/NC/SP**

Three lectures and two hours of activity.  
Prerequisite: Grade of credit in Academic Skills 99A or appropriate score on Academic Skills diagnostic test and freshman class standing.

Designed for students who have attained "Cr" (credit) in Academic Skills 99A or whose diagnostic scores indicate that this is the appropriate level for them, but have not satisfied the SDSU Entry Level Examination (ELM) or SDSU Mathematics Competency requirement. Topics covered include elementary algebra, intermediate algebra, and geometry. Class sessions augmented by one hour of reinforcement laboratory work each week. Prepares students for CSU Entry Level Mathematics Examination (ELM), but does not satisfy ELM requirement. Course final is SDSU Mathematics Placement Examination, Part C; a passing score on final examination earns "credit" and satisfies the Mathematics Competency requirement.

**296. Experimental Topics (1-3) Cr/NC**

Selected topics. May be repeated with new content for a maximum of three units. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

\* Academic Skills 90B and 99B is not offered at the Imperial Valley Campus. Students who do not attain a Cr in Academic Skills 90A at the Imperial Valley Campus should repeat Academic Skills 90A.

**NOTE:**

Academic Skills 90A is equivalent to Academic Skills 99A.

Academic Skills 90B is equivalent to Academic Skills 99B.

Academic Skills 92A is equivalent to Academic Skills 97A.

Academic Skills 92B is equivalent to Academic Skills 97B.

Enrollment in Academic Skills 97A, 97B and 99A, 99B is restricted to students participating in the Intensive Learning Experience program.

# Accountancy

In the College of Business Administration

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

A Member of the American Assembly of Collegiate Schools of Business.

**Faculty**

Emeritus: Brodshatzer, Dodds, Ferrel, Harned, Lamden, Meier, Snudden  
Director: Capettini  
The Vern E. Odmark Chair in Accountancy: Chow  
The KPMG Peat Marwick/Charles W. Lamden Professor of Taxation: Whittenburg  
Professors: Bailey (Dean), Barnett, Butler, Capettini, Grudnitski, Lightner, K., Meigs, Oestreich, Samuelson, Shields, Toole, Whittington, Williamson, Wong-Boren  
Associate Professors: Houston, Lightner, S., Pfeiffer  
Assistant Professors: Joh, Venable  
Lecturer: Snyder

**Offered by the Department**

Master of Business Administration.  
Master of Science degree in accountancy.  
Major in accounting with the B.S. degree in business administration.  
Teaching major in business for the single subject teaching credential.  
Minor in accounting.  
Certificate in accounting.

**The Vern E. Odmark Chair in Accountancy**

Established in recognition of Dr. Vern 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 KPMG Peat Marwick/Charles W. Lamden Professor of Taxation**

Established to help SDSU, the College of Business Administration, and the School of Accountancy achieve a new level of excellence and offer benefits to the accounting community, this professorship is the first in the School of Accountancy funded by a national CPA firm. The professorship has enhanced the School of Accountancy's ability to produce the highest caliber of tax graduates who are knowledgeable in contemporary issues in taxation.

Dr. Gerald Whittenburg has held the position since its inception in 1988. Since his tenure at SDSU, Whittenburg has been honored for his teaching and is the acknowledged entrepreneurial force behind the nationally recognized Masters of Tax program.

**Admission to the Major**

The undergraduate business administration program at San Diego State University is structured such that students desiring a business administration major are first admitted to the prebusiness administration major for their first two years of university work. During these first

two years students should complete general education courses and a common core of nine lower division preparation for the business major courses — Accountancy 201, Financial Accounting Fundamentals; 202, Managerial Accounting Fundamentals; Finance 140, Legal Environment of Business; Economics 101, Principles of Economics (Macro); Economics 102, Principles of Economics (Micro); Information and Decision Systems 180, Principles of Information Systems; Information and Decision Systems 290, Business Communication (not required for accounting majors); Mathematics 119, Elementary Statistics for Business; and Mathematics 120, Calculus for Business Analysis. These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C. All students must achieve a passing score on a quantitative competency examination. Students must have completed 56 college units.

**Supplemental admissions criteria must be met before students may declare an upper division major and be eligible for upper division courses.** For current information concerning admissions criteria and procedures, contact the Undergraduate Business Advising Office in the College of Business Administration.

Also, before enrolling in upper division courses offered by the College of Business Administration, students must be competent in the operation of personal computers, including word processing and spreadsheets. These skills are required in upper division business courses.

Business administration majors may not complete a minor in the College of Business Administration.

**Retention Policy**

The College of Business Administration is concerned that each individual upper division student makes reasonable academic progress toward earning a degree. To this end, the College will counsel students who have earned less than a "C" (2.0) average each semester. Further, such students will be warned that continued poor performance may result in their removal from any business major.

**Transfer Credit**

**Lower Division:** Courses clearly equivalent in scope and content to San Diego State University courses required for minors or as preparation for all business majors will be accepted from regionally accredited United States institutions and from foreign institutions recognized by San Diego State University and the College of Business Administration.

**Upper Division:** It is the policy of the San Diego State University College of Business Administration to accept **upper division transfer credits** where (a) the course content, requirements, and level are equivalent to San Diego State University courses and (b) where the course was taught in an American Assembly of Collegiate Schools of Business accredited program. Exceptions require thorough documentation evidencing the above standards.

**The Major**

The major in accountancy provides basic concepts of accounting and business knowledge to students seeking professional careers in the field and the opportunity to gain the knowledge necessary to pass professional examinations in accounting.

There are three kinds of accountants: public, management, and government. Public accountants work for themselves, in partnerships, or with public accounting firms. Management accountants, also known



as industrial or private accountants, work on salary for a single company or corporation. Government accountants are employed by federal, state and local governments to supply accounting services, or serve as investigators, bank examiners, and auditors.

The curriculum has been designed to offer courses in these three areas of specialization, as well as provide students with the essential principles of accounting.

The Certificate in Accounting program provides professional certification and training necessary for candidates preparing for the C.P.A. examination. Thirty units of coursework are required. Matriculated SDSU students may not enroll in this program. Enrollment is through the College of Extended Studies.

Growing with the increased complexity of the business world, accounting continues to offer a wide choice of careers and opportunities. Some of the more common specialties for accounting majors include auditors, cost accountants, controllers, systems and procedures accountants, and tax accountants.

## Accounting Major

With the B.S. Degree in Business Administration  
(Major Code: 05021)

**Preparation for the Major.** Accountancy 201 and 202; Economics 101 and 102; Economics 201 or Mathematics 119; Mathematics 120; Finance 140; Information and Decision Systems 180. (24 units)

These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C. **Additional progress requirements must be met before a student is admitted to an upper division major.**

**Upper Division Writing Requirement.** Information and Decision Systems 490W with a grade of C (2.0) or better.

**Major.** Fifty-five upper division units consisting of Accountancy 300, 301, 302, 404, 406, 506, and 590; Finance 323; Information and Decision Systems 301, 302, and 490W; Management 350; Management 405 or Information and Decision Systems 404; Marketing 370; Economics 320 or 321 or Finance 321; and at least one course selected from Accountancy 501, 502, 504, and 508. A minimum of 53 units of coursework applicable to the bachelor's degree must be completed outside the areas of business administration and economics. A maximum of six lower division units of accountancy courses may be used to satisfy degree requirements. No more than 25 percent (32 units) of the student's degree requirements may be in upper division accountancy courses. Of the 128 units required for the degree, at least 60 units must be at the upper division level. A "C" average is required in the courses stipulated here for the major.

## Business Major

For the Single Subject Teaching Credential  
With the B.S. Degree in Business Administration

All candidates for the single subject teaching credential in business must complete all requirements for the applicable specialization as outlined in this section of the catalog under Policy Studies or Teacher Education. Students must complete the requirements for a major in one of the five departments within the College of Business Administration. In consultation with the single subject credential adviser in the College of Business Administration, undergraduate students must develop programs which fulfill the State credential requirements. All undergraduate majors must demonstrate office skills proficiency. Finance 589, Personal Financial Planning, is required of all teaching credential majors. Of the 128 units required for the degree, at least 60 units must be at the upper division level.

Student program must be approved in advance by the College of Business Administration single subject credential adviser.

## Accounting Minor

The minor in accounting consists of a minimum of 22 units to include Accountancy 201 and 202, 300, 301, 302, and 404. (Information and Decision Systems 301 and 302 are required prerequisites for Accountancy 302.)

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Additional requirements must be met before the student may obtain permission to declare a business minor from the business minor adviser in the college of the student's major.

## Accounting Certificate

The purpose of the Accounting Certificate is to provide professional and postbaccalaureate certification to accounting and nonaccounting professionals in San Diego.

Students must apply and be admitted to the program before the completion of 18 certificate units. The certificate requires 30 units to include Accountancy 201, 202, 300, 301, 302\*, 404, 506\* (26 units) and electives selected from Accountancy 406, 501, 502, 504, 508, 590 (4 units). Accountancy 201 and 202 must be completed with a minimum grade of C and the certificate coursework must be completed with a minimum grade point average of 2.0.

Courses with relevant content may be substituted for the courses listed above with the approval of the certificate adviser. Courses in the certificate may not be counted toward the major or minor.

\* Prerequisites waived for students in this program.

## Courses

### LOWER DIVISION COURSES

#### 201. Financial Accounting Fundamentals (3) I, II, S

Theory and practice of accounting applicable to recording, summarizing, and reporting of business transactions for external reporting and other external uses. Asset valuation; revenue and expense recognition; various asset, liability, and capital accounts. Not open to students with credit in Accountancy 210A, 210B. Preparation requirement for business majors.

#### 202. Managerial Accounting Fundamentals (3) I, II, S

Prerequisite: Accountancy 201.  
Selection and analysis of accounting information for internal use by managers. Using financial information for planning and control purposes.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 300. Intermediate Accounting I (4) I, II, S

Prerequisites: Minimum grade of C in Accountancy 201, 202. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Theories and principles underlying accounting for cash, short-term investments, receivables, inventories, current liabilities, plant and equipment, intangible assets, contributed capital, retained earnings. (Formerly numbered Accountancy 310.)

#### 301. Intermediate Accounting II (4) I, II, S

Prerequisite: Accountancy 300 with minimum grade of C. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Theories and principles underlying accounting for long-term investments, stock options, dilutive securities, bonds, earnings per share, income taxes, pensions, leases, funds flow, changing prices. (Formerly numbered Accountancy 311.)

#### 302. Managerial Cost Accounting Systems (4) I, II, S

Prerequisites: Minimum grade of C in Accountancy 201, 202; Information and Decision Systems 301, 302. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Management use and design of accounting systems for planning and control; theories and practices of cost accounting, job order cost systems, process cost systems, standard cost systems, inventory control systems, distribution analysis, and capital budgeting. (Formerly numbered Accountancy 312.)

#### 309. The Accounting Profession (1) Cr/NC

Prerequisite: Completion of preparation for major.

Analysis and evaluation of professional opportunities that utilize the accounting and reporting functions. (Formerly numbered Accountancy 316.)

#### 404. Federal Income Tax I (4) I, II, S

Prerequisite: Minimum grade of C in Accountancy 201, 202. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Taxation of individuals, including income, deductions, credits, social security taxes, and property transactions. (Formerly numbered Accountancy 410.)

#### 406. Accounting Information Systems (4) I, II, S

Prerequisite: Accountancy 300. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Information systems requirements relevant to integrated accounting systems. Emphasis on accounting systems, designs, and controls. (Formerly numbered Accountancy 320.)

#### 409. Field Study in Taxation (1) II Cr/NC

Prerequisite: Accountancy 404.

Income tax preparation in the field. Follows procedures of IRS VITA Program, IRS instruction followed by faculty supervised fieldwork. (Student must be available for special IRS tax school.) (Formerly numbered Accountancy 420.)

#### 496. Selected Topics in Accountancy (1-4) I, II

Prerequisite: Consent of department chair.

Selected areas of concern in accountancy. See Class Schedule for specific content. May be repeated with new content with consent of department chair. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

#### 498. Investigation and Report (1-3) I, II

Prerequisites: Senior standing and consent of instructor.

A comprehensive and original study of a problem connected with accounting under the direction of one or more members of the accounting staff. May be repeated with new content. Maximum credit six units.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor.

Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 501. Advanced Accounting Problems (4) I, II

Prerequisites: Minimum grade of C in Accountancy 300; credit or concurrent registration in Accountancy 301. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Problems involved in partnerships, consignments, consolidations, receiverships, foreign exchange, fund accounting, and other specialized areas. (Formerly numbered Accountancy 514.)

#### 502. Advanced Managerial Accounting (3)

Prerequisite: Minimum grade of C in Accountancy 302. **Proof of completion of prerequisite required:** Grade report or 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. (Formerly numbered Accountancy 512 and Business Administration 412.)

#### 504. Federal Income Tax II (4) I, II, S

Prerequisite: Minimum grade of C in Accountancy 404. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Taxation of corporations, partnerships, estates, and trusts; Gift and estate tax. (Formerly numbered Accountancy 511 and Business Administration 411.)

#### 506. Auditing (4) I, II

Prerequisites: Accountancy 301, 406; Information and Decision Systems 301. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Internal control in the design of accounting systems; flow-charting techniques; duties, ethics, and responsibilities of the auditor; operational auditing; procedures for verification of financial statements; auditor's reports. (Formerly numbered Accountancy 414 and 534.)

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

Prerequisite: Accountancy 300. **Proof of completion of prerequisite required:** Grade report or 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. (Formerly numbered Accountancy 515 and Business Administration 415.)

#### 590. Macro Accounting Issues (4) I, II

Prerequisites: Accountancy 301, 302, 404, 406; credit or concurrent registration in Accountancy 506. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Macro-accounting issues. Political environment under which financial statements are prepared. Economic consequences of accounting standards. Ethical and social issues in financial reporting. Objectives and economic consequences of tax policy. Regulation of auditors. Management control systems. (Formerly numbered Accountancy 418 and 518.)

#### 596. Contemporary Topics in Accounting (1-3)

Prerequisites: Consent of instructor, upper division or graduate standing, accounting major.

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 Refer to the Graduate Bulletin.



# Administration, Rehabilitation and Postsecondary Education

In the College of Education

OFFICE: North Education 279  
TELEPHONE: (619) 594-6115

Accredited by the California Commission on Teacher Credentialing and the Council on Rehabilitation Education.

## Faculty

Emeritus: Holt, Lienert, Stevens, Warburton, Wetherill  
Chair: McFarlane

### Educational Administration

Professors: Chamley, Frase, Gorton, Latta, Merino  
Associate Professor: Streshly  
Assistant Professor: Downey

### Postsecondary Educational Leadership and Instruction

Professor: Piland

### Rehabilitation Counseling

Professors: Atkins, Jacobs, Jones, McFarlane

## Offered by the Department

Master of Arts degree in education.  
Concentration in educational administration and supervision.  
Concentration in postsecondary educational leadership and instruction.  
Master of Science degree in rehabilitation counseling.  
Bachelor of Vocational Education degree.  
Administrative services credential.  
Certificate in rehabilitation administration.

## Bachelor of Vocational Education Degree

(Major Code: 08395)

Instructors of Occupational Education are encouraged to complete the B.V.E. and to enroll in the program leading to the Master of Arts in Education with a concentration in community college curriculum and instruction. For further information, students are advised to consult with the Community College Coordinator, College of Education.

The Bachelor of Vocational Education degree is designed primarily for instructors who are **teaching in a vocational education program** either in the secondary school or in the community college and qualify for an official evaluation (under provisions of the Swan Bill) through the State Board of Vocational Examiners in Sacramento. To qualify for the evaluation, the requirements of the State Education Code, Section 89223, must be met. This regulation stipulates a minimum period of vocational teaching experience amounting to 1,620 clock hours in a full-time position or 1,000 clock hours in an approved trade technical extension class.

The individual desiring to secure the B.V.E. degree should follow the basic pattern set down in the following steps:

1. The individual must have an Associate of Arts degree or 60 units. (This should include, if possible, the 40 lower division units of general education required for the bachelor's degree from SDSU. The additional nine upper division units required for General Education must be completed at SDSU.) ..... 70 units maximum

2. The individual must apply for evaluation of work experience (Swan Bill). Applicants should apply to the Board of Examiners for Vocational Teachers, Bureau of Industrial Education, State Education Bldg., 721 Capitol Avenue, Sacramento, California. These units count toward the major and are classified as upper division units. (See Community College Program Coordinator for assistance and application forms.) ..... 40 units maximum
3. The individual must take the following professional occupational teacher education courses:  
ARP 380, 381, 382, and 565. .... 6-13 units maximum
4. The individual must receive credit for the required number of upper division courses to complete the Bachelor of Vocational Education degree graduation requirements. This includes those given in item 2 above. .... 40 units
5. The individual must satisfy all other graduation requirements, including competencies, upper division writing requirement, grade point average, residency, etc.
6. The individual must see an adviser in the area of the major to arrange a program for completion of coursework. A series of elective courses that will support the professional responsibilities of the candidate will be recommended. Furthermore, 30 units must be in residency at SDSU, of which 24 must be upper division.

Total ..... 124 units

## Courses

### General

#### UPPER DIVISION COURSES (Intended for Undergraduates)

- 397. Problems in Education (Credit to be arranged) I, II**  
**Offered only in Extension.**  
Prerequisite: Consent of instructor.  
Class study of specially selected problems in education. Does not apply to pattern requirements for credentials. Credit earned in this course not applicable to a bachelor's degree. (Formerly numbered Education 397.)
- 496. Experimental Topics (1-4)**  
Selected topics. 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. (Formerly numbered Educational Technology and Librarianship 496.)
- 499. Special Study (1-3) I, II**  
Prerequisite: Consent of instructor. Open only to senior and graduate students in education who have shown ability to work independently.  
Individual study. Maximum credit six units. (Formerly numbered Educational Technology and Librarianship 499.)

## Administration, Rehabilitation and Postsecondary Education

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

- 584. Introduction to Rehabilitation Process (3)**  
Two lectures and three hours of laboratory.  
Background and legislation related to vocational rehabilitation; client services, role and function of rehabilitation counselor as a professional. Orientation to community rehabilitation agencies. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 684 and Counselor Education 680A.)

### 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. (Formerly numbered Education 596 and Educational Technology and Librarianship 596.)

### Postsecondary Educational Leadership and Instruction

#### UPPER DIVISION COURSES (Intended for Undergraduates)

- 380. Principles of Adult and Vocational Education (3) I, II, S**  
Principles, practices, scope, and functions of adult and vocational education. (Formerly numbered Education 380.)

- 381. Developing Adult and Vocational Education (3) I, II, S**  
Needs assessment, task analysis, formulation of objectives, lesson plans, instructional techniques, and evaluation in adult and vocational settings. (Formerly numbered Education 381.)

- 382. Directed Teaching (2-4) I, II, S Cr/NC**  
Prerequisite: Administration, Rehabilitation and Postsecondary Education 380, 381, or 565.

Systematic observation, participation, and teaching under supervision in an occupational subject matter area. Application to take this course must be made in preceding semester. (Formerly numbered Education 382.)

### UPPER DIVISION COURSE (Also Acceptable for Advanced Degrees)

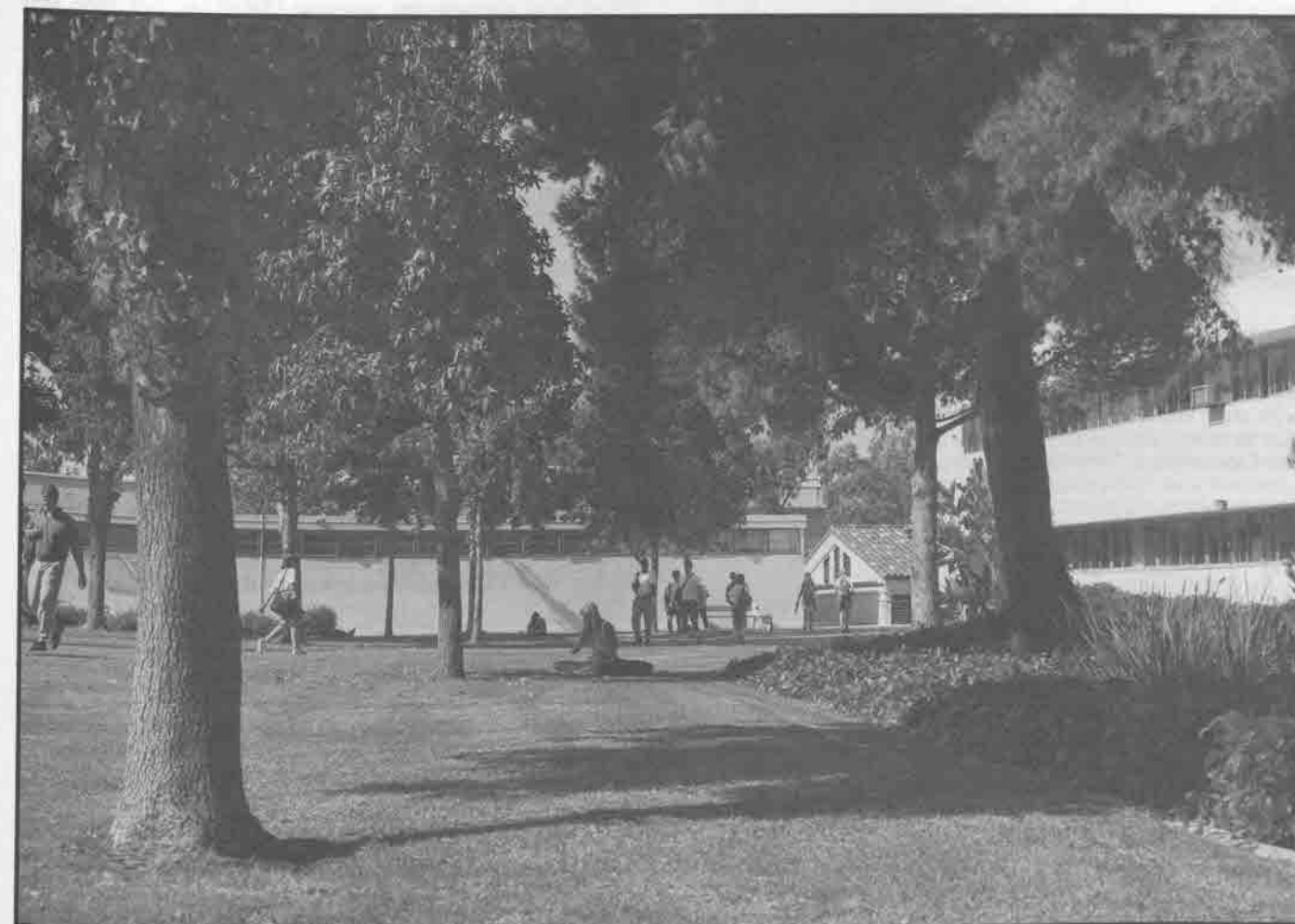
- 565. Psychological Foundations of Adult and Vocational Education (3) I, II, S**

Prerequisite: Administration, Rehabilitation and Postsecondary Education 380 or 381.

Learning processes of adult and vocational education students in relationship to theories of learning and methods of teaching. (Formerly numbered Education 565.)

### GRADUATE COURSES

Refer to the Graduate Bulletin.



# Aerospace Engineering and Engineering Mechanics

In the College of Engineering

OFFICE: Engineering 308  
TELEPHONE: (619) 594-6074

The undergraduate degree in Aerospace Engineering is accredited by the Accreditation Board for Engineering and Technology, Inc.

## Faculty

Emeritus: Shotts  
Chair: Nosseir  
Professors: Conly, Dharmarajan, Katz, Krishnamoorthy, McGhie, Narang, Nosseir, Pierucci, Plotkin, Wang  
Associate Professor: Lyrantzis  
Lecturer: Faulkner

## Offered by the Department

Doctor of Philosophy degree in engineering sciences/applied mechanics.  
Master of Science degree in aerospace engineering.  
Major in aerospace engineering with the B.S. degree.

## Transfer Credit

No credit will be given for upper division engineering coursework taken at an institution having an engineering program which has not been accredited by the Accreditation Board for Engineering and Technology, Inc., unless the student successfully completes the first 12 units of engineering work attempted at this university. At that time, and upon recommendation of the department, credit will be given for the unaccredited work.

## General Education

Students will complete a minimum of 50 units in General Education, to include a minimum of nine upper division units taken after attaining junior class standing. At least three of the nine upper division units must be taken from Explorations; the remaining six units may be taken from Explorations or from specifically approved upper division course substitutions for Foundations areas B and C (Social and Behavioral Sciences and Humanities). No more than twelve units may be used for General Education credit from any one department or academic unit.

### I. Communication and Analytical Reasoning: 15 units

- A. Written Communication (6 units to include):
  - 1. Composition (3 units)
  - 2. Intermediate Composition (3 units)
- B. Oral Communication (3 units)
- C. Mathematics (6 units) applicable to General Education
  - Mathematics 150
  - Mathematics 151

### II. Foundations: 29 units

- A. Natural Science (17 units to include):
  - 1. Life Science (3 units)
  - 2. Physical Science (14 units)
    - Chemistry 200
    - Physics 195
    - Physics 196
    - Physics 197

- B. Social and Behavioral Sciences (3 units)
- C. Humanities (9 units to include three of the four areas 1., 2., 3., 4.)

### III. Explorations: 6 units

- A. Three units of upper division cultural diversity Explorations coursework from the area in Humanities not selected in Foundations.
- B. Three units of upper division social sciences coursework. Three units of a six-unit upper division American Institutions sequence from any department but History may be counted toward the Explorations requirement.

## The Major

The Department of Aerospace Engineering and Engineering Mechanics offers a rigorous and balanced education which includes the study of aerodynamics, aerospace structures, propulsion, flight mechanics and vehicle design. The goal of this program is to create professional aerospace engineers with an understanding of the physical fundamentals underlying atmospheric and space flight, and with the capability of applying this knowledge for research, analysis, and design purposes. Moreover, the physical background and design synthesis that are characteristic of an aerospace engineering student's education also prepare the student to work productively in other fields such as energy, transportation, health and ocean engineering.

The aerospace industry, the second largest industry in our country is one of the largest employers of engineers. Opportunities for employment in entry level positions in large aircraft companies, general aviation manufacturers, the airlines, or government aerospace-related laboratories are good. Graduates of the program are also qualified to continue their formal education at the graduate level or to accept entry level positions in several nonaerospace fields.

## Aerospace Engineering Major

With the B.S. Degree (Major Code: 09021)

Students majoring in Aerospace Engineering must include in their program a sequence of fundamental courses. In addition, the students have the opportunity to satisfy their particular areas of interest by selecting a pattern of study indicated in the sequence below. This pattern includes typical aerospace engineering topics, such as aerospace vehicle design, performance, structural analysis, aerodynamics, and propulsion. The students' choice of elective courses and area of specialization must be made in consultation with their adviser and documented by the filing of an approved master plan during the first semester of their junior year.

**Upper Division Writing Requirement.** Departmental screening in Aerospace Engineering 303, or passing the University Writing Examination, or completing one of the approved writing courses with a grade of C (2.0) or better.

**NOTE:** See following page for recommended sequence of courses for the major in aerospace engineering.

### FRESHMAN YEAR

Fall Semester	Units	Spring Semester	Units
Chem. 200, General Chemistry .....	5	Phys. 195, Principles of Physics .....	3
Math. 150, Single Variable Calculus .....	5	Math. 151, Calc. and Anal. Geom. ....	4
General Education .....	6	ME 190, Engineering Drawing .....	2
AE 123, The Aerospace Engineer .....	1	Engr. 120, Engr. Problem Analysis .....	2
	17	General Education .....	6
			17

### SOPHOMORE YEAR

Fall Semester	Units	Spring Semester	Units
Math. 252, Multivariable Calculus .....	4	Phys. 197, Principles of Physics .....	3
EM 200, Statics .....	3	EE 204, Principles of Elec. Engr. ....	3
General Education .....	6	EM 220, Dynamics .....	3
Phys. 196, Principles of Physics .....	3	Engr. 280, Methods of Analysis .....	3
	16	General Education .....	3
		ME 260, Engineering Materials .....	3
			18

### JUNIOR YEAR

Fall Semester	Units	Spring Semester	Units
ME 352, Thermodynamics and Heat Transfer .....	3	Engr. 510, Methods of Analysis .....	3
AE 301, Low Speed Aerodynamics .....	3	AE 302, High Speed Aerodynamics .....	3
CE 301, Intro. to Solid Mechanics .....	3	AE 303, Experimental Aerodynamics .....	2
CE 302, Solid Mechanics Lab. ....	1	AE 310, Aerospace Struc. Anal. ....	3
EM 340, Fluid Mechanics .....	3	AE 320, Aerospace Flight Mech. ....	3
EM 341, Fluid Mechanics Lab. ....	1	General Education .....	3
General Education .....	3		17
	17		

### SENIOR YEAR

#### Fall Semester — All Specializations

	Units
AE 410, Aerospace Struc. Dynamics .....	3
AE 403, Aerosp. Engr. Senior Project .....	3
AE 430, Aircraft Propulsion Systems .....	3
AE 440, Aircraft Stab. and Control I .....	3
AE 460A, Aerosp. Engr. Applications .....	2
American Institutions .....	3
	17

#### Spring Semester — According to Specialization

Aerodynamics	Units	Aerospace Structures	Units	Propulsion & Flight Mechanics	Units
AE 460B, Aerosp. Engr. Applications ...	3	AE 460B, Aerosp. Engr. Applications ...	3	AE 460B, Aerosp. Engr. Applications ...	3
AE 480, Aeroelasticity & Acoustics .....	2	AE 480, Aeroelasticity & Acoustics .....	2	AE 480, Aeroelasticity & Acoustics .....	2
American Institutions .....	3	American Institutions .....	3	American Institutions .....	3
<b>Choose any two courses:</b>		<b>Choose any two courses:</b>		<b>Choose any two courses:</b>	
AE 530, Rocket & Space Propulsion .....	3	AE 540, Arcrft. Stability & Control II .....	3	AE 520, Int. Aerospace Flight Mech. ....	3
AE 550, Viscous Flow .....	3	EM 510, Fin. Ele. Meth. Aero. Struc. ....	3	AE 530, Rocket & Space Propulsion .....	3
EM 510, Fin. Elem. Meth. Aero. Struc. ....	3	EM 530, Composite Struc. Analysis .....	3	AE 540, Arcrft. Stability & Cntrl. II .....	3
	14		14		14

Other electives may be substituted with permission of the adviser and department chair.





## Courses

### LOWER DIVISION COURSE IN AEROSPACE ENGINEERING

- 123. The Aerospace Engineer (1)**  
Introduction to professional aerospace engineering. Emphasis on aeronautics and astronautics.

### UPPER DIVISION COURSES IN AEROSPACE ENGINEERING (Intended for Undergraduates)

- 301. Low Speed Aerodynamics (3)**  
Prerequisite: Credit or concurrent registration in Engineering Mechanics 340.  
Subsonic flow; airfoil and wing theory; experimental characteristics of wing sections; high lift devices.
- 302. High Speed Aerodynamics (3)**  
Prerequisites: Aerospace Engineering 301 and Mechanical Engineering 352.  
Supersonic flow; two- and three-dimensional compressible flow; wings in compressible flow; two- and three-dimensional method of characteristics; transonic flow.
- 303. Experimental Aerodynamics (2)**  
One lecture and three hours of laboratory.  
Prerequisites: Engineering Mechanics 341 and credit or concurrent registration in Aerospace Engineering 301. To be eligible for the departmental upper division writing test in this class, students must have completed 60 units, fulfilled the Writing Competency requirement, and completed the General Education requirement in Written Communication.  
Operating characteristics of subsonic and supersonic wind tunnels. Aerodynamic characteristics of wings and bodies. Flow visualization techniques. Force, moment and pressure distribution measurement. Use of hot-wire anemometer and schlieren equipment.
- 310. Aerospace Structural Analysis (3)**  
Prerequisite: Civil Engineering 301.  
Methods of static structural analysis of problems encountered in flight of aerospace vehicles. (Formerly numbered Aerospace Engineering 310A.)
- 320. Aerospace Flight Mechanics (3)**  
Prerequisites: Engineering Mechanics 220 and Engineering 280.  
Aerodynamics and dynamics of ballistic missiles; guidance systems; orbits and space trajectories; effects of aerodynamics, mass, rotation and shape of the earth on ballistic and space trajectories. Computer programming and problem solutions will be emphasized.
- 403. Aerospace Engineering Senior Project (3)**  
One lecture and six hours of laboratory.  
Prerequisites: Aerospace Engineering 302, 303, Engineering Mechanics 340.  
Design and build an aerospace project, conduct experimental measurements, perform analyses of measured data.
- 410. Aerospace Structural Dynamics (3)**  
Prerequisites: Credit or concurrent registration in Aerospace Engineering 310.  
Methods of structural dynamic analysis of problems encountered in aerospace vehicles. (Formerly numbered Aerospace Engineering 310B.)
- 430. Aircraft Propulsion Systems (3)**  
Prerequisite: Aerospace Engineering 302 or Mechanical Engineering 450.  
Theory and performance characteristics of aircraft propulsion systems including reciprocating engines, turbojets, ramjets, etc.
- 440. Aircraft Stability and Control I (3)**  
Prerequisite: Aerospace Engineering 303.  
Static stability and control, general equations of unsteady motion, stability derivatives, stability of uncontrolled motion, response of aircraft to actuation of controls.
- 460A. Aerospace Engineering Applications (2) I**  
Six hours of laboratory.  
Prerequisites: Aerospace Engineering 302, 303 and 310.  
Student projects in aerospace design.
- 460B. Aerospace Engineering Applications (3) II**  
One lecture and five hours of design activity.  
Prerequisite: Aerospace Engineering 460A.  
Student projects in aerospace design.
- 480. Aeroelasticity and Acoustics (2)**  
Prerequisites: Aerospace Engineering 302 and 410.  
Theory of fluid-structure interaction. Flutter phenomena. Buffeting. Oscillating airfoils in compressible flow. Theory of acoustics. Acoustic radiation. Effect of fluid motion.
- 496. Advanced Aerospace Engineering Topics (1-3) I, II**  
Prerequisite: Consent of instructor.  
Modern developments in engineering. See Class Schedule for specific content. Maximum credit six units for any combination of Aerospace Engineering 496 and 499.
- 499. Special Study (1-3) I, II**  
Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units for any combination of Aerospace Engineering 496 and 499.

### UPPER DIVISION COURSES IN AEROSPACE ENGINEERING (Also Acceptable for Advanced Degrees)

- 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) I**  
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.
- 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.

### LOWER DIVISION COURSES IN ENGINEERING MECHANICS

- 200. Statics (3) I, II**  
Prerequisites: Physics 195 and credit or concurrent registration in Mathematics 151.  
Force systems, equilibrium; structures, distributed forces, friction, virtual work, moments of inertia, vector algebra.
- 202. Mechanics for Electrical Engineers (3) I, II**  
Prerequisites: Physics 195 and credit or concurrent registration in Mathematics 151.  
Essentials of mechanics of particles and rigid bodies, for engineering applications. Emphasis on particle dynamics. Intended for Electrical Engineering majors. Not open to students with credit in Engineering Mechanics 200 or 220.
- 220. Dynamics (3) I, II**  
Prerequisite: Engineering Mechanics 200 with a grade of C or better.  
Kinetics of a particle; central force motion; systems of particles; work and energy; impulse and momentum; moments and products of inertia; Euler's equations of motion; vibration and time response; engineering applications.

### UPPER DIVISION COURSES IN ENGINEERING MECHANICS (Intended for Undergraduates)

- 340. Fluid Mechanics (3) I, II**  
Prerequisites: Engineering Mechanics 220 or 202; and credit or concurrent registration in Engineering 280.  
Fluid statics. Laminar and turbulent flow of liquids and gases in pipes, nozzles, and channels. Dimensional analysis and modeling. Drag forces on moving or immersed objects.
- 341. Fluid Mechanics Laboratory (1) I, II**  
Three hours of laboratory.  
Prerequisite: Credit or concurrent registration in Engineering Mechanics 340.  
Flow measuring devices. Experimental applications of continuity, Bernoulli and momentum equations. Model studies. Pipe and channel flows. Flow visualization techniques. Operating characteristics of wind tunnel and water table.
- 496. Advanced Engineering Mechanics Topics (1-3) I, II**  
Prerequisite: Consent of instructor.  
Modern developments in engineering mechanics. See Class Schedule for specific content. Maximum credit six units for any combination of Engineering Mechanics 496, 499, and 596.
- 499. Special Study (1-3) I, II**  
Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units for any combination of Engineering Mechanics 496, 499, and 596.

### UPPER DIVISION COURSES IN ENGINEERING MECHANICS (Also Acceptable for Advanced Degrees)

- 510. Finite Element Methods in Aerospace Structures (3)**  
Prerequisite: Aerospace Engineering 410.  
Static and dynamic analysis of aerospace structures utilizing finite element methods.
- 530. Composite Structural Analysis (3) I**  
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) I, II**  
Prerequisite: Consent of instructor.  
Modern developments in engineering mechanics. See Class Schedule for specific content. Maximum credit of six units for any combination of Engineering Mechanics 496, 499, and 596 applicable to a bachelor's degree. Maximum combined credit of six units of Engineering Mechanics 596 and 696 applicable to a 30-unit master's degree.

### GRADUATE COURSES IN AEROSPACE ENGINEERING AND ENGINEERING MECHANICS Refer to the Graduate Bulletin.

# Aerospace Studies

In the College of Professional Studies and Fine Arts

## Faculty

Chair: Carr  
Professor: Carr  
Assistant Professors: Adelman, Mora, Powell

## Offered by the Department

AFROTC curriculum.  
Minor in aerospace studies.

## AFROTC Curriculum

The department offers a four- or two-year Air Force Reserve Officers Training Corps program designed to develop officers who have broad understanding and high growth potential. For qualified students, two- to four-year scholarships are available in certain areas on a competitive basis. Scholarships pay full tuition at SDSU and various laboratory, textbook, and incidental fees plus a monthly nontaxable \$100 allowance during the school year. Cadets participate in dialogues, problem solving, and other planning activities designed to develop leaders and managers. All coursework is done on campus with the exception of field trips and one Field Training encampment conducted at military bases.

Either a four- or six-week Field Training camp is required for all students during the summer between the sophomore and junior years. The four-week camp is for students who have completed all AFROTC lower division courses with a grade of "C" or better in each course and for those with prior military service. Field training emphasizes military orientation for the junior officer and aircraft and aircrew familiarization. Cadets receive physical training and participate in competitive sports. They observe selected Air Force units perform everyday operations, and they are trained in drill and ceremonies, preparation for inspections, and the use of weapons. Upon completion of the AFROTC program and all requirements for a bachelor's degree, cadets are commissioned second lieutenants in the Air Force and serve a minimum of four years active duty. Graduates who are qualified may enter pilot or navigator training after graduation. Other graduates go on active duty in a specialty consistent with their academic major, their desires, and existing Air Force needs. Graduates may request a delay from entry on active duty to continue their education or may apply for Air Force sponsored graduate study to begin immediately upon entry on active duty.

## Applying for the Program

SDSU students enroll in aerospace classes by signing up for courses in the same manner as other university classes. There is no advance application needed for the freshman or sophomore (AS 100/200) classes. However, a two-day orientation program, held just prior to the start of the fall term, is recommended and designed to give new cadets a broad, realistic introduction to Air Force officer training and provide them with helpful, important information on meeting academic requirements. Contact the Aerospace Studies Department as early as possible for additional information and sign-up procedures. The last two years of AFROTC (AS 300/400) lead to the commission as a second lieutenant and students must apply as early as possible during their sophomore year. The application process involves taking the Air Force Officer Qualification Test (AFOQT), a physical examination, and a personal interview. Students from other institutions in the San Diego area are eligible to take AFROTC and should check with the department to obtain enrollment procedures. Veterans who can be

OFFICE: Physical Education 385  
TELEPHONE: (619) 594-5545

commissioned by age 35 are also eligible for the program. All AS 100/200 students should take the AFOQT by no later than the end of their first semester in AFROTC.

## Aerospace Studies Minor

The minor in aerospace studies consists of a minimum of fifteen units in aerospace studies, nine of which must be upper division.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

#### 91A-91B. Leadership Laboratory (1-1) Cr/NC

One hour and fifteen minutes of activity per unit.

Prerequisites for AFROTC cadets: Concurrent registration in Aerospace Studies 100A for Aerospace Studies 91A; concurrent registration in Aerospace Studies 100B for Aerospace Studies 91B.

Designed to prepare junior cadets for positions as leaders and managers of the cadet corps and a commission in the US Air Force. Application of principles of motivation, time management, organizational behavior, and participative group management in solving problems. Maximum credit two units. Credit earned in this course not applicable to a bachelor's degree. (Formerly numbered Aerospace Studies 92 and 250.)

#### 92A-92B. Leadership Laboratory (1-1) Cr/NC

One hour and fifteen minutes of activity per unit.

Prerequisites for AFROTC cadets: Concurrent registration in Aerospace Studies 200A for Aerospace Studies 92A; concurrent registration in Aerospace Studies 200B for Aerospace Studies 92B.

Designed to prepare junior cadets for positions as leaders and managers of the cadet corps and a commission in the US Air Force. Application of principles of motivation, time management, organizational behavior, and participative group management in solving problems. Maximum credit two units. Credit earned in this course not applicable to a bachelor's degree. (Formerly numbered Aerospace Studies 92.)

#### 93A-93B. Leadership Laboratory (1-1) Cr/NC

One hour and fifteen minutes of activity per unit.

Prerequisite: Concurrent registration in Aerospace Studies 300A for Aerospace Studies 93A; concurrent registration in Aerospace Studies 300B for Aerospace Studies 93B.

Demonstration laboratory designed to develop leadership and management skills, problem-solving skills, and exercise group planning, organizing and coordinating activities. Credit earned in this course not applicable to a bachelor's degree.

#### 94A-94B. Leadership Laboratory (1-1) Cr/NC

One hour and fifteen minutes of activity per unit.

Prerequisite: Concurrent registration in Aerospace Studies 400A for Aerospace Studies 94A; concurrent registration in Aerospace Studies 400B for Aerospace Studies 94B.

Demonstration laboratory designed to develop leadership and management skills, problem-solving skills, and exercise group planning, organizing and coordinating activities. Credit earned in this course not applicable to a bachelor's degree.

#### 100A-100B. The Air Force Today (1-1)

Meets one and one-half hours per week.

Prerequisite for AFROTC cadets: Concurrent registration in Aerospace Studies 91A for Aerospace Studies 100A; concurrent registration in Aerospace Studies 91B for Aerospace Studies 100B.

Semester I: Functions of the US Air Force. The total force structure, strategic offensive and defensive forces. Preparation for officer status. Semester II: General purpose and aerospace support forces and preparation for commissioned officer status.

#### 200A-200B. The Development of Air Power (1-1)

Meets one and one-half hours per week.

Prerequisite for AFROTC cadets: Concurrent registration in Aerospace Studies 92A for Aerospace Studies 200A; concurrent registration in Aerospace Studies 92B for Aerospace Studies 200B.

Semester I: Development of air power from balloons and dirigibles through the peaceful employment of US air power in relief missions and civic action programs in the late 1960s. Preparation for officer status. Semester II: Technological strides in the 50s, crisis in Cuba and Southeast Asia and preparation for commissioned officer status.

#### 233. Field Training Unit (3) I

Required for advanced cadets, military orientation and flight familiarization. Credit granted for six-week field training camp on basis of individual student application with approval of the Aerospace Studies department chair.

### UPPER DIVISION COURSES (Intended for successful AFROTC applicants or for those with special permission)

#### 300A-300B. The Professional Officer (3-3)

Semester I: The Professional Officer; Leadership theory and practice. Semester II: Management principles and functions; problem solving; briefing for commissioned service.

#### 400A-400B. National Security Forces in Contemporary American Society (3-3)

Semester I: Role of professional officer in democratic society; socialization within Armed Services; requisites for adequate national security forces. Semester II: Political, economic, and social constraints on national defense structure and impact of technological and international developments on defense policy making.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of Aerospace Studies department chair. Individual study. Maximum credit six units.





# Africana Studies

In the College of Arts and Letters

OFFICE: Adams Humanities 3128  
TELEPHONE: (619) 594-6531

## Faculty

Chair: Chambers  
Professors: Chambers, Kornweibel  
Associate Professors: Cornwell-Giles, Grigsby, Weber  
Assistant Professor: Toombs

## Offered by the Department

Major in Afro-American studies with the B.A. degree in liberal arts and sciences.

Minor in Afro-American studies.

## The Major

Africana studies offers a broad, interdisciplinary program. The curriculum is designed to study a variety of subjects pertaining to the Africana experience. It is concerned with strengthening links between the needs of black students and the black community, and developing frameworks for social change and the struggle for black dignity. It seeks, in short, to provide a total educational experience of the Africana culture. The courses offered in Africana studies are available to anyone who is interested.

The major provides excellent preparation for the fields of law, government, foreign service, business administration, research, consulting, librarianship, counseling, program development, program design, program analysis, urbanology, and writing, to name a few, as well as the more traditional Africana studies profession of teaching.

## Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

## Afro-American Studies Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 22111)

All candidates for the degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in Africana studies courses can apply to the degree.

A minor is not required with this major.

**Preparation for the Major.** Africana Studies 101A and 101B; 102 or 230; 170A and 170B or 232 and 250. (15 units)

**Foreign Language Requirement.** Twelve units in a foreign language or demonstration of equivalent knowledge in a reading examination administered by the foreign language department concerned.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units to include twelve units selected from one of the following areas and six units from each of the two remaining areas. Up to six units, with appropriate content, of

496 and 499 in any combination may be applied to an area of specialization with the approval of the department chair.

**Sociology and Psychology:** Africana Studies 330, 331, 334, 341, 360\*, 445, 448, 451, 452, 453.

**Humanities:** Africana Studies 350 (3 units applicable to major), 363, 365, 385, 460, 461, 462, 463, 480, 485.

**History and Political Science:** Africana Studies 320, 321, 322, 363, 380, 420, 470, 471A, 471B, 472.

\* Additional prerequisite required.

## Afro-American Studies Minor

The minor in Afro-American studies consists of a minimum of 18 units to include six units selected from the courses for preparation for the major, six units selected from one of the three areas of the major, and three units from each of the remaining areas.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

#### 101A. Introduction to Africana Studies: Social and Behavioral Sciences (3)

Interdisciplinary introduction of African American thought and behavior. Subject areas include social systems, economic empowerment, self development, family dynamics, use of power, cognitive styles, interethnic communication and international relations. Review of relevant literature in social and behavioral sciences. Not open to students with credit in Afro-American Studies 101.

#### 101B. Introduction to Africana Studies: Humanities (3)

Interdisciplinary introduction to African American history, literature, other arts and religion. Subject areas include methodology and theoretical perspectives of Africana studies. Not open to students with credit in Afro-American Studies 101.

#### 102. Afro-American Lifestyles (3) I, II

Afro-American lifestyles in the past, present, and future. Examination of contemporary problems, their roots and their effects on twentieth century America.

#### 120. Composition (3) I, II

Prerequisites: Satisfaction of the English Placement Test and Writing Competency requirements. (See the Graduation Requirements section of catalog.) **Proof of completion of prerequisites required:** Copy of EPT or competency scores or verification of exemption; proof of Cr in Academic Skills 92A or 92B or 97A or 97B, or notification from Academic Skills.

Designed to develop and enhance composition and reading skills. Focus on writing skills that contribute to academic growth and development. Not open to students with credit in English 100 or higher-numbered composition or creative writing course or Linguistics 100 or Mexican American Studies 111B.

#### 140. Oral Communication (3) I, II

Practice in speaking; critical listening, reasoning and organizing. Theory and techniques of communications used to evaluate the effect they have on the lives of Blacks and others. Not open to students with credit in Mexican American Studies 111A or Speech Communication 103.

#### 170A-170B. Afro-American History (3-3) I, II

American history from a Black perspective. (Satisfies American Institutions requirement.)

#### 185. Black Gospel Choir (1) I, II

Prerequisite: Audition by director.

Roots of Black choral music, performance practices, and styles. Vocal technique and technical aspects of choral singing. Public performances. Maximum credit two units applicable to a bachelor's degree.

#### 200. Intermediate Expository Writing and Research Fundamentals (3)

Prerequisites: Satisfaction of the English Placement Test and Writing Competency requirements; and Africana Studies 120 or English 100 or Linguistics 100 or Mexican American Studies 111B. **Proof of completion of prerequisites required:** Test scores or verification of exemption; grade report or copy of transcript.

Development of intermediate expository writing skills and application of practical research principles.

#### 230. Ethnicity and Black Social Competence (3)

An exploration into the concept of ethnicity as a positive mental health model for Afro-Americans in the process of identity formation and coping strategies.

#### 232. Social Analysis from a Black Perspective (3)

Prerequisite: Africana Studies 101A or 102.

Sociological concepts and models used to describe the social behavior of Afro-Americans. Issues in the interpretation of sociology from the Black perspective using the work of Black sociologists from 1900 to the present.

#### 250. Psychology of Blackness (3)

Facts, principles, and concepts which are basic to understanding human behavior. An analysis of the psychological motivations and behavioral responses of and toward Afro-Americans.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 320. Politics and Economics of Black Urban Development (3)

Prerequisite: Africana Studies 101A or completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Political economy of urban growth, development, and redevelopment examined in historical and contemporary contexts. Focus on race and class inequality and conflict; effectiveness of public and private sector decisions and programs; evolution of African American urban poor and their communities. (Formerly numbered Afro-American Studies 220.)

#### 321. Black Political Participation in America (3)

Prerequisites: Africana Studies 101A or 102 or 170A or 170B. Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Afro-American political life and development in the United States. Interaction between Afro-Americans and various actors, institutions, processes, and policies of the American system of politics and governance.

#### 322. African American Political Thought (3)

Prerequisite: Africana Studies 101A or completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Political and social thought underlying principles, goals, strategies developed by African Americans in struggle for social development and human rights. Focus on twentieth century thought. (Formerly numbered Afro-American Studies 221.)

#### 325. Public Policy and Afro-American Community (3) II

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences.

Impact of public policy on Afro-American community: theory and practice of policy formulation, implementation, evaluation, and modification for specific problems in Afro-American community; roles of governmental officials, administrative arrangements, organizational processes, and community groups in policy making.

#### 330. Black Child Development (3) II

Attitudes, needs and problems of the Afro-American child with emphasis on new approaches and insights into the development of positive changes for the child's growth and development.

#### 331. The Black Family (3) I

Structure and functions of the Black family in contemporary American society.

#### 332. Black Women: Myth and Reality (3)

Prerequisites: Africana Studies 101A or 101B and 102.

Images of Black women in America and how those images have been distorted.

#### 341. Cultural Patterns and African American Identity (3)

Prerequisites: Africana Studies 101A or completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Impact of social institutions on African American identity and cultural patterns. (Formerly numbered Afro-American Studies 231.)

#### 350. The Black Total Theatrical Experience (3) I, II

Six hours of activity.

A "living performing arts museum" that utilizes folktales, literature, music, Africanisms, folk myths and history to artistically reflect various cultural and historical aspects of Black life. Performances are important aspect of course. Maximum credit six units.

#### 360. Communications and Community Action (3)

Prerequisite: Africana Studies 140 (field assignments are a major part of this course).

Application of the basic theories of communication through field projects. Study of the communication problems that exist between sociopolitical groups and the media.

#### 362. Rhetoric of Black America (3)

Prerequisite: Three units in Afro-American history or communications.

Rhetoric of Black Americans from David Walker to the present, the role rhetoric has played in the history of Black people and an analysis of the Black audience in terms of the Black experience.

#### 363. Sociocultural Analysis of Black Languages (3)

Prerequisite: Three units in Africana Studies.

Social and cultural functions of Black languages, verbal and nonverbal, in Afro-American life, and their profound impact on larger society. Also, a probe into issues concerning validity of Black English.

#### 365. African American Literature (3)

Prerequisite: Africana Studies 101B or completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Early and contemporary writing by African American authors. Issues of literary form, canon formation and sociopolitical impact of the literature upon African American culture. (Formerly numbered Afro-American Studies 260.)



**380. Blacks in the American Justice System (3)**

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Interpretation and application of constitutional principles and judicial decisions to political and social problems faced by Afro-Americans.

**385. African American Music (3)**

Prerequisite: Africana Studies 101B or completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

African American music from its African roots to present. Consideration of musical styles, events, significant contributors as well as role of sociocultural values in development of music (Formerly numbered Afro-American Studies 180.)

**420. Afro-Americans and the Politics of Urban Education (3)**

Prerequisites: Africana Studies 101A or 102. Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Struggle against Afro-American subordination and complexities, contradictions, and dilemmas of formulating and implementing quality education and equal opportunity policies. Interaction between politics and education during eras of machine, reform, and postreform politics.

**445. Ethnicity and Social Psychology (3)**

Prerequisites: Africana Studies 101A or 250. Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Analysis of major social psychological theories specifically focusing on how these theories relate to minority attitude/value formation and group behavior. Strategies for resolving social issues.

**448. Black and Non-Black Interpersonal Relations (3)**

Cognitive and experiential examination of contemporary issues around Black and non-Black interpersonal relations. Authenticity in relationships, interracial trust, personal development, conflict resolution, and proactive belief systems. Central aim to assist Blacks and non-Blacks to facilitate communication.

**451. Black Consumer Psychology (3)**

Prerequisite: Africana Studies 250.  
Attitude values and decision making of Black people as consumers. Laws and techniques of manipulating consumers.

**452. Race Relations Strategies (3)**

Prerequisite: Africana Studies 101A or 102 or 250.  
Systematic inquiry into contemporary strategies and systems employed to ease racial tensions. Trends and approaches in military, religious, economic, educational, and other social institutions examined, focusing on those that offer most promise in terms of facilitating racial harmony.

**453. Issues in Mental Health: A Multicultural Perspective (3)**

Prerequisite: Africana Studies 230 or 250.  
Examination of multicultural mental health issues. Institutionalization, treatment, social policy funding, prevention, insurance, and community programs will be covered. Relevant research literature will be examined.

**460. Black Images in Western Literature (3)**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
Study of how the image of the Black has been portrayed in Western (white) literature and the attitudes and images of non-Black writers towards Blacks.

**461. Studies in African American Literature (3)**

Prerequisite: Africana Studies 101B.  
Focused studies in African American literature. Analysis of themes, techniques, etc., in fiction, poetry and/or drama.

**462. The Harlem Renaissance (3)**

Prerequisite: Africana Studies 260.  
Black literature of the 1920s from literary, historical, sociological and cultural perspectives.

**463. Black Literatures of the World (3)**

Prerequisite: Africana Studies 260; or completion of the General Education requirement in Foundations II.C., Humanities.  
Afro-American literature in context of world literatures by Blacks. Cross-cultural influences between Africa and the Americas.

**464. Caribbean Literature (3)**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Political, religious, and musical paradigms in writing from 1900 to present. Politico-religious movements and related art forms (Rastafarian Reggae, Dub Poetry).

**470. Comparative History: Afro-American and African Heritage (3)**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Conceptual framework of African history and a comparative study of Afro-American institutions.

**471A. Black History, 1492-1877 (3) I**

Afro-Americanization and African survivals in the U.S.; origins and development of slavery; growth of free Black communities; anti-slavery movements and Black nationalism; slavery's end and dawn of freedom.

**471B. Twentieth Century Black History (3) II**

History of social movements and institutions from 1890 to the present. Focus on both leadership and life of the masses.

**472. Slavery (3)**

Prerequisites: Africana Studies 101A or 170A or History 100 or 105 or 110A or 115A. Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

History of enslavement of Blacks in the new world; contrasted to patterns of slavery in African societies and in the ancient Mediterranean world. Further contrasts to forms of modern group oppression, such as Nazi concentration camps.

**475. African Americans and Leadership: Organization, Strategy, and Social Change (3)**

Prerequisites: Africana Studies 101A and 170B.  
Organizational leadership and social change. Analyzes leadership tasks and accountability, organizational strategies and constraints, and power and decisionmaking in the African American struggle for social development and human rights. Examines educational, religious, political, and intellectual leadership.

**480. History of Afro-American Jazz (3)**

Prerequisite: Africana Studies 101B.  
Historical development of jazz from its beginnings to the present, based on the ability to identify people, discuss musical styles and events, and to relate these factors to the life of the times.

**485. Blacks in the Arts (3)**

Prerequisite: Africana Studies 101B or 102.  
Academic and artistic perspectives on Black participation in and contributions to the creative and performing arts. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**496. Experimental Topics (1-4)**

Selected topics. 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.

**499. Special Study (1-3) I, II**

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

# American Indian Studies

In the College of Arts and Letters

OFFICE: Adams Humanities 3104  
TELEPHONE: (619) 594-6991

## Faculty

Associate Professor: Parker  
Lecturer: Whitehorse  
Adjunct: Brashear, Carrico, Colston, Cooper, Cox, Griswold, Johnson, T., Johnson, W., Shipek, White

## Offered by the Department

Minor in American Indian studies.  
Courses in American Indian studies.  
Major work in American Indian studies is not offered.

## The Minor

A minor in American Indian studies provides students with a liberal education which focuses on cultural diversity. Individuals will attain competency in a broad understanding of the human condition which will relate closely to the areas of public relations, cultural pluralism, and race relations. Students pursuing majors in mass media, politics, journalism, and education will find that a minor in American Indian studies opens a new spectrum of human understanding and critical analysis of professional life.

The American Indian studies program focuses on individual elements that comprise the native American cultures. Using literature, art, history and politics as touchstones, students come to understand the individual as well as tribal character of the Indian peoples. The academic area also draws comparisons between American Indian life and the life of other members of American society.

Career opportunities for graduates include jobs in business, education, government, politics, social sciences, and health and human services. Students have also found positions in programs for Indian tribes and reservations. Federal agencies also seek people with knowledge about and experience with American Indian people and their culture. Agencies include the Bureau of Indian Affairs, the Indian Health Services, the Bureau of Land Management, and the U.S. Forestry Services.

## American Indian Studies Minor

The minor in American Indian studies consists of a minimum of 15 units to include American Indian Studies 110; nine of the 15 units must be in upper division courses selected from American Indian studies or other appropriate departments (e.g., anthropology or history) in consultation with the departmental adviser.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

**110. American Indian Heritage (3) I, II**

Major American Indian themes, beliefs, and practices and their impact on Western civilization through institutions, art, literature, philosophy, and religion.

**265. American Indian Art (3) I, II**

American Indian as a creative person and artistic products from earliest examples to present surveyed through cultural elements affecting symbols, material, and media. Diverse forces generating forms which have become tradition will be central to the study.

**296. Experimental Topics (1-4)**

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

**300. American Indian Oral Literature (3)**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Pre-twentieth century American Indian oral and symbolic traditions including creation and origin legends, coyote stories, ceremonial songs, oratory, and memoirs. (Formerly numbered American Indian Studies 200.)

**303. American Indian Women in American Society (3) I**

Historical and contemporary analysis of the role of Indian women in both Indian and dominant society.

**310. American Indian Music (3)**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

American Indian music and culturally diverse elements that differentiate music of North American tribes and culture groups. Music as a central element in spiritual, social, and ceremonial contexts. (Formerly numbered American Indian Studies 255.)

**320. American Indians in Contemporary Society (3) I, II**

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences.

Sociological understanding of the American Indian groups in contemporary society with emphasis on the relationship to dominant society and why the focus has been on Indians as social problems.

**400. The American Indian Political Experience (3) I**

Social and political response to dominant group policies by the American Indian as compared to other minority groups.

**420. Indian Peoples of California (3) I**

Indian peoples of California. Their histories and cultures from oral traditions to contemporary issues. Focus on selected Indian tribes and communities.

**425. Indians of the Plains (3) II**

Indian peoples of the Plains. Their histories and cultures from oral traditions to contemporary issues. Focus on selected Indian tribes and communities.

**430. American Indian Poetry and Fiction (3) II**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Contemporary American Indian poetry and fiction explored in works of Welch, Ortiz, Momaday, Silko, Deloria, Allen, Erdich, and others.

**435. Indians Through Film and Television (3) II**

Images of Indians in film and television. Impact of movies and television on popular concepts of Indians. Films viewed in class.



**440. American Indian History (3) I, II**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Historical analysis of Indian-White contact. Emphasis on the impact of historical events upon the various cultures.

**450. Bureaucracy and the American Indian (3) II**

Comparative study in the dynamics of the bureaucratic influence on society, with reference to the American Indian experience.

**460. American Indian Community Organization and Development (3) I, II**

Study of theories and purposes of development of community organizations and their functions as they relate specifically to American Indian communities, both reservation and urban. Analysis of policies which govern local community programs will be explored.

**470. Roots of Indian Tradition (3) I, II**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Spirits, prophecies, and renewals of the Indian way compared through symbols and ceremony. Religions will be surveyed as they have been influenced by foreign elements and philosophies. Influences on values and tribalism as reflected through symbols and other measures.

**496. Topics in American Indian Studies (1-3)**

An undergraduate seminar. See Class Schedule for specific content. Maximum credit six units. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

**499. Special Study (1-4)**

Prerequisite: Consent of instructor.

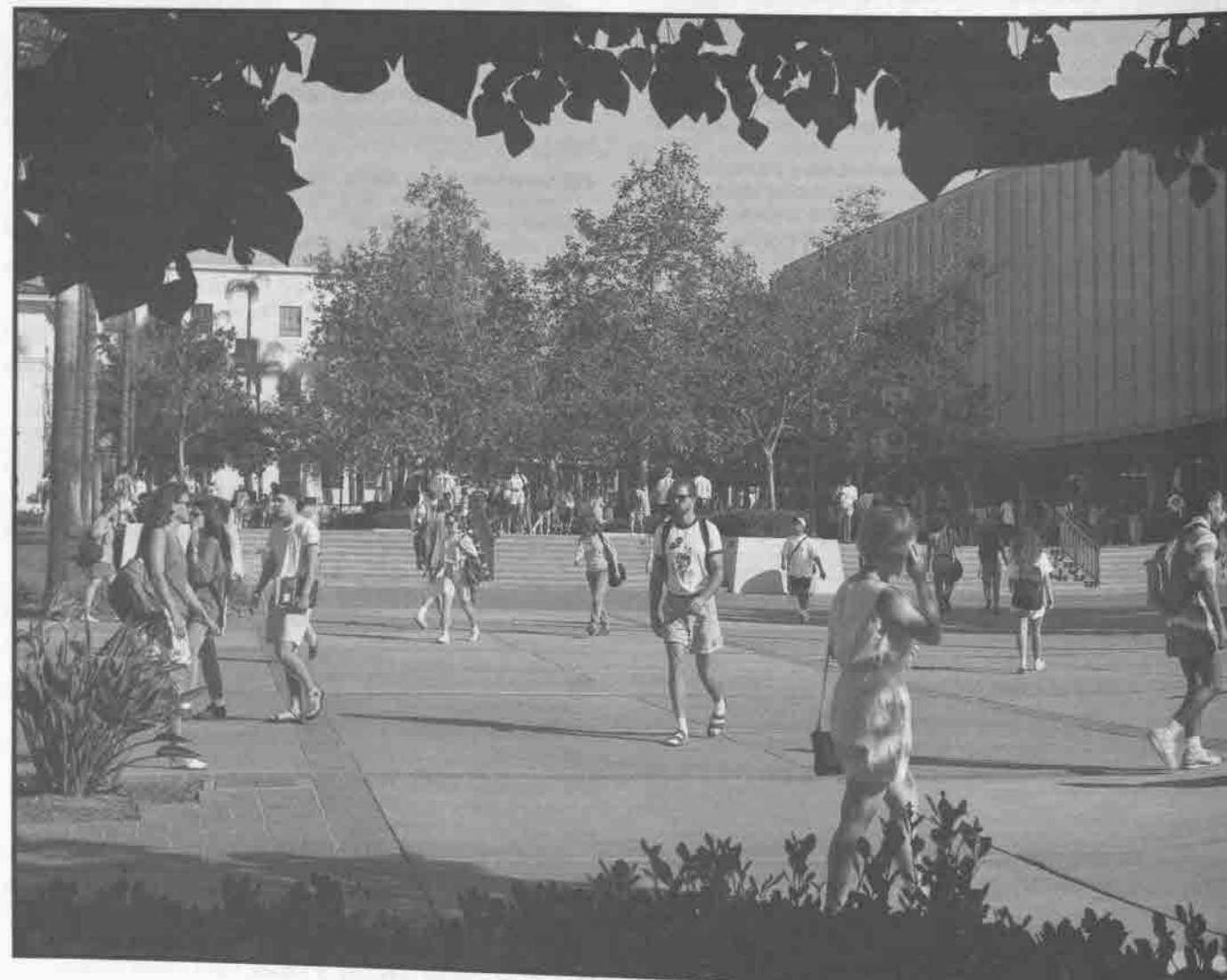
Individual study. Maximum credit six units.

**UPPER DIVISION COURSE  
(Also Acceptable for Advanced Degrees)**

**533. Problems in American Indian Education (3) II**

Prerequisite: Three units of American Indian studies.

Survey of education system imposed on Indian America from the close of the Indian-White military conflict period to the present. Philosophies, government policy and public school accommodation will be central to the topic. Studies, recommendations and resultant programs that affect the overall educational process will be assessed.



# American Studies

In the College of Arts and Letters

OFFICE: Adams Humanities 4158  
TELEPHONE: (619) 594-5237

## Faculty

The American studies program is administered through the American Studies Committee. Faculty assigned to teach courses in American studies are drawn from departments in the College of Arts and Letters.

**Chair:** McLeod (English and Comparative Literature)

**Advisers:** Kushner (History), McLeod (English and Comparative Literature)

**Committee:** Colquitt (English), Deutsch (Family Studies and Consumer Sciences), Donahue (Linguistics), DuFault (History), Ford (Geography), Griswold (English), Huckle (Women's Studies), Koolish (English), Kornfeld (History), Kornweibel (Africana Studies), Kushner (History), Lewin (Political Science), McLeod (English and Comparative Literature), Meadows (Music), Real (Telecommunications and Film), Samovar (Speech Communication), Santangelo (English and Comparative Literature), Strom (Teacher Education), Vartanian (History), Wall (English)

## Offered by American Studies

Major in American studies with the B.A. degree in liberal arts and sciences.

Minor in American studies.

## The Major

American studies is an interdisciplinary program designed to bridge the division of knowledge into discrete disciplines. Each of the four program clusters combines American studies core courses, which relate materials and methods from various disciplines, with upper division courses from several disciplines. The courses are selected to focus on and bring into interrelation one group of American people, one social or cultural process, one place and one period.

The special integrating work in the student's major program is a series of special studies under the direction of members of the American studies faculty in which the student produces a paper or project interrelating the four focuses of his or her studies. The paper or project must make use of two or more disciplines' analyses of the same material. Because American studies finds its center in the concept of culture, the paper or project must deal at least in part with the cultural connections among the four subjects of focus.

With the approval of the American studies adviser, the student may design a program cluster comparable in format to those listed in this catalog but tailored to his or her individual interests.

The minor in American studies is open to all students and is of special interest to international students. The coursework is intended to provide a broad perspective of the American culture—the heritage, the ideas and dreams, and the failures as well as accomplishments.

The flexibility of this interdisciplinary major allows graduates to enter a broad range of career areas, including journalism, law, law enforcement, environmental planning, teaching, archival work, museum curatorship, international business, librarianship or government service. Competencies gained by the American studies major provide a sound basis for entering graduate study in a variety of areas. Many universities have graduate programs in American studies. Graduate work may be required for entrance into a specific career field.

Business and teaching professions in foreign countries welcome American studies majors who can help them understand the way business and social life is conducted in the United States.

## Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

## American Studies Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 03131)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

**Preparation for the Major.** American Studies 201; 12 units selected from Anthropology 102, English 250A-250B (three or six units), History 110A-110B (three or six units), (15 units)

Students should note that a number of the upper division required and recommended courses listed below have lower division prerequisites, but these prerequisites do not constitute requirements per se for the completion of the major.

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** History 430W, English 500W, 508W, 581W or Sociology 396W with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units to include American Studies 499, 501, 580; and nine courses from one of the following clusters or a specially designed cluster.

In the selected cluster, the student will normally take three courses in one area and two courses in each of three other areas. However, the student must take at least one course in each area. The student may take no more than three courses in one discipline on the major program. The student must file with the Evaluations Office a master plan approved by the adviser for the American studies curriculum.

## American Communication

### People: Decision Makers

Economics 370; History 496; Management 356; Political Science 335, 422, 436, 531; Public Administration 520; Sociology 531; Women's Studies 330.

### Process: Communications

No more than one course in each discipline.  
Africana Studies 360, 362, 461, 480; American Indian Studies 430; Art 558; English 524, 525; Journalism 408, 500, 502, 503; Mexican American Studies 335; Music 351D; Political Science 326; Psychology 340; Sociology 456; Speech Communication 475.

### Place: United States

Geography 321; History 534, 535A, 535B, 546A, 546B, 547A, 547B, 548A, 548B.

### Period: Nuclear Age

Two of the following:  
English 525; History 536; Natural Science 333; Women's Studies 330.

**Special Study:** American Studies 499.

### Cultural Institutions and Artifacts

#### People: The Family

Africana Studies 331; Family Studies and Consumer Sciences 436; Mexican American Studies 320; Sociology 522.

#### Process: Material Culture

Anthropology 302; Art 347, 550; English 526 (when offered as American Literature and American Art); Geography 354, 555; Natural Science 333.

+ Museum Internship when available.

#### Place: The Southwest

No more than one course in each discipline.  
History 537B, 538, 541A, 541B; Mexican American Studies 320, 335, 350A, 350B, 376.

#### Period: Colonial

No more than one course in each discipline.  
Anthropology 441, 446; History 530, 531, 548A.

Special Study: American Studies 499.

### Cultural Pluralism

#### People: Ethnic Community

Sociology 355 and one of the following: Africana Studies 471B; American Indian Studies 440; Anthropology 446; Mexican American Studies 320 or 350B.

#### Process: Development of Identity

Africana Studies 362 or 461; Mexican American Studies 335; Music 344, 351; Political Science 531; Sociology 430 or 457; Women's Studies 352 or 553 (when American in content).

#### Place: The City

Economics 458; Geography 354 or 555; Mexican American Studies 303; Political Science 522; Public Administration 512; Sociology 557.

#### Period: 1840 to the Present

No more than one course in each discipline.  
English 523, 524, 525, 527, 528 (when appropriate); History 534, 535A, 541B, 548B; Women's Studies 330 or 341B.

Special Study: American Studies 499.

### Majority American Goals and Values

#### People: The Middle Class

Art 560; History 548B; Political Science 531; Sociology 531; Women's Studies 330.

#### Process: Tradition and Change in the Evolution of American Goals and Values

No more than one course in each discipline.  
Anthropology 444; Economics 474; English 525; History 435, 545A, 545B, 548A, 548B; Management 356, 456; Political Science 334, 335, 345, 346, 348; Sociology 433, 456, 457, 537.

#### Place: United States

English 523, 524, 525, 527; Geography 370; History 540, 546B, 547A, 547B; Political Science 305.

#### Period: Twentieth Century

Economics 338; English 525; History 310B, 535A, 535B, 536; Management 356; Music 351D; Women's Studies 341B.

Special Study: American Studies 499.

### American Studies Minor

The minor in American studies consists of a minimum of 18 units to include American Studies 501 (Study of American Culture), and six units selected from History 546A-546B or 547A-547B or 548A-548B;

and nine units selected from the courses listed below—six units from one grouping and three from the other, with no more than six units from any one department's or program's offerings.

**Humanities:** American Studies 580; Art 560; English 522, 523.

**Social Sciences:** Anthropology 444; Economics 338; Geography 354; Political Science 305; Sociology 433.

With the consent of the American studies adviser, six units in courses not listed here may be included in the student's program. Courses in the minor may not be counted towards the major but may be used to satisfy preparation for the major and general education requirements. A minimum of six upper division units must be completed at San Diego State University. In designing their American studies minor program, students may not include courses drawn from their major department.

### Courses

#### LOWER DIVISION COURSES

##### 201. Introduction to American Culture (3) I, II

Emphasizes the concept of culture as framework for introductory cross-disciplinary study of the American culture, through analyses of such things as artistic expression, historical events, social processes, folk and popular culture, using methodology adapted from social sciences and humanities.

##### 296. Experimental Topics (1-4)

Selected topics. 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.

#### UPPER DIVISION COURSES (Intended for Undergraduates)

##### 496. Experimental Topics (1-4)

Selected topics. 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.

##### 499. Special Study (1-3)

Prerequisite: Consent of instructor.  
Individual study in interdisciplinary humanities and social sciences work. Maximum credit six units.

#### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

##### 501. Study of American Culture (3) II

Prerequisite: Major in American studies; open to other students with interdisciplinary interests.  
American studies as a discipline, the important methods of the field, and variety of materials for interdisciplinary study.

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

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

# Anthropology

In the College of Arts and Letters

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

### Faculty

Emeritus: Anderson, Rogers

Chair: Goldkind

Professors: Ball, Goldkind, Greenfield, Henry, Himes, Leach, Lippold, Pendleton, Rohrl, Rollefson, Watson, Whitney

Associate Professor: Moore

Assistant Professor: Sonek

### Offered by the Department

Master of Arts degree in anthropology.

Major in anthropology with the B.A., degree in liberal arts and sciences.

Minor in anthropology.

### The Major

Anthropology is the far-reaching study of human beings as both biological and culturally adaptive organisms. Anthropologists study the physical and mental characteristics, social relationships, institutions, customs, myths, and geographic distribution of human populations.

The anthropology major provides a broad background for the various specialized areas in the field, such as archaeology, the analysis of past cultures; cultural anthropology, the study of cultural similarities and differences in contemporary societies; linguistics, the evaluation of cultural differences in communication; and physical anthropology, the analysis of biological characteristics of past and present populations. Elective courses provide information on the newest developments in the field and give the anthropology graduate an understanding of human nature in the context of past and present environmental influences.

Employment opportunities for anthropology graduates include work in senior citizen and minority agencies, the National Park Service, state archaeological services, marketing, environmental impact projects, urban affairs, state and local governmental agencies, and business.

### Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser during the first semester after declaration or change of major.

### Anthropology Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 22021)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in anthropology courses can apply to the degree.

A minor is not required with this major.

Preparation for the Major. Anthropology 101, 102. (6 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing Anthropology 396W, the University Writing Examination, or one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 33 upper-division units in Anthropology to include Anthropology 301, 302, 303, 304; and 21 additional units of upper division courses in anthropology. The student will file with the Evaluations Office a master plan approved by the adviser for the anthropology curriculum.

### Anthropology Minor

The minor in anthropology consists of a minimum of 15 units in anthropology, 9 to 12 units of which must be in upper division courses. The 15 units must be selected from one of the following areas:

**General:** Anthropology 101, 102 and nine units selected from 301, 302, 303, 304, 580.

**Archaeology:** Anthropology 101 and 302 and nine units selected from Anthropology 471, 472, 474, 478, 481, 483, 496 (if appropriate), 499, 561, 580.

**Biocultural:** Anthropology 101 and 301 and nine units selected from Anthropology 406, 483, 496 (if appropriate), 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 580.

**Linguistics:** Anthropology 102, 304 and 410 and six units selected from Anthropology 303, 350, 496 (if appropriate), 499, 580, 582, 583.

**Sociocultural:** Anthropology 102 and 350 and nine units selected from Anthropology 303, 424, 430, 439, 496 (if appropriate), 520, 526, 529, 532, 580.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

### Courses

#### LOWER DIVISION COURSES

##### 101. Human Biocultural Origins (3) I, II (CAN ANTH 2)

Man's place in nature; fossil evidence for hominid evolution; evolutionary theory; racial, clinal and genetic variability; relationship of physical and cultural adaptations; the rise of civilization.

##### 102. Introduction to Cultural Anthropology (3) I, II (CAN ANTH 4)

May be taken before Anthropology 101.

Man's relationship to his environment; types of preliterate society; systems of social organization, politics, economics, religion, and language.

##### 296. Experimental Topics (1-4)

Selected topics. 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.

#### UPPER DIVISION COURSES (Intended for Undergraduates)

##### 301. Principles of Physical Anthropology (3) I, II

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 101.

Primate comparative anatomy and human paleontology. Physical measurement of the living subject and skeletal specimens. The statistical treatment of data in physical anthropology. Applications of physical anthropology in industry and medicolegal problems.



- 302. Principles of Archaeology (3) I, II**  
Two lectures and three hours of laboratory.  
Prerequisite: Anthropology 101.  
History, method, and theory of archaeological data acquisition and interpretation. Methods of data recovery and analysis suitable to resolution of historical and processual questions. Archaeological examples from a worldwide sample of prehistoric and historic societies.
- 303. History of Ethnological Theory (3) I, II**  
Prerequisite: Anthropology 102.  
Development of theories which explain nature of culture and cultural variation. Applications of theory of culture to field methods in ethnography and interpretation of ethnographic findings. (Formerly numbered Anthropology 305.)
- 304. Principles of Anthropological Linguistics (3) I, II**  
Two lectures and three hours of laboratory.  
Prerequisite: Anthropology 102.  
The structural nature of language. How languages differ, change and influence each other. The language families of the world. The significance of language for human social life in a variety of cultures.
- 312. Archaeological Field Techniques (3) I, II, S**  
Six hours of activity.  
Prerequisite: Anthropology 302.  
Archaeological excavation of significant sites in San Diego. Techniques of excavation, recording, and surveying.
- 350. World Ethnography (3)**  
Prerequisites: Anthropology 102, and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.  
Cultural patterns of representative peoples. Industries, arts, social organization and supernaturalism considered with view to environmental adjustment, historical development and functional interrelation. Ethnological theories reviewed and applied in interpreting illustrative societies.
- 351. Primitive Technology (3)**  
Two lectures and three hours of laboratory.  
Prerequisite: Anthropology 101 or 102.  
Techniques of tool manufacture, subsistence, shelter, clothing and arts and crafts of nonindustrial peoples.
- 396W. Writing of Anthropology (3)**  
Prerequisites: Anthropology 101 and 102. 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; grade report or copy of transcript.  
Will develop ability to write clearly, correctly and effectively about anthropological subjects. Students will read assigned examples of anthropological writing from the main subdisciplines, write mini-ethnographies, summaries and critiques, and report on assigned research projects.
- 406. Nonhuman Primates (3)**  
Prerequisite: Anthropology 101.  
Basic aspects of nonhuman primates, geographical distribution, ecology (habitat, diet), external and internal morphology, locomotion and social behavior, reproduction and development.
- 410. Language in Culture (3)**  
Prerequisites: Anthropology 102, and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.  
Survey of anthropological interests in the study of language and of linguistic interests in the sociocultural context of language.

- 422. Music and Culture (3)**  
Prerequisites: Anthropology 102, and completion of the General Education requirement in Foundations II.C., Humanities.  
How the forms, functions and meanings of music vary cross-culturally. Understanding a society's music historically, holistically and experientially, with emphasis on non-Western music. Universals of music and music use. Ethnological theories of music and music change.
- 424. Primitive Religion (3)**  
Prerequisites: Anthropology 102, and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
Beliefs and ritual of primitive man. Magic and religion. Forms of animism and polytheism. Primitive mentality and the supernatural.
- 430. Anthropology of Law (3) I, II**  
Prerequisite: Anthropology 102.  
Law and social control studied in sociocultural context. Law in Western society compared with "law-ways" in a number of traditional or nonindustrialized cultures. Basic concepts and theories about law examined cross-culturally and applied to our own society.
- 432. Principles of Personality in Culture (3)**  
Prerequisites: Anthropology 102, and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.  
Principles related to the determinants of human behavior contained in culture. Studies of behavior cross-culturally.
- 439. Ethnology Through Film (3)**  
Principles of cultural anthropology to include signs and proxemics, cultural prerequisites, kinship and social organization, and law and values. Feature and documentary films.
- 440. Cultures of Europe (3)**  
Prerequisite: Anthropology 102.  
The study of society and culture in contemporary Europe, utilizing current ethnographic materials. The relationship of such studies to European culture growth and to the definition of European sociocultural regions.
- 441. The California Indian (3)**  
Prerequisite: Anthropology 102.  
Native California Indian cultures with stress on the Indian groups of Southern California. The industries, arts, social organization, folklore, and religion will be considered as revealed through the study of living peoples and archaeological evidences.
- 442. Cultures of South America (3)**  
Prerequisites: Anthropology 102, and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.  
Indian cultures in terms of origins, migration, relation to habitat, cultural variation and relevance to contemporary trends. Development of Inca civilization, the effects of the Spanish conquest and its aftermath.
- 443. Contemporary Latin American Cultures (3)**  
Prerequisite: Anthropology 102.  
A social anthropological approach to the structure and dynamics of contemporary conditions and problems, especially as revealed in studies of particular communities. Included are such topics as ethnic and regional differences within national societies, population change, social consequences of economic changes, changing stratification systems, values, institutional change.
- 444. American Culture (3)**  
An "inside-out" view of America. What culture has to do with feeling like an American. Theory and method in anthropology. Approaches include subcultures, American values, and mass media.

- 445. Ethnology of North America (3)**  
Prerequisites: Anthropology 102, and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.  
Native cultures and the role of environmental and historical factors in North America.
- 446. Southwestern Ethnology (3)**  
Prerequisites: Anthropology 102, and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.  
Indian cultures of the American Southwest in historic times; ecological adaptations, responses to white contact, adaptations to modern American life.
- 448. Cultures of Oceania (3)**  
Prerequisites: Anthropology 102, and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.  
The aboriginal cultures and peoples of Australia, Melanesia, Micronesia, and Polynesia in prehistoric, historic, and modern times.
- 449. Cultures of Sub-Saharan Africa (3)**  
Prerequisites: Anthropology 102, and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.  
Indigenous peoples and cultures of Africa south of the Sahara. A comparison of cultural traditions, social organization, and modern trends in newly emergent nations of the area.
- 450. Cultures of India (3)**  
Prerequisites: Anthropology 102, and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.  
Indigenous peoples and cultures of India and contiguous areas of South Asia. The development of cultural traditions, social organization, and modern trends.
- 452. Japanese Society (3)**  
Prerequisites: Anthropology 102, and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.  
Culture and social organization of Japanese people. Traditional Japanese economic, social, political and religious institutions. Okinawa and overseas Japanese. Recent industrial and urban changes in modern Japan.
- 471. Archaeology of North America (3)**  
Prerequisite: Anthropology 101 or 102.  
Origin of the American Indian and survey of the main prehistoric cultures of the North American continent.
- 472. Southwestern Prehistory (3)**  
Prerequisite: Anthropology 101 or 102.  
Prehistoric Indian cultures in the American Southwest; ecological adaptations and outside cultural influences.
- 474. Archaeology of Western and Central Asia (3)**  
Prerequisite: Anthropology 101 or 102.  
Culture change in the area from Anatolia eastwards to India and including the Arabian peninsula beginning with the first evidence of hominid activity through ethnohistorically known societies.
- 478. Archaeology of Europe (3)**  
Prerequisite: Anthropology 101 or 102.  
Culture change in the area from Ireland eastwards to European Russia in the time period beginning with the Pleistocene human occupation through Roman colonialism.
- 481. Archaeology of East Asia and Oceania (3)**  
Prerequisite: Anthropology 101 or 102.  
Culture change in the areas of China, Siberia, southeast Asia, Australia, Japan and Oceania beginning with the first evidence of hominid activity through ethnohistorically known societies.

- 483. Health and Nutrition in Antiquity (3)**  
Prerequisite: Anthropology 101 or 102.  
Health and disease patterns in human populations from the earliest times. Analysis of food resources, their impact on health and nutrition of prehistoric peoples.
- 496. Experimental Topics (1-4)**  
Selected topics. 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.
- 499. Special Study (1-3) I, II**  
Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

# UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

- 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.
- 502. Microevolution (3)**  
Prerequisite: Anthropology 101. Recommended: Anthropology 301.  
The evolution of human populations over a short period of time. Interaction of the evolutionary forces of mutation, selection, drift and gene flow with the cultural systems of human populations.
- 503. Human Variation (3)**  
Prerequisite: Anthropology 101.  
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.

**520. Ethnographic Field Methods (3)**

Two lectures and three hours of laboratory.  
Prerequisite: Anthropology 102.  
The problems and techniques of obtaining data in ethnological and social anthropological field work; preparation, gaining and maintaining rapport, evaluating data; participant observation. A review of literature followed by work with informants.

**526. Cultural Change and Processes (3)**

Prerequisites: Anthropology 102 and six upper division units in anthropology.  
Patterns of change in subsistence, social structure, and belief systems. Processes of change including diffusion, acculturation, individual innovation, and directed change among contemporary and historic peoples.

**529. Urban Anthropology (3)**

Prerequisites: Anthropology 102 and six upper division units in anthropology.  
Urban adaptations of past and present societies. Descriptive topics and applied concerns regarding urban origins, migrations, kinship, family, ethnicity, stratification, and change. Ethnographic examples drawn from Western and non-Western societies.

**532. Culture and Personality (3)**

Prerequisite: Anthropology 102.  
The relationship of individual personality to culture in a variety of cultures. A consideration of various theories and studies in the social and personality sciences.

**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. (Formerly numbered Anthropology 561A.)

**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**  
Refer to the Graduate Bulletin.



# Art

In the College of Professional Studies and Fine Arts

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

Accredited by the National Association of Schools of Art and Design and the Foundation for Interior Design Education Research.

For purposes of exhibition and reference, the department reserves the right to retain for a limited period some of each student's work produced in class.

**Faculty**

Emeritus: Baker, K., Bigelow, Dirks, Frick, Higgins, Hodge, Hopkins, Hunter, Jackson, Perczel, Roth (Longenecker), Sorenson, Tanzer, Wallace  
Chair: Orth  
Professors: Austin, Baker, R., Berg, Cotten, Covington, Dominguez, Esser, Fisch, Miller, Orth, Ray, Rigby, Roberts-Fields, Rogers, Shirk  
Associate Professors: Cooling, Dumlaio, Hayakawa, Mansfield  
Assistant Professors: Burkett, Merritt, Moaney, Nelson, Yapelli  
Lecturers: Elliott, Maruyama, Nakamura, Schamu, Siprut, Smith, Souza

**Offered by the Department**

Master of Arts degree in art.  
Master of Fine Arts degree in art.  
Major in art with the B.A. degree in liberal arts and sciences.  
Emphasis in art history.  
Emphasis in studio arts.  
Major in art with the B.A. degree in applied arts and sciences.  
Emphasis in applied design.  
Emphasis in environmental design.  
Emphasis in graphic design.  
Emphasis in interior design.  
Emphasis in painting, printmaking, and photography.  
Emphasis in sculpture.  
Teaching major in art for the single subject teaching credential.  
Minor in art.  
Minor in art history.  
Certificate in Art (available at Imperial Valley Campus only).

**The Major**

A significant concern of the Department of Art is the creative growth of its students. The department focuses on the development of sound undergraduate programs which provide a strong basic foundation in art. A major in art may be planned with an emphasis in applied design, with specialties in ceramics, furniture, metalsmithing, jewelry, and textiles; art history; studio arts; environmental design; graphic design; interior design; painting, printmaking, and photography; and sculpture. A program for those preparing for a single subject teaching credential is also available, as is a broad spectrum of courses for both majors and nonmajors in art history, art appreciation, basic drawing and design.

All emphases except art history require a set of core courses consisting of two courses each in drawing, design, and the survey of art history of the Western world. It is strongly recommended that all students complete the core requirements during their freshman year, or at least prior to taking beginning coursework in a specific program emphasis. It is recommended that students take courses from other emphases in order to enhance their overall art experience. In addition to the undergraduate degree, the department offers a Master of Arts

degree (30 units) in all of these emphases and a Master of Fine Arts degree (60 units).

Although a degree in art is often pursued as a means of self-fulfillment and creative growth, graduates of the department are employed in a variety of settings. The programs in environmental design, interior design, and graphic design have a preprofessional orientation supplemented by a strong liberal arts background. Environmental design and interior design can lead to interior, architectural, landscape design or city planning. Graphic design prepares the student for the areas of environmental graphics, art direction, visual design for the contemporary media of advertising, or editorial illustration. The areas of painting, printmaking, photography, and sculpture prepare students for professional attitudes toward the fine arts and the continuance of their educational experience in graduate schools with the goal of teaching at institutions of higher learning. The preprofessional program in art education prepares the student for teaching in either elementary or secondary schools. The applied design program can be developed to specialize in ceramics, furniture design, jewelry, metalsmithing, textile design and weaving.

**Art Major**

**With the B.A. Degree in Liberal Arts and Sciences**

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in art courses can apply to the degree for students with an emphasis in Art History. For students majoring in art with an emphasis in studio arts no more than 57 units in art courses can apply to the degree.

This major in art may be planned with an emphasis in studio arts or art history.

A minor is not required with this major in art.

**Emphasis in Art History**  
(Major Code: 10031)

**Preparation for the Major.** Art 100, 101, 158, 258, 259, and 263. (18 units)

**Foreign Language Requirement.** Four semesters of French or German with an overall average of "B" (3.0) or better; or successful completion of a proficiency examination in either French or German. The requirement may be met by taking German 100A, 100B, 200B, and 200C; French 100A, 100B, 200A, and 200B; or by passing the Graduate School Foreign Language Examination in French or German; or by passing the French Foreign Language Graduation Requirement Waiver Examination (contact the Art Department for permission to take this examination).

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 27 upper division units in art history to include Art 593; and 24 units selected from Art 371, 557 through 577; and to include at least one three-unit course from each of the five groups listed below:

*Ancient and Medieval Art:* Art 371, 568  
*Renaissance and Baroque Art:* Art 562, 573A, 573B, 574, 575  
*Modern Art and American Art:* Art 557, 558, 560  
*Native American, African and Oceanic Art:* Art 561, 576  
*Byzantine, Islamic, Indian, and Oriental Art:* Art 564, 565, 572



### Emphasis in Studio Arts (Major Code: 10021)

**Preparation for the Major.** Art 100, 101, 102, 103, 203, 204, 216, 258, 259, and six units of art electives. (33 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units in art to include Art 403, 404, and 500; six units of art history; and nine units of art electives selected in consultation with an adviser.

### Art Major

#### With the B.A. Degree in Applied Arts and Sciences

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

### Emphasis in Applied Design (Major Code: 10021)

**Preparation for the Major.** Art 100, 101, 102, 103, 220, 258, 259, and six units of art electives. (27 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 27 upper division units in art to include six units from each of the areas listed below, and six units of extended work in one of the areas; three units of art electives; and six units of art history.

**Fiber:** Art 334, 435, 436, 534, 535, 536

**Metal:** Art 331, 431, 531, 532, 533

**Clay:** Art 325, 425, 525, 526

**Wood:** Art 323, 423, 523

### Emphasis in Environmental Design (Major Code: 10021)

**Preparation for the Major.** Art 100, 101, 102, 103, 148, 247, 248, 249, 250, 251, 258, 259. (36 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 27 upper division units in art to include Art 348, 450, 454, 547, 550; six units selected from Art 323, 381, 416, 451, 453, 481, 552, 581; and six units of art history (may include Art 581).

### Emphasis in Graphic Design (Major Code: 10091)

**Preparation for the Major.** Art 100, 101, 102, 103, 241, 243, 258, 259; and six units selected from Art 203, 204, 210, 240, 242. (30 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 27 upper division units in art to include Art 341, 441, 541; six units of art history; and twelve units selected from Art 340, 440, 443, 444, 445, 540, 542, 543, 544.

### Emphasis in Interior Design (Major Code: 02031)

Art majors wishing to enter one of the Interior Design upper division courses (Art 451, 453, 552, 553) must receive, as a condition of junior level qualification, a *passing* evaluation of a portfolio of work submitted to the Interior Design Evaluation Committee. Any advance enrollment in the above-listed upper division courses will remain provisional until clearance of the portfolio review. Reviews are held prior to the beginning of the fall and spring semesters. See the Art Department office for specific information concerning current policies pertaining to the review, content of the portfolio, and the schedule to be observed.

**Preparation for the Major.** Art 100, 101, 102, 103, 148, 247, 248, 249, 250, 251, 258, 259. (36 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 30 upper division units in art to include Art 352, 451, 452, 453, 552, 553; six units selected from Art 381, 481, 581; three units selected from Art 323, 325, 334, 436, 450, 547; and three additional units of art history.

### Emphasis in Painting, Printmaking, and Photography (Major Code: 10021)

**Preparation for the Major.** Art 100, 101, 102, 103, 203, 258, 259, and six units selected from Art 204, 205, 207, or 210. (27 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units in art to include six units of art history, and 18 units selected in consultation with the adviser from Art 403, 404, 405, 406, 407, 408, 410, 411, 500, 502, 503, 504, 505, 506, 509, 510, 511.

### Emphasis in Sculpture (Major Code: 10021)

**Preparation for the Major.** Art 100, 101, 102, 103, 216, 217, 258, 259; and three units selected from Art 203, 204, 220, 225, 231, 234. (27 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units to include Art 416, 498A, 516, 517; six units of art history; and six units selected from Art 323, 331, 403, 404, 500.

### Art Major

#### For the Single Subject Teaching Credential With the B.A. Degree in Applied Arts and Sciences (Major Code: 10021)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under Policy Studies or Teacher Education.

This major may be used by students in teacher education as an undergraduate major for the B.A. degree in applied arts and sciences.

**Preparation for the Major.** Art 100, 101, 102, 103, 204, 216, 220, 225, 258, 259, and three units selected from 203, 205, 210, or 241. (33 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Teaching Major.** A minimum of 33 upper division units to include Art 325, 331, 404, 405, 435, 586; six units of art history and nine units selected from Art 416, 425, 431, 436, 504, 505, 535, and 536.

### Art Minor

The minor in art consists of a minimum of 21 units in art, to include Art 100 and 101 and 12 units of upper division courses in art taken from art history, applied design, environmental design, interior design, painting, printmaking, and sculpture.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

### Art History Minor

The minor in art history includes a minimum of 21 units in art distributed as follows: Nine units to include Art 258, 259, and three units selected from Art 158 or 263. Twelve units selected from Art 371, 557, 558, 559, 560, 561, 562, 564, 565, 568, 572, 573A, 573B, 574, 575, 576, 577.

Courses in the minor may not be used toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

### Certificate in Art (Imperial Valley Campus)\*

The Certificate in Art is a response to the needs of the community for a professionally oriented course of art studies. The certificate requirements are designed to satisfy those who want more than an occasional art course and who are not content with anything less than a solid foundation in a given medium. For apprentice artists, practicing artists, art educators, and others interested in developing their creative abilities, the certificate program demands a significant degree of commitment and meets that involvement with a strong basis in studio skills backed up with art history.

The student must complete an approved selection of six courses (18 units) with a minimum grade point average of 2.5 within a period of six consecutive semesters in order to qualify for the certificate. Candidacy will be established by the director of the program. In some cases, specific course prerequisites may be waived for persons able to demonstrate the skills or knowledge in question. In addition to formal course requirements, the student must submit a portfolio of work for review by a committee made up of the director and other instructional staff.

The Certificate in Art requires a minimum of 18 units to include Art 404 or 500, 406, 557 or 558; and nine units selected with the approval of the adviser from Art 325, 340, 341, 387, 403, 407, 425, 435, 496 (Color Photography; Studio Techniques), 502, 512, 557 or 558 (if not taken above).

\* Additional prerequisites required for this certificate.

### Courses

#### LOWER DIVISION COURSES

**100. Drawing and Composition (3) I, II (CAN ART 8)**

Six hours.  
The ordering of two-dimensional space through drawing.

**101. Two Dimensional Design and Color (3) I, II, S (CAN ART 14)**

Six hours.  
Fundamentals of space and color design. Basic course used as a prerequisite for advanced work.

**102. Drawing and Composition (3) I, II**

Six hours.  
Prerequisite: Art 100.  
Line and value in drawing; emphasis on structure and proportion, sketching, gesture, and contour drawing.

**103. Three Dimensional Design (3) I, II (CAN ART 16)**

Six hours.  
Prerequisite: Art 101.  
Introduction and investigation of design and theory, and practice in three dimensions.

**148. Visual Presentation I (3) I, II**

Six hours.  
Prerequisite: Art 100.  
Design drawing techniques including interior presentation drawings, interior detailing, architectural drafting, and lettering. Tools and materials used in the design professions.

**157. Introduction to Art (3) I, II**

An illustrated lecture course dealing with the meaning of art derived from an investigation of the principles of art. Designed to increase the understanding and appreciation of art.

**158. Arts of Native America, Sub-Saharan Africa, and Oceania (3)**

Arts of diverse societies of Native America, Sub-Saharan Africa, and Oceania in cultural context. Art forms from ancient to contemporary period.

**203. Life Drawing (3) I, II**

Six hours.  
Prerequisite: Art 102.  
Drawing from the nude model. Maximum credit six units.

**204. Painting (3) I, II (CAN ART 10)**

Six hours.  
Prerequisites: Art 101 and 102.  
Pictorial composition and techniques of painting. Maximum credit six units.

**205. Waterbase Media (3) I, II**

Six hours.  
Prerequisites: Art 101 and 102.  
Composition of still-life and landscape in aqueous media. Maximum credit six units.

**207. Introduction to Fine Art Photography (3) I, I**

Six hours.  
Prerequisites: Art 102 and 103.  
Black and white fine art photography including lighting techniques, small format cameras, metering, darkroom instruction, and fine art processes. Maximum credit six units.

**210. Printmaking (3) I, II**

Six hours.  
Prerequisites: Art 101, 102 and consent of instructor.  
Introduction and exploration of basic printmaking media. Emphasis on aesthetic and technical processes in intaglio, lithography, relief and serigraphy.

**216. Sculpture (3) I, II (CAN ART 12)**

Six hours.  
Prerequisite: Art 103.  
Introduction and experimentation of basic sculpture ideas, methods and materials. Maximum credit six units.

**217. Life Modeling—Sculpture (3) I, II**

Six hours.  
Prerequisite: Art 103.  
Creative experimentation with sculptural forms from the human figure.

**220. Design in Crafts (3) I, II**

Six hours.  
Prerequisite: Art 103.  
Visual and structural form in crafts.

**225. Beginning Handbuilt Ceramics (3) I, II**

Six hours.  
Prerequisite: Art 103.  
Design and construction of handbuilt ceramic forms. Introduction of glaze for surface enrichment. Maximum credit six units.

- 231. Beginning Jewelry Design (3) I, II**  
Six hours.  
Prerequisite: Art 220.  
Design and fashioning of jewelry.
- 234. Weaving (3) I, II**  
Six hours.  
Prerequisite: Art 220.  
Structure and design of woven fabrics. Maximum credit six units.
- 240. Graphic Imagery (3) I, II**  
Six hours.  
Prerequisites: Art 100 and 103.  
The organization concepts of design applied to experimental photographic and technical reproductive media, and environmental graphics.
- 241. Beginning Graphic Design (3) I, II**  
Six hours.  
Prerequisites: Art 102 and 103. **Proof of completion of prerequisites required:** Grade report or copy of transcript.  
Creative projects exploring the interrelation of fundamental art principles and design using phonetic symbols and typography.
- 242. Graphic Design Visual Presentation (3)**  
Six hours.  
Prerequisites: Art 102 and 103.  
Presentation methods, materials, and tools of the professional graphic designer, stressing art principles.
- 243. Intermediate Graphic Design (3) I, II**  
Six hours.  
Prerequisite: Art 241. **Proof of completion of prerequisite required:** Grade report or copy of transcript.  
Typographic and design concepts applied to layout for contemporary media.
- 247. The House and Its Environment (3) I, II, S**  
Architecture, interior design, landscape and city planning for forming the physical and aesthetic environment.
- 248. Visual Presentation II (3) I, II**  
Six hours.  
Prerequisites: Art 102, 103, 148. **Proof of completion of prerequisites required:** Grade report or copy of transcript.  
Methods, materials, and tools of the professional environmental designer stressing art principles.
- 249. Visual Presentation III (3) I, II**  
Six hours.  
Prerequisite: Art 248. **Proof of completion of prerequisite required:** Grade report or copy of transcript.  
Methods, materials, and tools of the professional environmental designer stressing art principles.
- 250. The Contemporary House (3) I, II**  
Six hours.  
Prerequisite: Art 248. **Proof of completion of prerequisite required:** Grade report or copy of transcript.  
Elementary problems in neighborhood planning, house design, and landscaping.
- 251. Interior Design I (3) I, II**  
Six hours.  
Prerequisites: Art 102 and 103. **Proof of completion of prerequisites required:** Grade report or copy of transcript.  
Elementary functional and aesthetic studies in interior space and form. Relationships of light, color, texture, shape and volume.
- 258. Appreciation and History of Art (3) I, II (CAN ART 2)**  
Art development in painting, sculpture, architecture, and handicrafts from the dawn of art to the Renaissance. Illustrated.

- 259. Appreciation and History of Art (3) I, II (CAN ART 4)**  
The period from the Renaissance through the modern school treated in the same manner as in Art 258.

- 263. Far Eastern Art (3) II**  
Arts of China and Japan from prehistoric times to present.

- 296. Experimental Topics (1-4)**  
Selected topics. 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.

#### UPPER DIVISION COURSES (Intended for Undergraduates)

- 308. Chinese Aesthetics and the Brush (3)**  
Two lectures and two hours of activity.  
Aesthetic principles and cultural and literary background of Oriental brush painting. Basic techniques and practice in the discipline toward self-expression.
- 323. Furniture Design (3) I, II**  
Six hours.  
Prerequisite: Art 101.  
Study of the principles of design through the making of furniture.
- 325. Beginning Throwing-Ceramics (3) I, II**  
Six hours.  
Prerequisite: Art 220. Recommended: Art 225.  
Basic methods of forming, decorating, glazing and firing pottery forms with emphasis on the use of the potter's wheel.
- 331. Beginning Jewelry and Metalwork (3) I, II**  
Six hours.  
Prerequisite: Art 220.  
Creative design and construction in metal of jewelry and small objects. Techniques in three-dimensional forming and constructions in nonferrous metals. Not open to students with credit in Art 231.
- 334. Advanced Weaving (3) I, II**  
Six hours.  
Prerequisite: Art 220.  
Total credit in Art 234, 334 and 534 limited to nine units.  
Advanced problems in fabric design and weave construction including tapestry and rug weaving techniques. Maximum credit six units.
- 340. Graphic Imagery (3) I, II**  
Six hours.  
Prerequisites: Art 102 and 103.  
Experimental photographic and technical reproductive media. Not open to students with credit in Art 240.
- 341. Graphic Design (3) I, II**  
Six hours.  
Prerequisite: Art 243. **Proof of completion of prerequisite required:** Grade report or copy of transcript.  
Investigation of design concepts relating to advertising.
- 347. The House and Its Environment (3) I, II, S**  
Architecture, interior design, landscape, and city planning for forming the physical and aesthetic environment, its simplicities and complexities. Not open to students with credit in Art 247.
- 348. Environmental Media (3) II**  
Six hours.  
Prerequisite: Art 249.  
Design communication and documentation techniques using photography, exhibition, portfolio, and publication orientations as they relate to environmental design.

- 352. Methods and Materials of Interior Design (3) I, II**  
Prerequisites: Art 250 and 251.  
Topics in successful professional practice including codes, legal liabilities, contractual agreements, project management. Lectures in field settings illustrate methods and materials of installation and explore environmental systems.

- 371. Medieval Art (3) II**  
Prerequisites: Art 258 and 259.  
Development of painting, sculpture and architecture from the time of Constantine through the Gothic period.

- 381. History and Theory of Environmental Design (3) S**  
Prerequisites: Art 258 and 259.  
Environmental arts. From earliest times to the fifteenth century.

- 387. Design for Teachers (3) I, II, S**  
Six hours.  
Prerequisite: Art 101.  
A design-crafts course that explores in depth materials and processes that could be used with young people.

- 403. Advanced Life Drawing (3) I, II**  
Six hours.  
Prerequisite: Art 203.  
Drawing the nude model. Maximum credit six units.

- 404. Intermediate Painting (3) I, II**  
Six hours.  
Prerequisite: Art 204.  
Concepts that enhance basic painting principles and a broad range of painting issues. Maximum credit six units.

- 405. Intermediate Waterbase Media (3) I, II**  
Six hours.  
Prerequisites: Art 101 and 102. Recommended: Art 204 or 205.  
Painting issues in transparent and opaque. Maximum credit six units.

- 406. Design and Composition (3)**  
Six hours.  
Prerequisites: Art 103 and 204.  
Structure in picture making.

- 407. Black and White Photography as a Fine Art Medium (3) I, II**  
One lecture and four hours of activity.  
Prerequisite: Art 207.  
Intermediate black and white photography and darkroom techniques combined with independent research in contemporary art and photography. Criticism in contemporary context. Maximum credit six units.

- 408. Color Photography as a Fine Art Medium (3) I**  
One lecture and four hours of activity.  
Prerequisite: Art 407.  
Color photography as a fine art medium, including color theory, transparency and negative film exposure controls, darkroom techniques, and electronic flash and lighting techniques for color photography. Maximum credit six units.

- 410. Intaglio Printmaking (3) I, II**  
Six hours.  
Prerequisites: Art 203 and 210.  
Creative intaglio—etching, drypoint, aquatint, engraving and variations. Emphasis on fine print quality and technical development. Maximum credit six units.

- 411. Lithography Printmaking (3) I, II**  
Six hours.  
Prerequisites: Art 101 and 203.  
Creative lithography—stone and plate planographic process. Emphasis on fine print quality and technical development. Maximum credit six units.

- 416. Intermediate Sculpture (3) I, II**  
Six hours.  
Prerequisite: Art 216.  
Individual investigations into sculpture ideas, methods and materials. Individual development in sculpture. Maximum credit six units.  
**A.** Ceramic sculpture **D.** Handmade paper sculpture  
**B.** Plastic sculpture **E.** Wood sculpture  
**C.** Foundry/metal sculpture

- 423. Advanced Furniture Design (3) I, II**  
Six hours.  
Prerequisite: Art 323.  
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.

- 425. Intermediate Ceramics (3) I, II**  
Six hours.  
Prerequisite: Art 325.  
Continuation of Art 325. Further development of knowledge, skills and philosophy of ceramics through individual creative projects.

- 431. Jewelry and Metalwork (3) I, II**  
Six hours.  
Prerequisite: Art 231 or 331.  
Creative design and techniques in metalsmithing.

- 435. Nonwoven Textile Construction (3) I, II**  
Six hours.  
Prerequisite: Art 220.  
Textile structures with an emphasis on nonloom techniques.

- 436. Textile Design (3) I, II**  
Six hours.  
Prerequisite: Art 220.  
Application of design for the textile surface, using a broad variety of media and processes appropriate for both the individual designer and commercial reproduction. Media include stencil, block, silk-screen, batik, and tie-dye. Maximum credit six units.

- 440. Advanced Graphic Design – Environmental Graphics (3)**  
Six hours.  
Prerequisite: Art 241.  
Study of visual design for contemporary architectural, motivational, display traffic and guidance graphics.

- 441. Advanced Graphic Design – Media (3) I, II**  
Six hours.  
Prerequisite: Art 341. **Proof of completion of prerequisite required:** Grade report or copy of transcript.  
Application of visual design concepts to graphic design, advertising media and technical reproductive processes.

- 443. Drawing and Illustration for Graphic Design (3) I, II**  
Six hours.  
Prerequisites: Art 103 and 203.  
Disciplines of realistic, descriptive illustration. Methods, materials and tools of the professional graphic designer and illustrator.

- 444. Visual Communication Media (3)**  
Six hours.  
Prerequisite: Art 341.  
Experimental, creative and practical exploration of contemporary communication as related to sequential visual imagery.

- 445. Internship in Graphic Design (3) I, II Cr/NC**  
Prerequisites: Art 441 and consent of instructor.  
Field experience in design, business procedures, management, client relationships, and supervision of subcontractual work with local practicing professionals. Maximum credit six units.



**450. Synergetic Environments (3) I**

Six hours.

Prerequisites: Art 249 and 454.

Synthesis of materials, space, sound and light using exploratory methods in full scale projects.

**451. Interior Design II (3) I, II**

Six hours.

Prerequisites: Art 249, 250, 251, and completion of portfolio requirement. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Survey, analysis and conceptual design methods of residential interiors stressing materials, equipment, components and structural detailing. Maximum credit six units.

**452. Interior Design Practicum (3) I, II Cr/NC**

Nine hours of laboratory.

Prerequisite: Art 453. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Field experience with local professional interior designers in client relationships, business procedures, supervision of subcontracted work and installation, and execution of contracts. Maximum credit six units.

**453. Interior Design III (3) I, II**

One lecture, two hours of activity, and three hours of laboratory.

Prerequisites: Art 249, 250, 251, and completion of portfolio requirement. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Materials and techniques of nonresidential space planning. Estimating, specification writing, contractual agreements, record keeping, budgets, and project supervision. Required field trips to professional offices, studios and showrooms. (Formerly numbered Art 552.)

**454. Environmental Design (3) I, II**

Six hours.

Prerequisites: Art 247 and 250.

Survey, analysis and design synthesis of problems of more complexity, through interiors, to landscape, to architectural planning and, finally, concern for city design.

**481. History and Theory of Environmental Design (3) I**

Prerequisites: Art 258 and 259.

Environmental arts. From the fifteenth to the nineteenth century.

**483. Museum Internship (1-6) Cr/NC**

Prerequisites: Upper division standing in art and consent of instructor.

Internship in assigned local museums and galleries under the direction of an art historian. Maximum credit six units.

**496. Experimental Topics (1-4)**

Selected topics. 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.

**497. Senior Investigation and Report (3) I, II**

Nine hours for 497A; three hours for 497B.

Prerequisites: Six upper division units in art, and consent of instructor.

Individual research into areas of studio and art history not covered by regular courses.

A. Studio Investigations

B. Art History Investigations

**498. Senior Project (3) I, II**

Nine hours for 498A; three hours for 498B.

Prerequisite: Consent of instructor.

Investigation in art. Formal presentation of project.

A. Studio project

B. Art History project

**499. Special Study (1-3) I, II**

Prerequisite: Consent of instructor.

Individual study. Maximum credit six units.

**UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)****500. Advanced Drawing (3)**

Six hours.

Prerequisites: Art 203 and 204.

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

**501. Professional Orientation in the Arts (3) I, II**

Prerequisite: Twelve units of upper division art or graduate standing in art.

Conditions met in professional art world as well as opportunities available: Exhibitions, marketing system, legal and tax responsibilities, public and private collections, grants, fellowships and professional positions investigated.

**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: Art 404.

Approaches to contemporary concepts in painting. Maximum credit six units.

**505. Advanced Waterbase Media (3) I, II**

Six hours.

Prerequisite: Art 405.

Approaches to contemporary concepts in waterbase painting. Maximum credit six units.

**506. Contemporary Issues for Studio Artists (3) I**

Prerequisites: Upper division or graduate standing in art and consent of instructor.

Theory, practice, and philosophy of being an artist. Independent research on current art concepts and issues. Material will encompass the past five years. Field trips.

**509. Relief Printmaking (3) I, II**

Six hours.

Prerequisites: Art 203 and 210.

Woodcut, wood engraving, gessocut, 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.

**512. Serigraphy (3) (Offered at IVC only)**

Six hours.

Prerequisites: Art 203 and 210.

Techniques of reproducing original prints by means of the silk-screen process. Maximum credit six units.

**516. Advanced Sculpture (3) I, II**

Six hours.

Prerequisite: Art 416.

Individual investigations into sculpture ideas, methods and materials. Individual development in sculpture. Maximum credit six units.

- |                            |                             |
|----------------------------|-----------------------------|
| A. Ceramic sculpture       | D. Handmade paper sculpture |
| B. Plastic sculpture       | E. Wood sculpture           |
| C. Foundry/metal sculpture |                             |

**517. Advanced Figurative Sculpture (3) I, II**

Six hours.

Prerequisites: Art 216 and 217.

Figurative study with emphasis on individual exploration. Maximum credit six units.

**523. Advanced Furniture Design (3) I, II**

Six hours.

Prerequisite: Art 423.

Advanced individual design; exploration of materials, process and function. Maximum credit six units. Maximum combined credit of 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 431.

Advanced problems involving metalsmithing processes already studied in order to increase technical competence while exploring personal design statements. Maximum credit six units.

**533. Textile Techniques in Metal (3)**

Six hours.

Prerequisite: Art 331 or 435.

Textile structures as applied to precious and nonprecious metals. Individually designed projects utilizing information acquired through samples and documentation. For students of fiber, metal and sculpture.

**534. Advanced Weaving (3) I, II**

Six hours.

Prerequisite: Art 334.

Advanced individual problems in weaving. Maximum credit six units. Maximum combined credit of nine units in Art 234, 334, and 534.

**535. Advanced Nonwoven Textile Construction (3) I, II**

Six hours.

Prerequisite: Art 435.

Advanced study in 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 341. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Symbolic processes, materials and structures, visual communication 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.

**543. Advanced Drawing and Illustration for Graphic Design (3) II**

Six hours.

Prerequisite: Art 443.

Refinement of visual imagery and advanced illustration problems.

**544. Advanced Visual Communication Media (3)**

Six hours.

Prerequisite: Art 444.

Experimental, creative and practical exploration of contemporary communication as related to advanced sequential visual imagery in multimedia formats.

**547. Environmental Theory (3) I, II**

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:** Grade report or 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:** Grade report or 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**

Prerequisite: Art 259.  
Major developments in the visual arts and art criticism from 1880 to 1945 (Post-Impressionism through Surrealism).

**559. Twentieth Century European and American Art Since 1945 (3) I, II**

Prerequisite: Art 558.  
Major developments in the visual arts and art criticism since 1945.

**560. History of American Art (3)**

Prerequisites: Art 258 and 259.  
Development of painting, sculpture, and architecture from the Native American art and Colonial Period to the present.

**561. Art of Pre-Hispanic America (3)**

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

**562. Art of Latin America (3)**

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

**564. Art of China (3) II**

Prerequisite: Art 263.  
History of Chinese art from prehistoric times through the Ching Dynasty.

**565. Art of Japan (3) II**

Prerequisite: Art 263.  
History of Japanese art from prehistoric times to the Meiji Restoration.

**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.

**572. Coptic and Byzantine Art (3)**

Prerequisites: Art 258 and 259.  
The art of the Eastern Church from the reign of Justinian to the Russian Revolution.

**573A. Early Renaissance 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.

**581. History and Theory of Environmental Design (3) II**

Prerequisites: Art 258 and 259.  
Environmental arts in the nineteenth and twentieth centuries.

**586. Art Practicum Seminar (3) I**

Prerequisites: Twenty upper division units in art and concurrent assignment to student teaching.  
Discussion, readings, and research study related to art presentation strategies.

**591. Gallery Exhibition Design (3) I, II**

Six hours.  
Prerequisite: Fifteen units of art.  
Fundamental art elements and principles applied to the theories and techniques of gallery exhibition design.

**592. Gallery Exhibition Design (3) I, II**

Six hours.  
Prerequisite: Art 591.  
Advanced problems in the theories and techniques of gallery exhibition design.

**593. History and Methodology of Art History (3)**

Prerequisites: Upper division standing; art history major or minor.  
Readings and discussions on the historiography of art and on modern methodologies for art historical research.

**596. Advanced Studies in Art and Art History (1-4)**

Prerequisites: Twelve units of art and art history and consent of instructor.

Advanced topics in art and art history. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses 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

Refer to the Graduate Bulletin.

# Asian Studies

In the College of Arts and Letters

OFFICE: Adams Humanities 4210  
TELEPHONE: (619) 594-5262

**Faculty**

Asian studies is administered through the Center for Asian Studies. Faculty assigned to teach courses in Asian Studies are drawn from the Departments of Anthropology, Art, Classics and Humanities, Economics, English and Comparative Literature, Geography, History, Linguistics and Oriental Languages, Philosophy, Political Science, Religious Studies, and Sociology; the Colleges of Business Administration, Education, Engineering, and Sciences; and the Library.

*Director and Undergraduate Adviser:* Madhavan (Economics)  
*Graduate Adviser:* Oades (History)

**Offered by Asian Studies**

Master of Arts degree in Asian studies.

Major in Asian studies with the B.A. degree in liberal arts and sciences.

Minor in Asian studies.

**The Major**

Two and one-half billion people live in East, Southeast, and South Asia – half of the world's population. The importance of this immense and varied region cannot be overstated. More and more Americans are discovering the rich culture and history of the Asian people. Asians have made a major contribution to the world's literature and art, religion and philosophy, and are becoming increasingly important in international relations, business, and economics.

Nonmajors who wish to increase their knowledge about Asian peoples will find courses available in the Asian studies undergraduate and graduate programs.

The Asian studies program seeks to provide a background for students planning to enter business, the academic environment, government, or community service – wherever the knowledge of Asia and Asians is needed. Students in the major develop an understanding of cultural heritage, societies, language and special forces. Areas of special interest may be pursued in depth.

**Advising**

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

**Asian Studies Major**

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 03011)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." Each student must file an individual master plan with the Asian Studies undergraduate adviser and with the Evaluations Office.

**Preparation for the Major.** Six units selected from Asian Studies 105, 106, 107; History 120, 121; Philosophy 101, 102; or Religious Studies 101; and six units selected from Anthropology 101, 102; Economics 101, 102; Geography 101, 102; or Political Science 101, 103. (12 units)

Art 258 and 259 (unless waived by the instructor) are needed if Art 366 is selected in the major. Art 263 is recommended.

**Foreign Language Requirement.** Competency (equivalent to that normally attained through two consecutive years of college study) in one major Asian language, such as Chinese or Japanese, unless specifically waived by the undergraduate adviser.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing Anthropology 396W, English 305W, 500W, 503W, 508W, Linguistics 396W, Religious Studies 396W, or Sociology 396W with a grade of C (2.0) or better.

**Major.** A minimum of 30 upper division units to include six units selected from Asian Studies 458, 459, 499 (maximum three units), 560, and 596. No fewer than 12 units must be chosen from at least two humanities departments, and no fewer than 12 units must be chosen from at least two social science departments. A student may choose courses focusing on East Asia, South Asia, or Southeast Asia.

Appropriate humanities courses are Art 308; Comparative Literature 455, 460, 470\*, 490\*, 571\*, 577\*, 580\*, History 496\*, 561A, 561B, 562, 563, 564A, 564B, 565, 566, 567, 568, 569, 570, 596\*; Linguistics 496\*; Music 351F, 561\*; Philosophy 351, 575\*, 596\*; Religious Studies 401, 403, 499\*, 506, 580\*, 581\*.

Appropriate social science courses are Anthropology 448, 450, 452, 481\*, 496\*, 582\*, 583\*; Economics 330, 336\*, 360, 365\*, 465, 489, 496\*, 499\*; Management 466\*; Political Science 361, 362, 499; Women's Studies 580\*.

\* When deemed relevant by the undergraduate adviser.

**Asian Studies Minor**

The minor in Asian studies consists of a minimum of 21 units, six units of which must be selected from Asian Studies 105, 106, 107, or History 120, 121. Other lower division courses acceptable for the minor are Art 263 and four units of an appropriate Asian language, e.g., Chinese or Japanese. Twelve units must be in upper division and divided equally between humanities and social science courses.

Appropriate humanities courses are Asian Studies 458, 499, 596; History 561A, 561B, 562, 563, 564A, 564B, 565, 566, 567, 568, 569, 570; Philosophy 351, 575 (when relevant)\*, 596 (when relevant)\*; Religious Studies 401, 403, 506.

Appropriate social science courses are Asian Studies 459, 499, 560, 596; Anthropology 450, 452; Economics 330, 465; Marketing 376\*; Political Science 362, 499 (when relevant)\*.

To achieve a desired geographical spread of courses in the minor, no more than six units may be selected from History 566, 567, 568, and Philosophy 351; no more than six units may be selected from History 569, 570, and Anthropology 452; and no more than six units from Anthropology 450, History 562, 563, and Religious Studies 401, 506.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of twelve upper division units must be completed at San Diego State University.

\* Additional upper division prerequisites are required for these courses.

**Courses****LOWER DIVISION COURSES****105. Intellectual Foundations of Asia (3) I**

An interdisciplinary survey of the philosophical and religious thought of South, Southeast and East Asia and its application in theory and practice in traditional Asian societies.



**106. Cultural Heritage of Asia (3) II**

Social and cultural heritages of South, Southeast, and East Asian societies as revealed in art, drama, classical literatures, and folk traditions.

**107. Social Foundations of Modern Asia (3) I, II**

Social, economic, and political systems of South, Southeast, and East Asia in modern times.

**UPPER DIVISION COURSES  
(Intended for Undergraduates)**

**458. Asian Traditions (3) I, II**

Prerequisites: Six units of Asian-content courses or upper division standing, and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Social, cultural, economic, and political traditions of South, Southeast, and East Asia; how they functioned in theory and practice prior to twentieth century.

**459. Contemporary Asian Cultures (3) I, II**

Prerequisite: Six units of Asian-content courses or upper division standing, and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Continuity and change in traditions and values of Asian societies in face of urbanization, modernization, and Westernization since mid-nineteenth century.

**499. Special Study (1-3)**

Prerequisites: At least six units of upper division work completed toward the major or minor in Asian studies and consent of the instructor.

Individual study. Maximum credit six units.

**UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)**

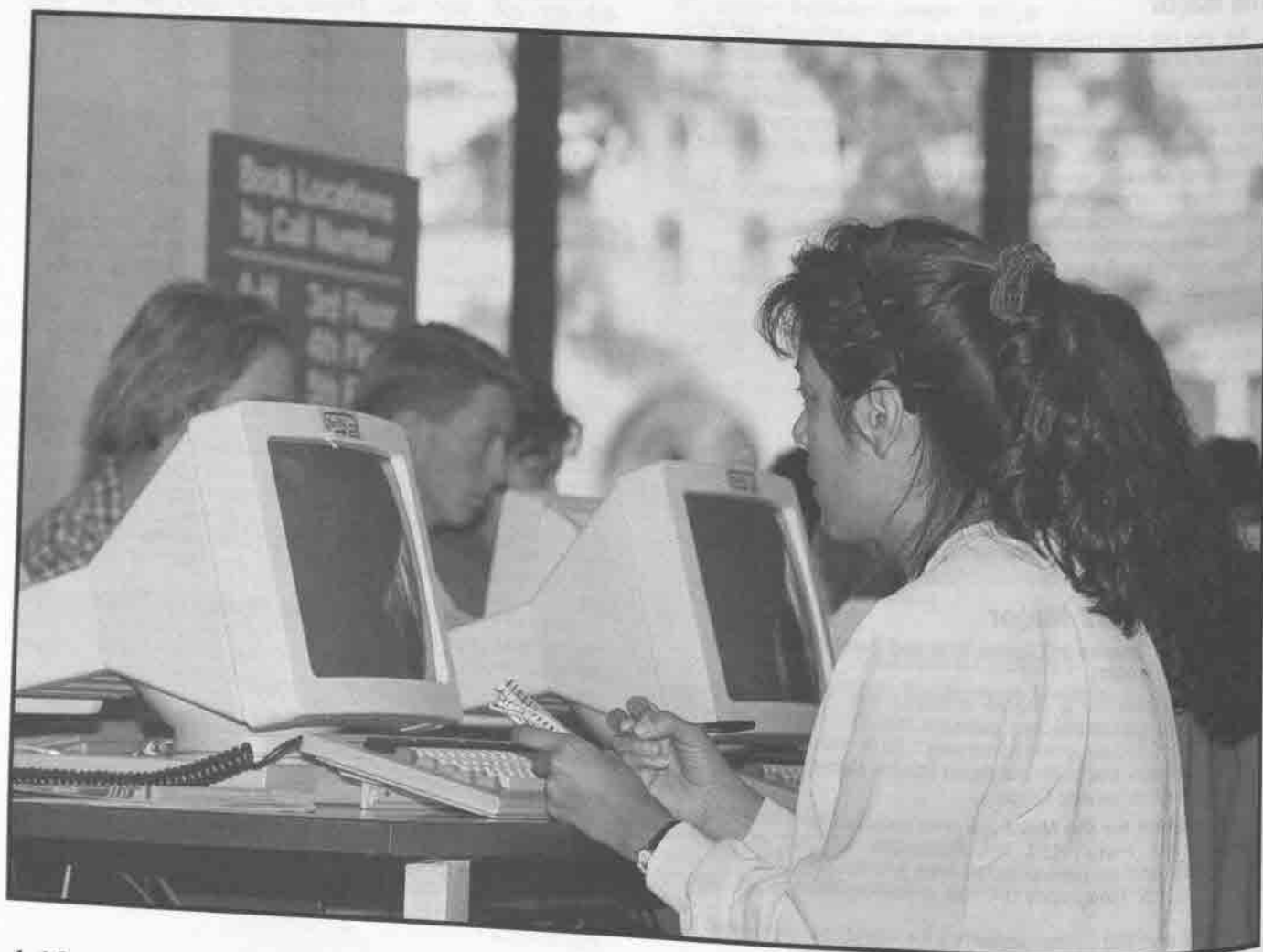
**560. History of Japanese Business and Trade (3) I, II**

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.

**GRADUATE COURSES  
Refer to the Graduate Bulletin.**



# Astronomy

In the College of Sciences

**Faculty**

Emeritus: Nelson

Chair: Angione

Professors: Angione (Director of Mt. Laguna Observatory), Daub, Young, A.

Associate Professors: Etzel, Talbert

Assistant Professor: Shafter

Adjunct: Kovach, Young, A.T.

**Offered by the Department**

Master of Science degree in astronomy.

Major in astronomy with the B.A. degree in liberal arts and sciences.

Major in astronomy with the B.S. degree in applied arts and sciences.

Minor in astronomy.

**The Major**

Will the universe expand forever? Is there life on other planets? How are stars formed? These are the types of questions being addressed by students majoring in astronomy. Some areas of study in astronomy include the sun, the solar system, the stars, the Milky Way, the galaxies, and cosmology.

SDSU is the only institution in The California State University system which offers a complete academic program in astronomy. Students actively participate in all phases of observational astronomical research.

Joint faculty and student research activities are principally in the area of observational astrophysics. These include ongoing investigations of the moons of Jupiter, eclipsing binary stars, low mass stars, planetary nebulae, galactic clusters, exterior galaxies, and atmospheric physics.

Much of this work is done at the Mount Laguna Observatory operated by the University. The department also has excellent computer facilities.

Graduates with a bachelor's degree may find some positions in observatories and large astronomy departments. These jobs support continuing research and include telescope operators, instrument makers, opticians, electronic technicians, programmers, photographers, and laboratory technicians.

Employment opportunities for astronomers who have advanced degrees include positions in colleges and universities, in national observatories and government laboratories, in planetariums, and in industry and private companies.

**Astronomy Major**

**With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 9111)**

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in astronomy courses can apply to the degree.

**Preparation for the Major.** Astronomy 101, 109; Mathematics 150, 151, and 252; or 155, 156, 157, and 252; Physics 195, 195L, 196, 196L, 197, 197L. (29 units)

Recommended: Chemistry 200, Engineering 120.

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive semesters of college study) is required in one foreign language as part of the

OFFICE: Physics/Astronomy 210  
TELEPHONE: (619) 594-6182

preparation for the major. Refer to the section of this catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 27 upper division units in astronomy and physics to include Astronomy 340, 350, 440, 450; Mathematics 342A; Physics 350, 354A, and six units selected with the approval of the astronomy undergraduate adviser. Recommended: Astronomy 320; Physics 354B, 400A, 406, 460.

**Astronomy Major**

**With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 19111)**

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

**Preparation for the Major.** Astronomy 101, 109; Physics 195, 195L, 196, 196L, 197, 197L. (16 units)

Recommended: Chemistry 200, Engineering 120.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units in astronomy and physics to include Astronomy 340, 350, 440, 450, 498A, 498B; Physics 350, 354A, 400A, 460; and nine units selected from Astronomy 320; Physics 311, 354B, 400B, 406, 510.

**Minor in Mathematics.** All candidates for the B.S. degree in astronomy must complete a minor in mathematics, to include Mathematics 150, 151, 252, 342A, or 155, 156, 157, 252, 342A; and six additional upper division units of electives in mathematics. Recommended: Mathematics 342B, 342C, 541, 551A.

**Astronomy Minor**

The minor in astronomy consists of a minimum of 15 units to include Astronomy 101 and 12 upper division units selected from Astronomy 301, 305, 320\*, 340\*, 350\*, 440\*, 450\*.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

\* Additional prerequisites required.

**Courses**

**LOWER DIVISION COURSES**

**101. Principles of Astronomy (3) I, II**

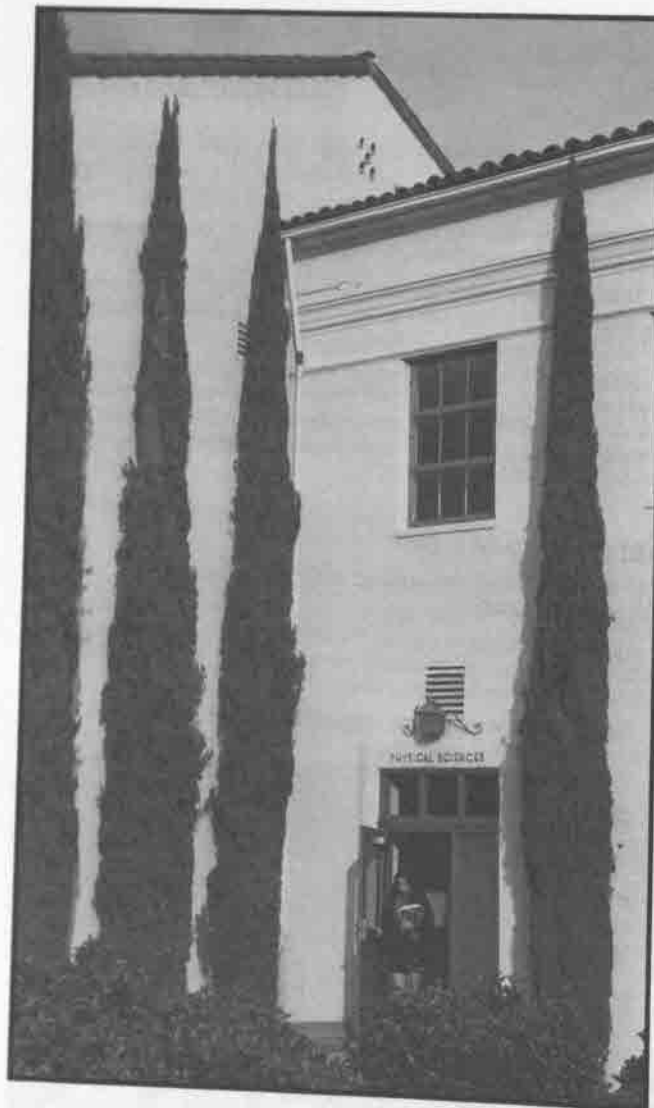
Nature of the universe: the solar system, stars, galaxies, and remote universe.

**109. Astronomy Laboratory (1) I, II**

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Astronomy 101.

Demonstration of astronomical principles through observations with astronomical instruments and analysis of astronomical data.



- 296. Experimental Topics (1-4)**  
Selected topics. 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.

#### UPPER DIVISION COURSES (Intended for Undergraduates)

- 301. Cosmology and Gravitational Collapse (3)**  
Prerequisites: Three units of lower division physical science.  
Einstein's theory of general relativity applied to problems of gravitational collapse (stellar evolution, neutron stars, black holes) and cosmology (origin and evolution of the universe).
- 305. Historic Development of Astronomy (3)**  
Prerequisite: Astronomy 101.  
Theories and advancements which have shaped our concepts of the universe. Contributions of major astronomers.

#### 320. Solar System Astronomy (3)

Prerequisites: Astronomy 101 and Physics 197, 197L.  
Structures of the planets, their atmospheres and satellite systems; asteroids, comets, and meteoroids; and the interplanetary medium, including the sun's influence in the system.

#### 340. Spherical Astronomy (3) I

Prerequisites: Credit or concurrent registration in Mathematics 252 and Physics 197.  
Problems in spherical astronomy, astronomical coordinate systems, time, general precession, and introduction to astronomy.

#### 350. Astronomical Techniques (3) II

Prerequisite: Astronomy 340.  
Data acquisition and data reduction for current instrumentation including photoelectric photometry, direct imaging, and spectroscopy. Techniques for obtaining precise measurements.

#### 440. Astrophysics of Stars (3) I

Prerequisites: Credit or concurrent registration in Mathematics 342A and Physics 354A.  
Radiative transfer theory, atmospheres of stars and the emergent spectrum, interior structure and evolution of stars, stellar pulsations.

#### 450. Astrophysics of Star Systems (3) II

Prerequisites: Credit or concurrent registration in Mathematics 342A and Physics 354A.  
Applications of physics in study of binary stars, star clusters, the interstellar medium and galactic structure, galaxies, and cosmology.

#### 498A. Senior Project (1) I, II

Prerequisite: An acceptable master plan for graduation within one year.  
Selection and design of individual projects.

#### 498B. Senior Project (2) I, II

Six hours of laboratory.  
Prerequisite: Astronomy 498A.  
Individual research project culminating in a final written report.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

#### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 530. Celestial Mechanics (3)

Prerequisite: Physics 350.  
Fundamental dynamics of celestial bodies, the central force motion, 2-body motion, restricted 3-body and n-body problems. Orbital calculations. First-order perturbations of orbital elements and the motion and dynamics of earth satellites.

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

Prerequisite: Consent of instructor.  
Selected topics in theoretical astronomy or astrophysics. May be repeated with new content upon approval of instructor. See Class Schedule for specific content. 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 Refer to the Graduate Bulletin.

## Biology

### In the College of Sciences

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

#### Faculty

Emeritus: Alexander, Atkins, Bohnsack, Clark, Cooper, Crouch, Davis, Farris, Hazen, Huffman, Johnson, A., Kelly, Kummerow, McBlair, McLean, Moore, Norland, Olson, Parsons, Phelps, Plymale, Ratty, Schapiro, Shepard, Sloan, Taylor, Waich, Wedberg

Chair: Barnett

Professors: Allen, Archibald, Awbrey, Barnett, Baxter, Bernstein, Bizzoco, Brandt, Breindl, Carpenter, Chen, Cohn, Collier, B., Collier, G., Cox, Dexter, Ebert, Etheridge, Ford, Frey, Glembotski, Hemmingsen, Hunsaker, Hurlbert, Johnson, G., Johnson, K., Krekorian, Krisans, McClenaghan, Monroe, Neel, Oechel, Paolini, Perrault, Rayle, Rinehart, Sabbadini, Simpson, Steenbergen, Tsoukas, Virginia, Wilson, Zedler, J., Zedler, P., Zyskind

Associate Professors: Avila, Berta, Beuchat, Daugherty, Diehl, Futch, Hanscom, Thwaites, Williams, S.

Assistant Professors: Carmichael, Clouse, Harris, Helenurm, Mabee, McGuire, Williams, K.

Lecturer: Lewis

#### Offered by the Department

Doctor of Philosophy degree in biology and ecology.

Master of Arts degree in biology.

Master of Science degree in biology.

Master of Science degree in microbiology.

Major in biology with the B.A. degree in liberal arts and sciences.

Major in biology with the B.S. degree in applied arts and sciences.

Emphasis in entomology.

Major in environmental health with the B.S. degree in applied arts and sciences.

Major in microbiology with the B.A. degree in liberal arts and sciences.

Major in microbiology with the B.S. degree in applied arts and sciences.

Emphasis in medical technology and public health microbiology.

Waiver program for the single subject teaching credential in life sciences.

Minor in biology.

Certificate in Recombinant DNA Technology.

#### The Majors

**Biology.** The Department of Biology offers a dynamic and modern program in biology which prepares students both academically and practically for vocations in science and science-related fields or for entry into graduate studies. The major is designed to present a basic background in modern biology and in the supportive disciplines of chemistry, mathematics and physics, and to provide specialized training selected by the student from a variety of areas. The wide range of faculty expertise and research interest allows the department to offer a curriculum which includes general and advanced courses in plant and animal sciences, marine sciences, genetics and physiology, ecology, molecular biology, microbiology, immunology, endocrinology, entomology, and evolution and systematics. Special studies opportunities with SDSU faculty and scientists at cooperating institutions allow qualified students to gain research experience on an individual basis.

The department offers a specific program of courses to fulfill the state of California's science requirements for the Single Subject Teaching Credential in the life sciences. Students successfully

completing this program may be granted waivers from the National Teacher Examination.

The department also offers a program leading to the Recombinant DNA Technology Certificate. The purpose of this program is to prepare undergraduate and graduate students for employment in public and private organizations utilizing recombinant DNA technology.

The department's formal Emphasis in Entomology is designed to prepare students for vocations or further academic training in this field. Subspecialties within the emphasis allow students to focus on agricultural entomology or human and animal health entomology.

The rapid advances in theoretical and applied biology, the growing demands in health care and the expansion of general interest in and concern for the environment are just a few of the factors which continue to increase society's need for biologists. Some examples: a biology degree is the common precursor for the medical, dental, veterinarian and allied health professions; government agencies involved in environment protection, public health and conservation need ecologists, inspectors, laboratory technicians and wildlife, forest, coast and park managers; government and private agriculture agencies need entomologists and botanists; private companies, government laboratories and universities involved in biotechnology need microbiologists and molecular biologists; zoos, wild animal parks and aquaria need zoologists; the secondary school system needs biology teachers; textbook and scientific supply companies need science majors. Whether your goal is to work in a laboratory or a forest, there is opportunity for fulfillment and growth in the field of biology.

**Environmental Health.** Those who are interested in such problems as solid waste disposal, air pollution, hazardous materials and similar environmental concerns, may want to choose a major in environmental health.

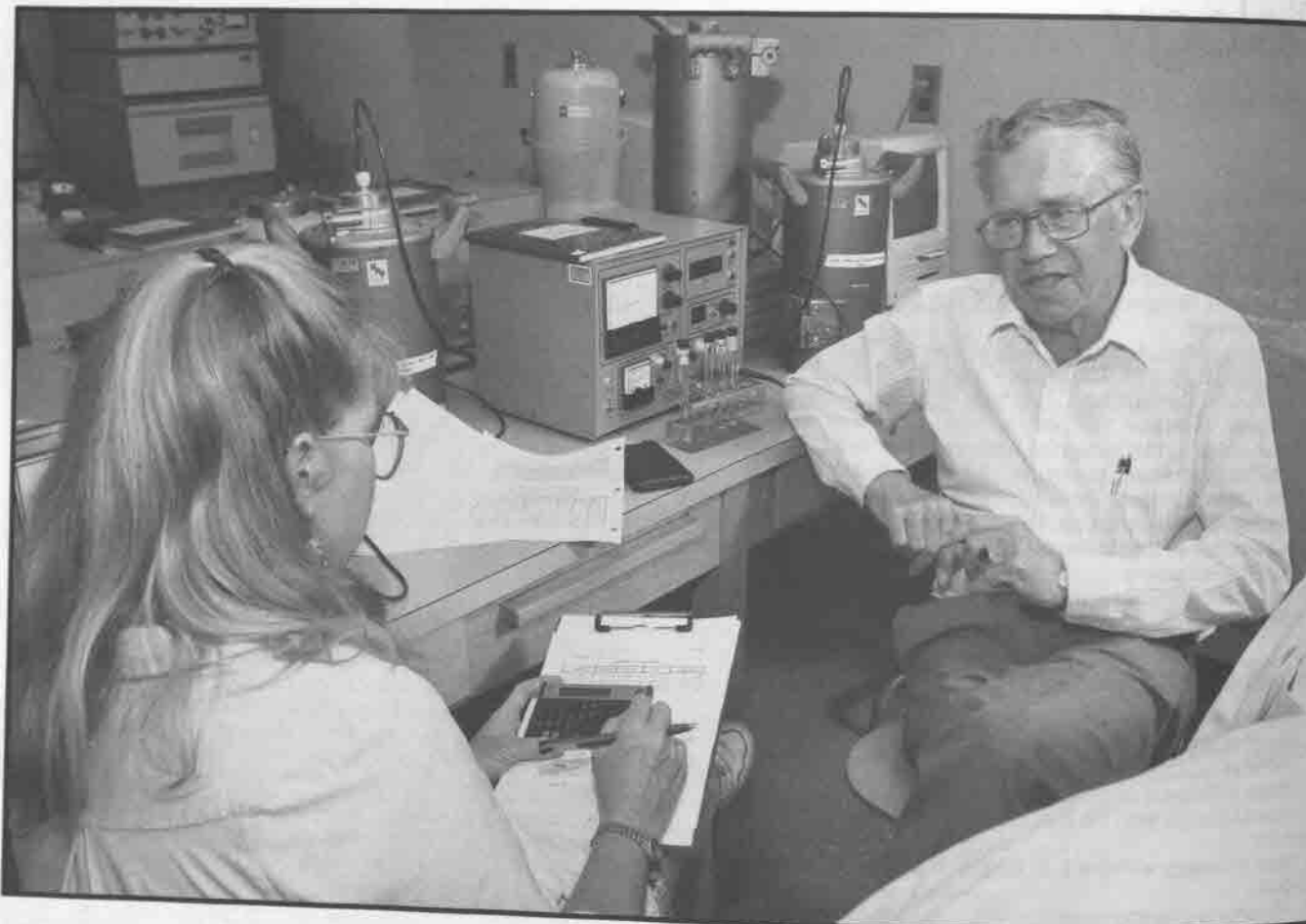
The major includes preparatory coursework in biology, chemistry, mathematics, and physics. Upper division students are exposed to a variety of areas concerned with environmental health such as epidemiology, which studies the transmission, distribution and control of diseases; pathogenic bacteriology, which studies agents of disease; and a civil engineering course which examines the treatment of water and wastewater.

Employment opportunities for graduates are keeping pace with the growth of public and legislative interest in environmental health and are plentiful in both the public and private sectors. Graduates may find positions in housing and land development, housing inspection, vector control, safety inspection, environmental impact, industrial hygiene, and occupational health.

The Environmental Health program is approved by the California Department of Health Services to satisfy the academic requirements for registration as a sanitarian. After six months of experience as an assistant sanitarian in a local public health department, an environmental health graduate will be able to take the State of California examination to become a Registered Sanitarian. Registered Sanitarians, also known as public health inspectors, are involved in restaurant inspection, communicable disease investigation, and water and wastewater disposal and management. These individuals, who normally belong to state and national environmental health associations, may also be involved in the areas of food safety, radiation, vector control, and environmental impact.

**Microbiology.** Microbiology is the study of bacteria, viruses, yeasts, molds, algae and protozoa. These microorganisms are found associated with plants and animals, in soil, and in fresh and marine waters. Many of the free-living species participate in maintaining the quality of our environment. Certain species affect the health and well-being of plants and animals, including humans, by causing infectious diseases. Microorganisms are often used in the molecular biology laboratory as research tools, for experiments in genetic engineering, and in the manufacture of food and chemicals.





The microbiology major is designed to provide the student with a background in basic biology, microbiology, and the disciplines of chemistry, mathematics and physics. The curriculum includes introductory and advanced courses (most with laboratories) in general and pathogenic microbiology, immunology, virology, physiology, and genetics as well as courses in food and industrial microbiology, marine microbiology, and molecular biology.

Microbiologists find positions with governmental agencies, in university and private research laboratories, in biotechnology, medical and industrial laboratories, in schools as teachers, with scientific supply companies, or with textbook companies. Depending on the situation, a microbiologist may conduct fundamental and applied research, identify disease-causing microorganisms in medical or veterinary specimens, participate in studies of the environment (e.g., soil, ocean, lakes), aid in the manufacture of pharmaceuticals, food, or beverages, or provide quality and safety control. The microbiology major is excellent preparation for entrance into medical, dental, veterinarian, and graduate schools. The Emphasis in Medical Technology and Public Health Microbiology prepares students to become, after a postgraduate internship, licensed medical technologists or certified public health microbiologists.

## Biology Major

**With the B.A. Degree in Liberal Arts and Sciences**  
(Major Code: 04011)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." A total of 45 upper division units must be taken, of which 24 must be selected from the General

Biology Degree Requirements and the list of courses acceptable for electives. No more than 48 units in biology courses can apply to the degree.

A minor is not required with this major.

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

## Biology Major

**With the B.S. Degree in Applied Arts and Sciences**  
(Major Code: 04011)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." A total of 36 upper division units must be selected from the General Biology Degree Requirements and the list of courses acceptable for electives.

A minor is not required with this major.

## General Biology Degree Requirements

**Preparation for the Major.** Biology 201, 202, and 215; Chemistry 200, 201, and 230 or 231; Mathematics 121 and 122, or 150, or 155 and 156; Physics 180A, 180B, 182A, and 182B. (38-39 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units for the B.A. degree or 36 upper division units for the B.S. degree to include Biology 352, 354, 356 and Chemistry 361A or 560A. Elective courses include Biology 350-362, 454-499, all 500-level biology courses and all upper division chemistry courses. At least one of the electives must be an organism level course selected from Biology 350, 462 and 462L, 469, 470, 514, 515, 520, 524, 525, and 533; and at least two must be biology laboratory courses (not including Biology 499 but may include one or more organism level courses).

All courses not included above must have the prior approval of the Department and the substitution filed with the Evaluations Office.

**Time Limitation.** All courses for the major must be completed within seven years of the granting of the undergraduate degree. Exceptions for individual courses must be approved by the department and be filed with the Evaluations Office.

## Emphasis in Entomology

**Preparation for the Major.** Biology 201, 202, and 215; Chemistry 200, 201, and 230 or 231; Mathematics 121 and 122, or 150, or 155 and 156; Physics 180A, 180B, 182A, and 182B. (38-39 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units to include Biology 352, 354, 356, 462, 462L, and Chemistry 361A or 560A. The remaining 18 units must be selected from Biology 460, 506, 530, 533, 563, 586, 588, 597A and 597B; Chemistry 361B or 560B, 431, and 567; and Geography 505.

## Environmental Health Major

**With the B.S. Degree in Applied Arts and Sciences**  
(Major Code: 12142)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

**Preparation for the Major.** Biology 201, 202, and 215 or Mathematics 250; Chemistry 200, 201, and 230 or 231, and 251; Mathematics 121 and 122, or 150, or 155 and 156; Physics 180A, 180B, 182A, and 182B; Psychology 101 or Sociology 101. (46-47 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 37 upper division units to include Biology 350, 464A-464B, 466, 468A-468B, 561, 586, and 589; Civil Engineering 555 (prerequisites are waived for students in this major); Sociology 410 or Psychology 340; and three units selected from Health Science 345, 351 or 355, Public Administration and Urban Studies 320.

**Time Limitation.** All courses for the major must be completed within seven years of the granting of the undergraduate degree. Exceptions for individual courses must be approved by the department and be filed with the Evaluations Office.

## Microbiology Major

**With the B.A. Degree in Liberal Arts and Sciences**  
(Major Code: 04111)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in biology courses can apply to the degree.

A minor is not required with this major.

**Preparation for the Major.** Biology 201, 202, and 215 or Mathematics 250; Chemistry 200, 201, and 230 or 231, and 251; Mathematics 121 and 122, or 150, or 155 and 156; Physics 180A, 180B, 182A, and 182B. (43-44 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. It is recommended that students select French, German or Russian to satisfy this requirement. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 28 upper division units to include Biology 350, 352, 354, 356, 585, and Chemistry 361A; at least one laboratory course selected from Biology 521 and 521L, 528, 552 and 552L, or 589; and at least three additional units selected from Biology 513, 513L, 514, 549, 551, 551L, 553, 591, and Chemistry 361B.

All courses not included above must have the prior approval of the Department and the substitution filed with the Evaluations Office.

**Time Limitation.** All courses for the major must be completed within seven years of the granting of the undergraduate degree. Exceptions for individual courses must be approved by the department and be filed with the Evaluations Office.

## Microbiology Major

**With the B.S. Degree in Applied Arts and Sciences**  
(Major Code: 04111)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

**Preparation for the Major.** Biology 201, 202, and 215 or Mathematics 250; Chemistry 200, 201, 230 or 231, 251; Mathematics 121 and 122, or 150, or 155 and 156; Physics 180A, 180B, 182A, and 182B. (43-44 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 40 upper division units to include Biology 350, 352, 354, 356, 549, 550, 585, and Chemistry 361A and 361B; at least one laboratory course selected from Biology 521 and 521L, 528, 552 and 552L, and 589; and at least six additional units selected from Biology 499 (maximum of three units), 513, 513L, 521, 521L, 528, 551, 551L, 552, 552L, 553, 585L, 587, 589, 591, 593, 594, and Chemistry 567.

All courses not included above must have the prior approval of the Department and the substitution filed with the Evaluations Office.

**Time Limitation.** All courses for the major must be completed within seven years of the granting of the undergraduate degree. Exceptions for individual courses must be approved by the department and be filed with the Evaluations Office.

## Emphasis in Medical Technology and Public Health Microbiology

The emphasis in medical technology and public health is a program of required and elective courses which prepares students for the Public Health Microbiologist and Clinical Laboratory Technologist academic certification and licensing examinations.

**Preparation for the Major.** Biology 201, 202, and 215 or Mathematics 250; Chemistry 200, 201, 230 or 231, 251; Mathematics 121 and 122, or 150, or 155 and 156; Physics 180A, 180B, 182A, and 182B. (43-44 units)



**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved courses with a grade of C (2.0) or better.

**Major.** A minimum of 40 upper division units to include Biology 350, 352, 354, 356, 549, 582, 585, 585L, 589, and Chemistry 361A and 361B. In consultation with the medical technology adviser, the remaining minimum of six elective units must be selected from Biology 550, 552, 552L, 553, 578, 586, 587, 588, 594, and Chemistry 567.

All courses not included above must have the prior approval of the Department and the substitution filed with the Evaluations Office. After completion of the degree requirements a one-year internship at an approved laboratory must precede the examination for licensing or certification for medical technologists.

**Time Limitation.** All courses for the major must be completed within seven years of the granting of the undergraduate degree. Exceptions for individual courses must be approved by the department and be filed with the Evaluations Office.

## Biology Major

**For the Single Subject Teaching Credential in Life Sciences With the B.S. Degree in Applied Arts and Sciences (Major Code: 04011)**

One of the requirements for individuals planning to enter the College of Education's postgraduate credential program is to either pass the National Teacher Examination (NTE) or complete an appropriate waiver program. The department's Single Subject Teaching Credential in Life Sciences program satisfies the course requirements for both the biology major and the life sciences waiver.

The department also has the responsibility to certify that applicants to the postgraduate credential program in the life sciences have mastery of their biology content knowledge and understanding. This certification requires passing the Life Sciences and General Sciences NTE or completing a life sciences waiver program with the appropriate grade point average, earning a B or better in Biology 452 or equivalent course and all biology courses taken as a postbaccalaureate student, and taking the Major Field Achievement Test in Biology. Although no minimum score has been set for this test, the department will consider the results in determining content knowledge and understanding. Where a significant lack in one or more areas of biology is found the department may require further coursework prior to certification.

**Preparation for the Major.** Biology 201, 202, and 215; Chemistry 200, 201, and 230 or 231; Mathematics 121 and 122, or 150, or 155 and 156; Physics 180A, 180B, 182A, and 182B. (38-39 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units in biology and chemistry to include Biology 352, 354, 356 and 452, and at least one course from each of the following groups: Biology 560 or 590 (physiology); Biology 515 or 517 (marine biology); Biology 470 or 522 or 527 or 577 (animal biology); Biology 358 or 460 or 514 or 533 or 563 (plant biology); Chemistry 361A. The remaining three to five units must be selected from Biology 499 (strongly recommended) or a biology laboratory course acceptable on the major or a combination of both. It is recommended that Chemistry 361B be taken to attain the 20 chemistry units required for the supplementary credential in chemistry. Biology 496 and 596 courses with the appropriate contents may satisfy one or more group requirements. These and any other courses not listed above must have the prior approval of the Department and the department's credential adviser and must be filed with the Evaluation's Office.

**Time Limitation.** All courses for the major must be completed within seven years of the granting of the undergraduate degree. Exceptions for individual courses must be approved by the department and be filed with the Evaluations Office.

All courses not included above must have the prior approval of the Department and the substitution filed with the Evaluations Office.

## Biology Minor

The minor in biology consists of a minimum of 20 units to include Biology 201 and either Biology 100 and 100L or 202 (8 units) and at least 12 units of upper division courses selected from one of the areas listed below. At least one course must be an upper division biology laboratory course other than Biology 452 or 499. A maximum of 3 units of Biology 499 may be included with the prior approval of the department. Other courses not listed below, including Biology 496 and 596, must have the prior approval of the department and the substitution filed with the Evaluations Office. For courses requiring Biology 215 a college level course in statistics may be acceptable with the consent of the instructor.

### Animal Behavior

Required: Biology 527; electives: Biology 307, 324, 330, 339, 354, 354L, 462, 506, 524, 565, Anthropology 500 and Psychology 417.

### Cell Biology and Genetics

Required: Biology 215, Chemistry 200, 201, 230 and 361A or 560A; electives: Biology 350, 352, 356, 521, 521L, 549, 550, 563, 566, 576, and 590.

### Ecology

Required: Biology 354; electives: Biology 315, 324, 330, 339, 350, 354L, 358, 359, 454, 462, 462L, 513, 534, 535, 539, 540, and 565.

### Evolutionary Biology

Required: Biology 319 or 354; electives: Biology 354L, 359, 462, 462L, 469, 470, 506, 522, and Natural Science 431.

### Human Biology

Required: Biology 336 and a course in college chemistry or Biology 261 or 410; electives: Biology 150, 307, 321, 352, 362, 474, 480, 577, 580, and 590.

### Marine Biology

Required: Biology 514 or 515 or 520; electives: Biology 324, 513, 514, 515, 517, 518, 519, 520, and 524.

### Plant Biology

Required: Biology 358 or 460; electives: Biology 358, 362, 460, 514, 528, 530, 533, and 563.

### Secondary Education

Required: Biology 452; electives (at least one course from each group): Biology 336, 522, 560, 580 or 590; Biology 354, Biology 358, 460, 514 or 533; Biology 462, 462L, 469, 470, 520, 523, 524, 525 or 527; Biology 324, 515, 517, or 520. Basic courses in genetics, microbiology, and organic chemistry are recommended.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Recombinant DNA Technology Certificate

Matriculated students must apply for admission to the program before completion of 15 certificate units and must complete all prerequisite and required courses with a GPA of 2.5 or better and required courses Biology 550, 551, and 551L with grades of B or better.

The certificate requires 17 prerequisite units — Biology 350, 352, 356; Chemistry 251; and 28-29 certificate units — Biology 498 (5 units), 550, 551, 551L and Biology 594; Chemistry 560A-560B or 361A-361B, and 567; and one elective from Biology 549, 566, 569, or 585, Biology 550, 551, and 551L must be taken at San Diego State University, either in residence or through Open University. Upper division prerequisite and certificate units which may be applied to the major for B.S.

degrees in biology, chemistry (biochemistry emphasis), and microbiology are 42-43, 37, and 20 units, respectively.

Courses in the certificate may not be counted toward the minor.

## Courses

### LOWER DIVISION COURSES

#### 100. General Biology (3) I, II

Prerequisite recommended: Concurrent registration in Biology 100L.

A beginning course in biology stressing processes common to living organisms. Not open to biological sciences majors; see Biology 201, 202.

#### 100L. General Biology Laboratory (1) I, II

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 100.

A laboratory course in biology stressing processes common to living organisms. Not open to biological sciences majors; see Biology 201, 202.

#### 101. Animal Biology (3)

Animal adaptation and diversity and their relationship to the development of evolutionary theory. Not open to biological sciences majors. (Formerly numbered Biology 110.)

#### 101L. Animal Biology Laboratory (1)

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 101.

Laboratory course on evolution and diversity of animals involving field trips and laboratory investigations. Not open to biological sciences majors. (Formerly numbered Biology 110L.)

#### 120. Microbiology and Man (3) I, II

The biology of microorganisms and their significance in disease, agriculture, sanitation and industry. Not open to nursing, foods and nutrition, and biological sciences majors.

#### 120L. Microbiology and Man Laboratory (1) I, II

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 120.

Laboratory exercises designed to complement material presented in Biology 120. Not open to biological sciences majors.

#### 130. Plants and Man (3) I, II

Basic structure and function of plants with emphasis on the interrelationships of plants and man. Not open to biological sciences majors.

#### 130L. Plants and Man Laboratory (1) I, II

Prerequisite: Credit or concurrent registration in Biology 130.

Observation, experimentation and demonstration of plants and their activities, emphasizing practical applications. Topics include plant cell structure and division, photosynthesis, mineral nutrition, morphology, anatomy, asexual and sexual reproduction, growth and development, and diversity. Not open to biological sciences majors.

#### 150. Human Anatomy (4) I, II

Two lectures and six hours of laboratory.

Prerequisite: An introductory course in high school biology or zoology.

Gross and microscopic anatomy of the organ system of the human body.

#### 201. Principles of Organismal Biology (4) (201 + 202: CAN BIOL SEQ A)

Three lectures and three hours of laboratory.

Principles of biology covering all organisms, including systematics and diversity of bacteria, protista, fungi, plants and animals; and concepts of physiology, reproduction, development and differentiation, ecology, and the causes of the endangerment of a species. (Formerly numbered Biology 200B.)

#### 202. Principles of Cell and Molecular Biology (4) (201 + 202: CAN BIOL SEQ A)

Three lectures and three hours of laboratory.

Prerequisite: Chemistry 200.

Principles of biology applying to all organisms, including cell structure, membrane transport, energy metabolism, cell division, classical and molecular genetics, recombinant DNA, population genetics, mechanisms of evolution, and the basis of classification. (Formerly numbered Biology 200A.)

#### 210. Fundamentals of Microbiology (4) I, II

Two lectures and six hours of laboratory.

Prerequisites: Chemistry 100 and 130, or 200 and 201. Students with credit in Biology 120 may enroll but will receive only one additional unit of credit.

A course for nursing and foods and nutrition majors. Study of the microorganisms of the environment, including the disease-producing organisms, their actions and reactions. Not open to biological sciences majors; see Biology 350.

#### 215. Quantitative Biology (3) I, II

Two lectures and three hours of laboratory.

Prerequisites: Mathematics 121 or 140 or 155; credit or concurrent registration in Biology 201.

Methods and experience in defining and solving quantitative problems in biology, including the design of experiments, and parametric and nonparametric statistical techniques. Students with credit or concurrent registration in the following lower division courses will be awarded a total of four units for the two (or more) courses: Biology 215, Economics 201, Engineering 140, Mathematics 119, 250, Political Science 201, Psychology 270, and Sociology 201.

#### 248. Careers in Biological Sciences (1) Cr/NC

Career opportunities in biological sciences. Specialists in major biological areas will present information about their fields and how best to prepare for careers.

#### 250. Preprofessional Topics (1) Cr/NC

A. Topics in Medicine.

B. Topics in Dentistry.

C. Topics in Veterinary Medicine.

Designed to expose the preprofessional student to the profession of his/her choice through speakers and selected readings. Emphasis on alternatives and meeting stresses as a preprofessional student.

Maximum combined credit three units for 250A, 250B and 250C.

#### 261. Human Physiology (4) I, II

Three lectures and three hours of laboratory.

Prerequisites: Chemistry 100; Biology 150; credit or concurrent registration in Chemistry 130.

Human function viewed from cellular through organ system levels of organization. Intended primarily for prenursing students. Not open to biological sciences majors; see Biology 560 or 590. Students with credit in Biology 261 and 336 will receive a total of four units towards graduation.

#### 277. Medical Terminology (2) I

Prerequisite: Biology 201.

Words and word components used in medical and allied medical practice translated, investigated, and applied.

#### 291. Biology Laboratory (1) I, II

Prerequisites: Recommendation by department and consent of instructor.

Special course to allow makeup of program laboratory deficiencies. Student will be assigned to the laboratory portion of appropriate course.

#### 296. Experimental Topics (1-4)

Selected topics. 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.



### UPPER DIVISION COURSES (Intended for Undergraduates)

- 307. Biology of Sex (3) I, II, S**  
Prerequisite: Completion of the General Education requirement in Foundations II.A.1., Life Sciences.  
Reproductive adaptations in humans, and comparatively in other species. Topics include sex differences, mate choice and mating behavior, fertility regulation, fertilization and embryonic development, sex ratios, parental investment, effects of aging, and life history strategies. Not applicable to the biological sciences majors.
- 315. Ecology and Human Impacts on the Environment (3)**  
Prerequisite: Completion of the General Education requirement in Foundations II.A., Natural Sciences.  
Ecological characteristics of natural ecosystems and basic effects of human society upon those systems, emphasizing resource management, food production, global environmental problems, and future directions. Not applicable to biological sciences majors. (Formerly numbered Biology 140.)
- 319. Evolution (3)**  
Prerequisites: A college course in biological sciences and completion of the General Education requirement in Foundations II.A.1., Life Sciences.  
Modern theory of organic evolution with emphasis on processes involved as they relate to past, present, and future evolution of mankind. Not open to biological sciences majors; see Biology 354 or 471.
- 320. Dinosaurs (3)**  
Prerequisites: A college course in biological sciences and completion of the General Education requirement in Foundations II.A.1., Life Sciences.  
Rise and fall of dinosaurs, their biology, and evolutionary relationships. Not applicable to biological sciences majors.
- 321. Human Heredity (3) I, II**  
Prerequisites: A college course in biological sciences and completion of the General Education requirement in Foundations II.A.1., Life Sciences.  
Selected principles of human inheritance with emphasis on relationships to other fields of human studies. Not open to students with credit in Biology 160 or to biology or microbiology majors; see Biology 352.
- 324. Life in the Sea (3)**  
Prerequisites: A college course in biological sciences and completion of the General Education requirement in Foundations II.A.1., Life Sciences.  
Overview of complexity of marine life. Diverse interactions of organisms in the intertidal zone, over the continental shelves and in the open oceans. Current controversies concerning the marine biosphere. Not applicable to the biological sciences majors.
- 330. Natural History of Animals and Plants (3)**  
Prerequisites: A college course in biological sciences and completion of the General Education requirement in Foundations II.A.1., Life Sciences.  
Ecology, behavior, and diversity of animals and plants and their interactions; the evolution of natural history characteristics. Emphasis on local species. Not applicable to the biological sciences majors.
- 330L. Natural History of Animals and Plants Laboratory (1)**  
Three hours of laboratory.  
Prerequisite: Credit or concurrent registration in Biology 330.  
Laboratory in natural history of animals and plants, with emphasis on field observations of the local species. Not applicable to the biological sciences majors.
- 336. Principles of Human Physiology (3) I, II**  
Prerequisites: A college course in biological sciences and completion of the General Education requirement in Foundations II.A.1., Life Sciences.  
Systems of the human body, their interrelationships and control systems which regulate them. Not open to students with credit in Biology 261, 410, 560 or 590. Not applicable to the biological sciences majors.
- 336L. Human Physiology Laboratory (1) I, II**  
Three hours of laboratory.  
Prerequisite: Credit or concurrent registration in Biology 336.  
Laboratory work in human physiology. Not open to students with credit in Biology 261. Not applicable to the biological sciences majors.
- 339. Sociobiology (3)**  
Prerequisites: Biology 100 or 101 or Anthropology 102 or Psychology 101, and completion of the General Education requirement in Foundations II.A.1., Life Sciences.  
Biological bases of social behavior in animals with emphasis on altruism, aggression, territoriality, mating systems, mate choice, parental care, communication, cooperative hunting, and predator avoidance. Not applicable to biological sciences majors.
- 341. The Human Body (3) I, II**  
Prerequisite: Completion of the General Education requirement in Foundations II.A.1., Life Sciences.  
Survey of human body with emphasis on intricacy of design and integration of various organ systems. Not open to nursing, physical education, or biological sciences majors, or to students with credit in any college level human physiology or anatomy course.
- 350. General Microbiology (4) I, II**  
Two lectures and six hours of laboratory.  
Prerequisites: Biology 201, 202, and 215; Chemistry 230 or 231.  
Actions and reactions of microorganisms in response to their environment, both natural and as changed by other organisms, including man. Also includes an introduction to pathogens.
- 352. General Genetics (3) I, II**  
Prerequisites: Biology 201, 202, and 215; credit or concurrent registration in Chemistry 361A.  
Principles of transmission genetics, population genetics and evolution, and molecular genetics. Not open to students with credit in Biology 351, 357 or 546.
- 354. Ecology and Evolution (3) I, II**  
Prerequisites: Biology 201 and 215.  
Fundamental concepts in population and community ecology and evolutionary biology. Not open to students with credit in Biology 353.
- 354L. Experimental Ecology and Evolution (2) I, II**  
One hour of discussion and three hours of laboratory.  
Prerequisite: Credit or concurrent registration in Biology 354.  
Methods of research in ecology and evolutionary biology; approaches to analysis of populations and communities.
- 356. Cell Biology (5) I, II**  
Three lectures and six hours of laboratory.  
Prerequisites: Biology 201, 202, and 215; Chemistry 361A; Physics 180A, 180B, 182A, and 182B.  
Structure and function of prokaryotic and eukaryotic cells and cell organelles.
- 358. California Flora (3)**  
Two lectures and three hours of laboratory (Field).  
Prerequisite: Biology 201.  
Local native and naturalized plants in San Diego County and selected areas of California. Identification of plants and plant communities.
- 359. Endangered and Extinct Species (3)**  
Prerequisite: A college course in biological sciences.  
Examination of reasons that some plants and animals become rare, endangered and extinct. Emphasis on man's activities as pressure that often leads to extinction.

### 362. Plants, Medicines, and Drugs (3)

Prerequisites: A college course in biological sciences, and completion of the General Education requirement in Foundations II.A.1., Life Sciences.

Medicinal plants, toxic-poisonous plants, herbal medicines, psychoactive plants, preparation of medicines and mechanisms of action; current research results on medicinal plants and drugs used in diseases such as diabetes, cancer, and heart diseases.

### 410. Integrated Human Physiology (4)

Three lectures and three hours of laboratory.

Prerequisites: Biology 100 and 100L; Chemistry 100 and 130.

Human physiological systems and their regulation; emphasis on nutritional influences. Not open to students with credit in Biology 261 or 590. Students with credit in Biology 336 and 410 will receive a total of four units towards graduation. Not applicable to the biological sciences majors.

### 452. Biology Concept Development and Integration (3)

Two lectures and three hours of laboratory.

Prerequisite: Senior standing, or participation in a life sciences single subject credential program.

Development and integration of biological science content knowledge, introduction to learning theory, and transformation of knowledge. Designed for students preparing for the single subject teaching credential in life sciences.

### 454. Conservation of Wildlife (3) I, II

Prerequisites: A college course in biological sciences, and completion of the General Education requirement in Foundations II.A.1., Life Sciences.

Plant and animal resources with emphasis on their conservation and intelligent use.

### 460. Economic Botany (4)

Three lectures and three hours of laboratory.

Prerequisite: Biology 201.

Plants of agricultural, economic, and historical importance. Topics include plant genetics, agricultural breeding and propagation techniques, vegetables and fruits, spices and herbs, beverage plants, wood, and plant fibers. Plant morphology, anatomy, and taxonomy.

### 462. Entomology (3)

Prerequisite: Biology 201.

Morphological and behavior adaptations, natural history, and overall importance of insects.

### 462L. Entomology Laboratory (1)

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 462.

External and internal structure of insects; insect classification.

### 464A-464B. Principles of Environmental Health (3-3)

Two lectures and three hours of laboratory.

Prerequisites: Biology 215 or Mathematics 250; and Biology 350.

General principles of environmental sanitation, including the relationship of the various aspects of physical environment to preventive medicine; the provision of clean air and water, proper waste disposal, safe food supply, and adequate habitation.

### 466. Environmental Health Administration (3)

Prerequisite: Biology 464A.

Concepts of organization and administration applied to environmental health; factors affecting these at the local, national and international levels.

### 468A-468B. Epidemiology (2-2)

Prerequisite: Biology 589; Biology 215 or Mathematics 250.

Study of the transmission, distribution, and control of infectious and noninfectious diseases in the community.

### 469. Biology of Invertebrates (3)

Two lectures and three hours of laboratory.

Prerequisite: Biology 201.

Form, function and ecological roles of major terrestrial, fresh water, marine, and parasite invertebrate groups. Evolution of their adaptations and methods for their study.

### 470. Biology of Vertebrates (4)

Three lectures and three hours of laboratory.

Prerequisite: Biology 354.

An introductory course in the biology of the vertebrates with emphasis on the vertebrate organism as a whole; anatomy, physiology, development, and evolution.

### 471. Analysis of Evolutionary Criticism (3)

Prerequisite: Upper division standing in physical or life sciences.

Evolutionary theory examined through study of criticisms against it. Fringe science ideas examined for value as object lessons.

### 474. Histology (4)

Two lectures and six hours of laboratory.

Prerequisite: Biology 201. Recommended: Biology 150.

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

### 480. Biology of Aging (3)

Prerequisites: Biology 100 or 201, and completion of the General Education requirement in Foundations II.A.1., Life Sciences.

Concepts and theories of aging in biological systems from the population to the molecular level.

### 495. Methods of Investigation (2)

One discussion and three additional hours to be arranged.

Prerequisites: Consent of instructor and senior standing.

Selection and design of individual research in biology or microbiology; oral and written reports. See Class Schedule for specific content. Maximum credit four units.

### 496. Experimental Topics (1-4)

Selected topics. May be repeated once 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.

### 498. Laboratory Experience in Modern Industrial Technology (1-5) I, II Cr/NC

Up to 20 hours per week in academic year, 40 hours per week in summer or winter sessions.

Prerequisites: Fifteen upper division units in biological sciences with grades of A or B and consent of instructor.

Practical laboratory experience in local industrial or SDSU campus laboratories emphasizing current technology. Maximum credit five units applicable to Recombinant DNA Technology certificate. Does not apply to biological sciences majors.

### 499. Special Study (1-3) I, II

Prerequisites: Upper division status in good standing and consent of instructor.

Individual study. Maximum credit six units for any combination of Biology or Chemistry 499.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

### 506. Special Topics in Entomology (3-4)

Prerequisite: Biology 462.

Treatment of some aspect of entomology, such as biological control, microbial control or forest entomology, not covered in regularly scheduled courses. See Class Schedule for specific content. Maximum credit nine units. Maximum credit six units applicable to a master's degree. (Formerly numbered Biology 506A.)



- 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.
- 513L. Marine Microbiology Laboratory (2)**  
Six hours of laboratory.  
Prerequisite: Credit or concurrent registration in Biology 513.  
Field and laboratory methods and techniques used in the study of marine microorganisms with emphasis on bacteria.
- 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 Zoology (4)**  
Two lectures and six hours of laboratory.  
Prerequisite: Biology 201.  
Structure and function, ecology, behavior, physiology and phyletic relationships of marine invertebrate animals.
- 516. Special Topics in Marine Invertebrates (3-4)**  
Prerequisite: Biology 515.  
Treatment of some aspect of marine invertebrate zoology such as invertebrate embryology, intertidal ecology, or special experimental approaches. See Class Schedule for specific content and lecture/lab format. May be taken twice with new content. Maximum credit eight units applicable to a master's degree.
- 517. Biological Oceanography (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.
- 518. Fisheries Biology (3)**  
Two lectures and three hours of laboratory.  
Prerequisite: Biology 354.  
Fisheries of commercial importance. The dynamics of exploited populations.
- 519. Aquaculture (3)**  
Prerequisite: Biology 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.
- 522. Evolution of Vertebrate Structure (4)**  
Two lectures and six hours of laboratory.  
Prerequisite: Biology 201.  
Structural changes that have occurred in organ systems of vertebrates during the course of evolution.
- 523. Herpetology (4)**  
Three lectures and three hours of laboratory.  
Prerequisite: Biology 522.  
Origin, evolution, distribution and systematics of amphibians and reptiles of the world.
- 524. Ornithology (4)**  
Two lectures, six hours of laboratory or field excursions, and a field project.  
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)**  
Two lectures and six 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.
- 534. Plant-Soil Ecology (3)**  
Prerequisite: Biology 201. Recommended: Geography 505.  
Plant-soil relationships from an ecological perspective. Biotic interactions controlling soil fertility and plant growth.
- 535. Plant Ecology (4)**  
Three lectures and three hours of laboratory.  
Prerequisite: Biology 201.  
Plant adaptation and response to living and non-living environment including aspects of plant evolution, demography, ecophysiology, community and ecosystem dynamics and soil-plant relationships. Terrestrial systems emphasized.
- 536. Plant-Microbe Interactions: From Molecules to Ecosystems (3)**  
Prerequisites: Biology 352 and 354; Chemistry 361A.  
Current theories of plant-microbe interactions including recognition, specificity, and regulation of ecosystem structure and function. Emphasis on modern molecular and population theories.
- 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.
- 542. Ecology of Genetically Engineered Organisms (3)**  
Two lectures and one hour of colloquium.  
Prerequisites: Biology 201 and 202. Recommended: Biology 350 and 354.  
Engineered organisms in agriculture and pollution abatement, basic procedures used to develop engineered organisms, and ecological and sociological implications of their use.
- 543. Ecological Methods (1-3)**  
Three hours of laboratory per unit.  
Prerequisites: Biology 215 and 354 or 454.  
Modular course in vegetation sampling, ecophysiological methods, plankton sampling, benthic community/population analysis, and ecological data analysis. See Class Schedule for specific content. Maximum credit three units.
- 547. Regional Field Studies in Biology (1-3)**  
One- to three-week periods during vacations and summer sessions; may be combined with class meetings during academic year.  
Prerequisites: At least twelve units in the biological sciences, including Biology 201, and consent of instructor.  
Extended field studies of the flora, fauna, and biotic communities of major natural regions of western North America. May be repeated with new content. Maximum credit six units.
- 549. Microbial Genetics and Physiology (2)**  
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 356; Chemistry 361A, 361B.  
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) I, II**  
Six hours of laboratory.  
Prerequisites: Biology 350 and 550.  
A laboratory course in recombinant DNA techniques.
- 552. General Virology (2)**  
Prerequisite: Biology 350. Recommended: Biology 585 and 589.  
Viruses, their structure, function, culture, and methods of study.
- 552L. General Virology Laboratory (2)**  
Six hours of laboratory.  
Prerequisite: Credit or concurrent registration in Biology 552.  
The culture, isolation, and characterization of viruses.
- 553. Molecular Approaches in the Medical Laboratory (3) I**  
One lecture and six hours of laboratory.  
Prerequisites: Biology 350 and 356; Chemistry 361A and 361B.  
Application of recombinant DNA and molecular cell biology techniques in modern medical laboratory: theory and practice.
- 554. Molecular Virology (2)**  
Prerequisites: Biology 356, 552. 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 230 or 231.  
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; Chemistry 230 or 231.  
Activities of plants, including photosynthesis, ion transport, translocation, water relations, growth and development.
- 564. Topics in Cellular Biology (3)**  
Prerequisite: Biology 356 or Chemistry 361A and 361B or Chemistry 560A and 560B.  
Topics selected from chromatin structure function and regulation; cell cycle analysis and regulation; cellular membrane formation, structure and function. Other topics irregularly scheduled. Maximum credit six units.
- 565. Topics in Comparative Physiology (3)**  
Prerequisite: Biology 356 or, with consent of instructor, other prerequisites may be substituted.  
Topics vary each semester and are chosen from three areas: digestion, nutrition, respiration, metabolism, blood, circulation, osmoregulation, and excretion; sensory reception, neural integration, and muscle function; endocrine mechanisms. Maximum credit six units. See Class Schedule for specific content.
- 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) II**  
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.
- 576. Developmental Biology (3)**  
Prerequisite: Biology 352.  
Analysis of development with emphasis on embryonic differentiation.



**577. Embryology (4)**

Two lectures and six hours of laboratory.  
Prerequisites: Biology 201 and 202.  
Studies in comparative gametogenesis, morphogenesis, and reproductive physiology.

**578. Immunohematology (2)**

Prerequisite: Biology 350. Recommended: Biology 585.  
Theory of blood grouping and typing with emphasis on recent advances. Procedures for identification of immune disorders and tests to determine compatibility.

**580. Advanced Human Anatomy (4)**

Two lectures and six hours of laboratory.  
Prerequisite: Biology 150 or 522.  
Comprehensive dissection and study of human cadavers with major emphasis on the regional approach.

**582. Hematology (3) I**

Two lectures and three hours of laboratory.  
Prerequisite: Biology 350.  
Study of normal and pathological blood with chemical, physical and microscopic methods.

**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.

**585L. Immunology Laboratory (1)**

Three hours of laboratory.  
Prerequisites: Biology 350 and credit or concurrent registration in Biology 585.  
Cellular immunological techniques.

**586. Medical Entomology (4)**

Three lectures and three hours of laboratory. See Class Schedule for lecture/lab format.  
Prerequisite: Biology 201.  
Role of insects and other arthropods in the transmission and causation of human diseases and the important diseases of domesticated animals.

**587. Medical Mycology (4)**

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

**588. Parasitology (4)**

Two lectures and six hours of laboratory.  
Prerequisite: Biology 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.

**589. Pathogenic Bacteriology (4) I**

Two lectures and six hours of laboratory.  
Prerequisites: Biology 350 with a minimum grade of C; Chemistry 251. Recommended: Chemistry 361A.  
Bacterial and rickettsial agents of disease in man and other animals. Consideration of host-parasite relationships, the biology of the inciting agents and mechanisms of host resistance. Laboratory experience in isolation and identification of bacterial pathogens.

**590. Physiology of Human Systems (4)**

Three lectures and one hour of discussion.  
Prerequisites: Physics 180B and 182B; Biology 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.

**591. Advanced Immunology (3)**

Prerequisites: Biology 356 and 585; Chemistry 361B.  
Cellular and molecular aspects of the immune response. Genetics of immunoglobulins, major histocompatibility complex, lymphocyte activation and its manifestations on the immune response, and contemporary immunological research techniques.

**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.

**594. Radioisotope Techniques in Biology (4)**

Two lectures and six hours of laboratory.  
Prerequisites: Physics 180B and 182B; Biology 100 or 201 and 202. Recommended: Biology 356 and Chemistry 251.  
Principles and application of radioisotopes in biology. Radionuclide measurement, safe handling, tracer and radioautography techniques.

**595. Computers in Biomedical Research (3)**

Prerequisite: Biology 356 or 590. Recommended: Computer Science 107.  
Application of micro- and 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 credit of six units of 596 with three units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**597A. Univariate Statistical Methods in Biology (3)**

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

**597B. Multivariate Statistical Methods in Biology (3)**

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

**598. Cardiovascular Physiology (3)**

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

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

# Chemistry

In the College of Sciences

OFFICE: Chemistry/Geology 305  
TELEPHONE: (619) 594-5595

Accredited by the American Chemical Society.

**Faculty**

Emeritus: Isensee, Jones, Joseph, Rowe, Spangler, Wadsworth, Walba  
Chair: Ring  
Professors: Abbott, Bennett, Cobble, Coffey, Dahms, Grubbs, Hellberg, Jensen, Landis, Laub, Lebherz, Malik, Mathewson, O'Neal, Richardson, Ring, Roeder, Sharts, Stewart, Stumph, Tong, Woodson  
Associate Professors: Chatfield, Cole  
Assistant Professor: Smith

**Offered by the Department**

Doctor of Philosophy degree in chemistry.  
Master of Arts degree in chemistry.  
Master of Science degree in chemistry.  
Major in chemical physics with the B.S. degree in applied arts and sciences.  
Major in chemistry with the B.S. degree in applied arts and sciences with the Certificate of the American Chemical Society.  
Emphasis in biochemistry.  
Major in chemistry with the B.A. degree in liberal arts and sciences, with or without the Certificate of the American Chemical Society.  
Single subject teaching credential in physical sciences in the area of chemistry.  
Minor in chemistry.

**The Major**

Through the study of chemistry students can better understand their environment and develop new materials that provide for a higher quality of life. Chemists are involved in a wide range of careers in research, development and the production of new goods. Basic chemical research provides society with discoveries of new substances and the means to predict their chemical and physical properties. In developmental chemistry, professionals find ways to put them to use. There are careers in methods of production to provide these materials to society in a cost-effective way. In each of these areas, there are subspecialties in analytical, biochemical, inorganic, organic, and physical chemistry.

The Department of Chemistry offers five degree programs leading to the Bachelor of Arts degree, the Bachelor of Science degree, the Master of Arts degree, the Master of Science degree, and the Doctor of Philosophy degree (with the University of California, San Diego).

There are several options available in the undergraduate program for those wishing either a major or a minor in chemistry. A chemistry major with the Bachelor of Science degree and certificate of the American Chemical Society is designed to qualify students for many types of positions as chemists and for admission to graduate study.

The chemistry major with the Bachelor of Arts degree and certificate of the American Chemical Society is specifically designed to prepare students for careers and graduate work requiring a strong chemistry background. This program requires preparatory courses in botany and zoology, in addition to chemistry, physics, and mathematics classes. With an appropriate choice of electives, graduates can meet the requirements for admission to medical, dental and pharmaceutical schools. A minor in biology is recommended.

The use of chemistry electives allows a student to focus on a particular area in chemistry such as analytical chemistry, biochemistry, bioinorganic chemistry, chemical physics, inorganic chemistry, organic chemistry, or physical chemistry.

**Chemistry Major**

With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 19051)

and Certificate of the American Chemical Society

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

**Preparation for the Major.** Chemistry 200, 201, 231, 237, and 251; Mathematics 150 and 151, or 155, 156, and 157, and 252; and Physics 195, 195L, 196, 196L, 197, 197L. (45 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units to include Chemistry 410A-410B, 417, 431, 437, 457, 520A-520B, 550, 560A, one unit of 497, and eight units of upper division electives in chemistry. Six of the eight units may be in related subjects with the approval of the department.

**Emphasis in Biochemistry**

**Preparation for the Major.** Chemistry 200, 201, 231, 237, 251; Mathematics 150 and 151, or 155, 156, and 157, and 252; Physics 195, 195L, 196, 196L, 197, 197L; Biology 201, 202. (53 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units to include Chemistry 410A-410B, 431, 457, 550, 560A-560B, 567; Biology 352; one unit of Chemistry 497 or 498; and nine units selected from Chemistry 520A, 530, 537, 551; Biology 350, 536, 549, 549L, 550, 551, 551L, 552, 552L, 553, 561, 561L, 563, 564, 566, 567, 569, 570, 576, 585, 585L, 590, 591, 594, 595. The addition of Chemistry 520A and 520B qualifies this program for ACS certification.

\* Chemistry 560A replaces Chemistry 361A as a prerequisite; Chemistry 410A replaces Biology 215 as a prerequisite.

**Chemistry Major**

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 19051)

and Certificate of the American Chemical Society

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in chemistry courses can apply to the degree.

A minor is not required with this major.

**Preparation for the Major.** Chemistry 200, 201, 231, 237, 251; Mathematics 150 and 151, or 155, 156, and 157, and 252; and Physics 195, 195L, 196, 196L, 197, 197L. (45 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of this catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 25 upper division units in chemistry to include Chemistry 410A-410B, 417, 431, 437, 457, 520A-520B, 550; one unit of 497.

**NOTE:** See following page for recommended sequence of courses for the B.S. and B.A. Degrees and Certificate.

## OUTLINE FOR THE B.S. DEGREE AND CERTIFICATE

		Units				Units	
		1st Sem.	2nd Sem.			1st Sem.	2nd Sem.
<b>First year</b>				<b>Second year</b>			
Chemistry 200	5	—		Chemistry 231, 237	5	—	
Chemistry 201	—	5		Chemistry 251	—	5	
English 100	3	—		Chemistry 431, 437	—	5	
English 200	—	3		Mathematics 252	4	—	
† Mathematics 150, 151	5	4		Physics 196, 196L	4	—	
Physics 195, 195L	—	4		Physics 197, 197L	—	4	
Speech Communication 103	3	—		# General Education	3	3	
	16	16			16	17	
		Units				Units	
		1st Sem.	2nd Sem.			1st Sem.	2nd Sem.
<b>Third year</b>				<b>Fourth year</b>			
Chemistry 410A-410B	4	3		Chemistry 417	—	2	
Chemistry 560A	3	—		Chemistry 457	2	—	
Chemistry Elective	—	3		Chemistry 497	1	—	
American Institutions	3	3		Chemistry 520A-520B	3	3	
# General Education	6	6		Chemistry 550	2	—	
	16	15		Chemistry Electives	3	2	
				General Electives	—	5	
				# General Education	6	3	
					17	15	

# Refer to catalog section on General Education requirements. The department strongly recommends that students take German 100A-100B for seven units of credit under the Humanities section of General Education.

† Some students will be required to take Mathematics 104 or 140 or both in their first semester because of failure to qualify on the mathematics placement examination. The appropriate number of units should then be subtracted from General Electives. Mathematics 155, 156, and 157 may be substituted for 150 and 151 by moving some General Education units to another semester.

## OUTLINE FOR THE B.A. DEGREE AND CERTIFICATE

		Units				Units	
		1st Sem.	2nd Sem.			1st Sem.	2nd Sem.
<b>First year</b>				<b>Second year</b>			
Chemistry 200	5	—		Chemistry 231, 237	—	5	
Chemistry 201	—	5		Chemistry 251	5	—	
English 100	3	—		Mathematics 151, 252	4	4	
† Math. 104, 140, 150	5	5		Physics 196, 196L	4	—	
Physics 195, 195L	—	4		Physics 197, 197L	—	4	
Speech Communication 103	3	—		# General Education	3	3	
# General Education	—	3			16	16	
	16	17					
		Units				Units	
		1st Sem.	2nd Sem.			1st Sem.	2nd Sem.
<b>Third year</b>				<b>Fourth year</b>			
Chemistry 410A-410B	4	3		Chemistry 417	—	2	
Chemistry 431, 437	5	—		Chemistry 457	2	—	
American Institutions	3	3		Chemistry 497	1	—	
# General Education	3	9		Chemistry 520A-520B	3	3	
	15	15		Chemistry 550	2	—	
				General Electives	4	3	
				# General Education	3	6	
					15	14	

# Refer to catalog section on General Education requirements. The department strongly recommends that students take German 100A-100B for seven units of credit under the Humanities section of General Education.

† Students eligible to take Mathematics 150 in their first semester should do so and substitute for Mathematics 104 and/or 140 two to five units of general electives. Mathematics 155, 156, and 157 may be substituted for 150 and 151 by moving some General Education units to another semester.

**Major.** A minimum of 24 upper division units in chemistry to include Chemistry 410A-410B, 417, 431, 457, 550, and seven units of electives in chemistry. Chemistry 361A-361B or 560A-560B is recommended for all premedical students.

**Minor.** A minor in biology is expected for preprofessional students.

## Chemistry Major

**For the Single Subject Teaching Credential in Physical Sciences With the B.A. or B.S. Degree (Major Code: 19051)**

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under Policy Studies or Teacher Education.

All candidates for a teaching credential must complete all requirements for a chemistry major for either the B.A. or the B.S. degree in Applied Arts and Sciences and must satisfy the requirements for a Physical Science Major for the Single Subject Teaching Credential in Physical Science as listed under the Natural Science Department. No more than 48 units in chemistry courses can apply to the degree.

## Chemical Physics Major

**With the B.S. Degree in Applied Arts and Sciences (Major Code: 19081)**

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." Individual master plans for each student are filed with the chemistry and physics undergraduate advisers and the Evaluations Office.

A minor is not required with this major.

**Preparation for the Major.** Chemistry 200, 201, 231, 251; Mathematics 150 and 151, or 155, 156, and 157, and 252; Physics 195, 195L, 196, 196L, 197, 197L (44 units)

Recommended: A course in computer programming.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 45 upper division units to include Chemistry 410A-410B, 431, 457, 520A, 550; Mathematics 342A-342B; Physics 311, 350, 354A-354B, 357, 400A-400B. Recommended: Mathematics 342C.

## Chemistry Minor

The following courses are prerequisite to the chemistry minor and do not count toward the 15 units required for the minor: Chemistry 200, 201. (10 units.)

The minor in chemistry consists of 15 units in chemistry to include Chemistry 230 or 231, and 251; and six units of upper division electives. Chemistry 410A-410B\*\* are strongly recommended.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

\*\* Additional prerequisites in mathematics and physics required for these courses.

## Graduation with Distinction

A student desiring to graduate with Distinction in Chemistry must meet the university requirements listed in the section of this catalog on "Graduation Requirements" and in addition have completed four units of Chemistry 498 by the time of graduation and be recommended by the faculty member directing the Chemistry 498 project.



## Chemistry Major

**With the B.A. Degree in Liberal Arts and Sciences (Major Code: 19051)**

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in chemistry courses can apply to the degree.

**Preparation for the Major.** Chemistry 200, 201, 231, 237; Physics 195, 195L, 196, 196L, 197, 197L; Mathematics 104, 140, 150 and 151, or 155, 156, and 157, and 252; Biology 201, 202. (53 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of this catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.



## Courses

## LOWER DIVISION COURSES

- 100. Introduction to General Chemistry with Laboratory (4) I, II**  
Three lectures and three hours of laboratory.  
Elementary principles of chemistry used to illustrate nature and development of modern scientific thought. Not open to students with credit in Chemistry 105 or 200.
- 105. Preparation for General Chemistry (4) I, II**  
Three lectures and three hours of laboratory.  
Elemental principles of chemistry approached from problem-solving perspective necessary for success in Chemistry 200. Not open to students with credit in Chemistry 100 or 200.
- 110. Chemistry and Life (3)**  
Chemistry of biological processes for the nonscience major. Basic concepts in chemistry that provide the chemical basis for understanding the nature of life.
- 130. Elementary Organic Chemistry (3) I, II**  
Two lectures and three hours of laboratory.  
Prerequisite: Chemistry 100, 105, or 200.  
Introduction to the compounds of carbon including both aliphatic and aromatic substances. Not open to students with credit in Chemistry 201 or 202.
- 160. Introductory Biochemistry (3) I, II**  
Prerequisite: Chemistry 130.  
Fundamental principles of the chemistry of living processes. This course intended primarily for majors in home economics, nursing, and related fields.
- 200. General Chemistry (5) I, II (CAN CHEM 2)**  
Three lectures and six hours of laboratory.  
Prerequisites: High school chemistry or a grade of "C" or better in Chemistry 105, and two years of high school algebra.  
General principles of chemistry with emphasis on inorganic materials. Students with credit for either Chemistry 100 or 105, and 200 will receive a total of five units of credit toward graduation.
- 201. General Chemistry (5) I, II (CAN CHEM 4)**  
Three lectures and six hours of laboratory.  
Prerequisite: Chemistry 200.  
Continuation of Chemistry 200. General principles of chemistry with emphasis on inorganic materials and qualitative analysis. Duplicate credit will not be allowed for the corresponding course in Chemistry 202.
- 202. General Chemistry for Engineers (3) I, II**  
Two lectures and three hours of laboratory.  
Prerequisite: Chemistry 200.  
A continuation of the study of the principles of chemistry with emphasis on the relationships to the field of engineering. Open only to engineering majors. Not open to students with credit in Chemistry 201.
- 230. Introductory Organic Chemistry (4) I, II**  
Three lectures and three hours of laboratory.  
Prerequisite: Chemistry 201.  
Aliphatic and aromatic compounds including reaction mechanisms. For students needing only one semester of organic chemistry. Not open to students with credit in Chemistry 231.
- 231. Organic Chemistry (4) I, II**  
Three lectures and three hours of laboratory.  
Prerequisite: Chemistry 201.  
Properties and synthesis of organic compounds including reaction mechanisms. First half of a year course. Not open to students with credit in Chemistry 230, 232, 232L.
- 232. Organic Chemistry (3) (Summer only)**  
Prerequisite: Chemistry 201.  
Properties and synthesis of organic compounds including reaction mechanisms. First half of a one-year course. Not open to students with credit in Chemistry 230 or 231.
- 232L. Organic Chemistry Laboratory (1) (Summer only)**  
Three hours of laboratory.  
Prerequisite: Chemistry 201.  
Properties and synthesis of organic compounds including methods of separation and purification techniques. Not open to students with credit in Chemistry 230 or 231.
- 237. Organic Chemistry Laboratory (1) I, II**  
Three hours of laboratory.  
Prerequisite: Open only to students enrolled concurrently in Chemistry 231.  
The theory and practice of laboratory operations.
- 251. Analytical Chemistry (5) I, II**  
Three lectures and six hours of laboratory.  
Prerequisites: Chemistry 201 and credit or concurrent registration in Mathematics 122, 150, or 156. It is recommended that students who plan to enroll in this course do so the semester following completion of the prerequisites.  
Introduction to the theory and practice of analytical chemistry including gravimetric, volumetric, and instrumental methods.
- 296. Experimental Topics (1-4)**  
Selected topics. 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.
- 299. Special Study (1-3)**  
Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

UPPER DIVISION COURSES  
(Intended for Undergraduates)

- 361A-361B. Fundamentals of Biochemistry (3-3) I, II**  
Prerequisites: Chemistry 230 or 231. Chemistry 361A is prerequisite to Chemistry 361B.  
The chemistry of intermediary metabolism and its regulation. Not open to students with credit in Chemistry 560A-560B.
- 402. Chemical Literature (2)**  
Prerequisite: Upper division standing in chemistry.  
Availability, type, scope, and use of chemical literature with emphasis on chemical abstracts, Beilstein, Gremlin, science citation indexes, patent literature, and secondary review literature. Description of computerized chemistry data bases and use of remote terminals to access data bases.
- 410A-410B. Physical Chemistry (4-3) I, II**  
410A: Three lectures and three hours of laboratory.  
410B: Three lectures.  
Prerequisites: Chemistry 251 and 230 or 231; Mathematics 252, and credit or concurrent registration in Physics 197 and 197L. Chemistry 410A is prerequisite to 410B.  
Theoretical principles of chemistry with emphasis on mathematical relations. Theory and practice in acquisition and statistical analysis of physical measurements on chemical systems. (Students with credit in Chemistry 407 will receive only three units credit for 410A.)
- 417. Advanced Physical Chemistry Laboratory (2) II**  
Six hours of laboratory.  
Prerequisites: Chemistry 410B, 457, and 550.  
Experimental physical chemistry. Emphasis on use of instruments, record keeping, report writing, and individual initiative in observing results.

- 431. Organic Chemistry (4) I, II**  
Three lectures and three hours of laboratory.  
Prerequisite: Chemistry 231.  
Continuation of Chemistry 231.
- 437. Organic Chemistry Laboratory (1) I, II**  
Three hours of laboratory.  
Prerequisite: Open only to students enrolled concurrently in Chemistry 431.  
Theory and practice of laboratory operations.
- 457. Instrumental Methods of Chemical Analysis Laboratory (2) I**  
Six hours of laboratory.  
Prerequisites: Chemistry 431 and credit or concurrent registration in Chemistry 410B; concurrent registration in Chemistry 550.  
Application of instrumental methods of chemical separations and analysis frequently used in all subdisciplines of chemistry.
- 496. Selected Topics in Chemistry (1-4)**  
Prerequisite: Consent of instructor.  
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 six units.
- 497. Senior Laboratory Project (1-3) I, II, S Cr/NC**  
Three hours of laboratory per unit.  
Prerequisite: Three one-year chemistry courses which have an associated laboratory.  
Individual laboratory investigation in analytical, inorganic, organic, or physical chemistry or in biochemistry using advanced laboratory techniques with a final written report of the investigation.
- 498. Senior Project (1-3) I, II Cr/NC**  
Prerequisite: Three one-year courses in chemistry.  
An individual investigation and report on a problem. Maximum credit six units.
- 499. Special Study (1-3) I, II**  
Prerequisite: Consent of instructor. Open only to students who have shown ability to do A or B work in Chemistry.  
Individual study. Maximum credit six units.

UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)

- 501. Chemical Oceanography (3)**  
Three lectures and occasional field trips.  
Prerequisites: Chemistry 201 and 231. Strongly recommended: Chemistry 251. Recommended: Chemistry 410B and Oceanography 320 or 541.  
The application of the fundamentals of chemistry to the study of oceans.
- 510. Advanced Physical Chemistry (3)**  
Prerequisite: Chemistry 410B.  
Mathematical tools essential to solving problems in chemical thermodynamics, statistical mechanics, chemical kinetics, quantum chemistry and molecular structure and spectroscopy, with applications.
- 520A. Inorganic Chemistry (3) I**  
Prerequisite: Credit or concurrent registration in Chemistry 410B.  
The physical basis of the periodic system, complex inorganic compounds, and the nature of the chemical bond.
- 520B. Inorganic Chemistry (3) II**  
Prerequisite: Chemistry 520A.  
An advanced systematic study of representative and transition elements and their compounds.
- 530. Theoretical Organic Chemistry (3)**  
Prerequisites: Chemistry 410A and 431. Recommended: Credit or concurrent registration in Chemistry 410B.  
Electronic and physical properties of organic molecules; structure-reactivity correlations; Electronic 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.
- 561. Physical Biochemistry (3)**  
Prerequisites: Chemistry 201, 431, 361B or 560B; Physics 182B.  
Fundamental principles of physical chemistry, including thermodynamics and kinetics as applied to the field of biochemistry. Not open to students with credit in Chemistry 410A-410B.
- 567. Biochemistry Laboratory (2)**  
Six hours of laboratory.  
Prerequisite: Credit or concurrent registration in Chemistry 361A or 560A.  
Theory and practice of procedures used in study of life at molecular level. Includes purification and characterization of enzymes, isolation of cell components, and use of radioactive tracer techniques.
- 596. Advanced Special Topics in Chemistry (1-3)**  
Prerequisite: Consent of instructor.  
Advanced selected topics in modern chemistry. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES  
Refer to the Graduate Bulletin.

# Chinese

In the College of Arts and Letters

## Faculty

Chair: Webb  
Professor: Woo  
Lecturer: Zhang

Offered by the Department of  
Linguistics and Oriental Languages

Minor in Chinese.

## Foreign Language Requirement for the B.A. Degree in Liberal Arts and Sciences

Students electing the study of Chinese to fulfill the foreign language requirement for the Bachelor of Arts degree in liberal arts and sciences must successfully complete Chinese 201 or the equivalent level of achievement. The usual sequence of coursework is Chinese 101, 102, and 201. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

## High School Equivalents

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high school courses will not count as college credit toward graduation.

Secondary school language courses can be used as follows:

1. The first **two years** of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.

2. The first **three years** of high school level language count as the equivalent of the first two college semesters, although students with fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not receive credit for the first semester college course unless at least five years separate the last high school course and the first college course.

3. **Four years** of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

## Chinese Minor

The minor in Chinese consists of a minimum of 19 units in Chinese; at least 16 units must be in the Chinese language of which six units must be in upper division courses. The remaining three units may be selected from additional Chinese language courses or selected from Art 263, 308, Asian Studies 458, 459, Comparative Literature 455, 460 (when appropriate), History 566, 567, 568, either Linguistics 420 or 520, Philosophy 351, Religious Studies 403.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and General Education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

OFFICE: Business Administration 327  
TELEPHONE: (619) 594-5268

## Courses

### LOWER DIVISION COURSES

Native speakers of Mandarin Chinese will not receive credit for taking lower division courses except with advance approval from the department.

**All lower division courses in Chinese are taught in Chinese.**

No credit will be given for Chinese 101, 102, 201, 202 taken out of sequence.

#### 101. Elementary Chinese I (5) I

Five lectures and one hour of laboratory.

Rudiments of Mandarin pronunciation; listening, speaking, reading, and writing with emphasis on communicative ability; acquisition of the most useful phrases and vocabulary items, and over 250 characters; familiarity with basic sentence structures of Mandarin; information on Chinese culture. Not open to students who have completed three years of high school Chinese unless the third course was completed five or more years ago.

#### 102. Elementary Chinese II (5)

Five lectures and one hour of laboratory.

Prerequisite: Chinese 101.

Continuation of Chinese 101, including acquisition of an additional 250 characters. Further development of language competence. Not open to students who have completed three years of high school Chinese unless the third course was completed five or more years ago. (Formerly numbered Chinese 202.)

#### 201. Intermediate Chinese I (5)

Five lectures and one hour of laboratory.

Prerequisites: Chinese 102, and completion of the General Education requirement in Foundations II.C., Humanities.

Development of facility to comprehend and produce spoken Chinese. Acquisition of advanced language structures and an additional 300 characters. Emphasis on connected discourse. (Formerly numbered Chinese 303.)

#### 202. Intermediate Chinese II (5)

Five lectures and one hour of laboratory.

Prerequisites: Chinese 201, and completion of the General Education requirement in Foundations II.C., Humanities.

Continuation of Chinese 201. Reading of contemporary work and writing of short passages in Chinese. Acquisition of an additional 300 characters. (Formerly numbered Chinese 304.)

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

**All upper division courses in Chinese are taught in Chinese unless otherwise stated.**

#### 301. Advanced Chinese I (3)

Prerequisite: Chinese 202.

Greater facility in oral expression and writing for practical purposes; exposure to various styles of language; newspaper and media Chinese; elements of literary and classical language; an additional 300 Chinese characters.

#### 302. Advanced Chinese II (3)

Prerequisite: Chinese 301.

Continuation of Chinese 301. Writing paragraphs and longer expository texts. Reading modern and classical literature; an additional 300 characters.

#### 331. Conversational Chinese (3)

Prerequisite: Chinese 202.

Conversation practice on practical, social, and cultural topics, with aid of spoken language materials such as plays and videotapes; learning conversational strategies and stylistic features.

#### 333. Business Chinese (3)

Prerequisite: Chinese 202.

Developing ability to function in Chinese business environment; familiarity with business correspondence, telecommunication, advertising, business terminology and stylistic features, information on intercultural communication, social and cultural background.

#### 334. Newspaper Chinese (3)

Prerequisite: Chinese 202.

Developing reading skills; cultural, historical, and linguistic information for understanding of newspaper Chinese. Conventions, special structures, and vocabulary; reading strategies such as skimming and scanning; background information on idioms and literary allusions used in newspapers.

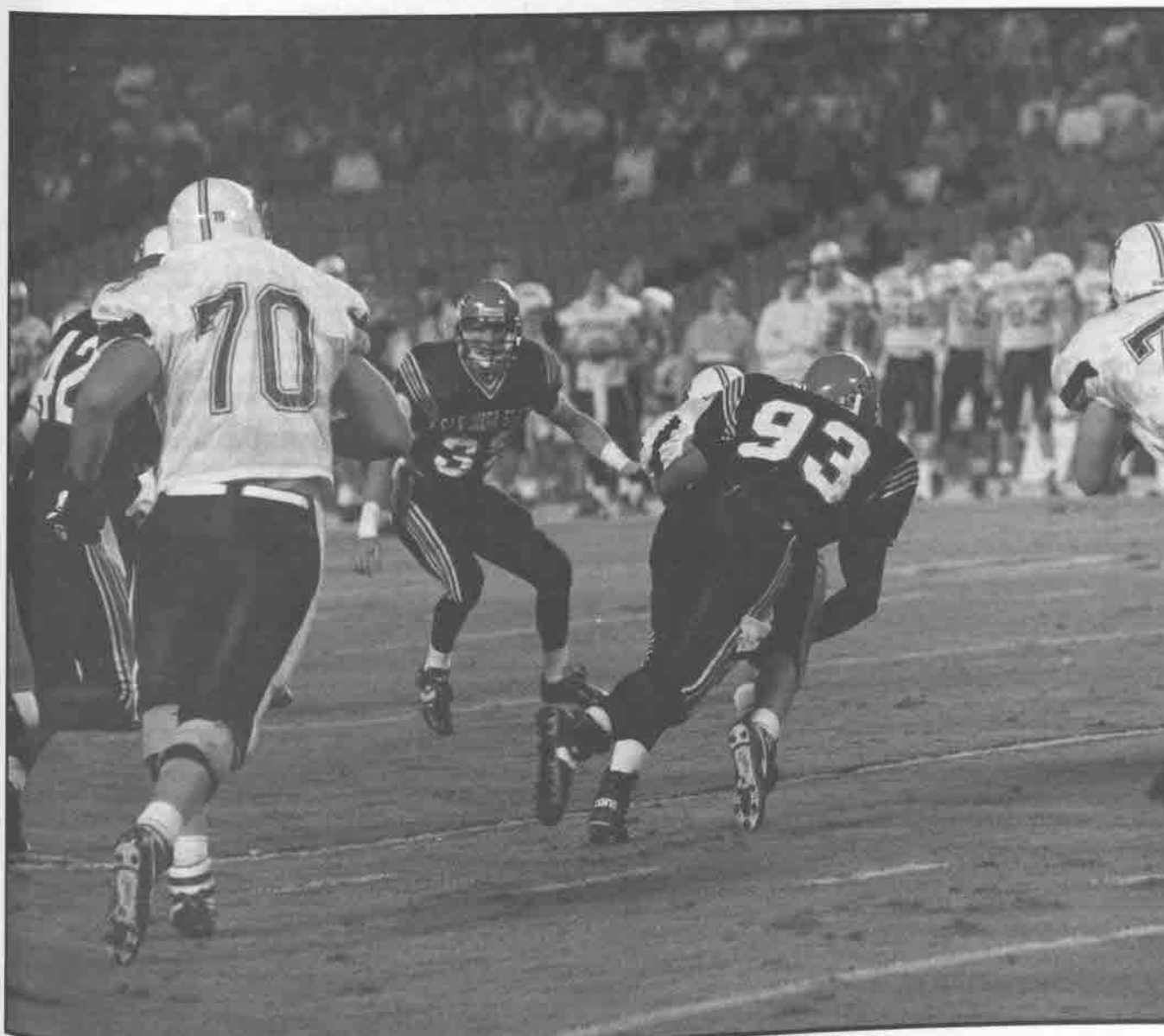
#### 496. Topics in Chinese Studies (1-4)

Topics in Chinese language, literature, culture, 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 eight units.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor.

Individual study. Maximum credit six units.





# Civil Engineering

In the College of Arts and Letters

OFFICE: Engineering 424  
TELEPHONE: (619) 594-6071

The undergraduate degree in Civil Engineering is accredited by the Accreditation Board for Engineering and Technology, Inc.

## Faculty

Emeritus: Capp, Johnson, Quiett, Stone  
Chair: Ponce  
Professors: Banks, Chang, Chou, Noorany, Ponce, Stratton, Supernak, Westermo  
Associate Professor: Sharabi  
Assistant Professor: Bayasi

## Offered by the Department

Master of Science degree in civil engineering.  
Major in civil engineering with the B.S. degree.

## Transfer Credit

No credit will be given for upper division engineering coursework taken at an institution having an engineering program which has not been accredited by the Accreditation Board for Engineering and Technology, Inc., unless the student successfully completes the first 12 units of engineering work attempted at this university. At that time, and upon recommendation of the department, credit will be given for the unaccredited work.

## General Education

Students will complete a minimum of 50 units in General Education, to include a minimum of nine upper division units taken after attaining junior class standing. At least three of the nine upper division units must be taken from Explorations; the remaining six units may be taken from Explorations or from specifically approved upper division course substitutions for Foundations areas B and C (Social and Behavioral Sciences and Humanities). No more than twelve units may be used for General Education credit from any one department or academic unit.

### I. Communication and Analytical Reasoning: 15 units

- A. Written Communication (6 units to include):
  - 1. Composition (3 units)
  - 2. Intermediate Composition (3 units)
- B. Oral Communication (3 units)
- C. Mathematics (6 units) applicable to General Education
  - Mathematics 150
  - Mathematics 151

### II. Foundations: 29 units

- A. Natural Science (17 units to include):
  - 1. Life Science (3 units)
  - 2. Physical Science (14 units)
    - Chemistry 200
    - Physics 195
    - Physics 196
    - Physics 197
- B. Social and Behavioral Sciences (3 units)
- C. Humanities (9 units to include three of the four areas 1., 2., 3., 4.)

### III. Explorations: 6 units

- A. Three units of upper division cultural diversity Explorations coursework from the area in Humanities not selected in Foundations.
- B. Three units of upper division social sciences coursework. Three units of a six-unit upper division American Institutions sequence from any department but History may be counted toward the Explorations requirement.

## The Major

Civil engineering is the application of engineering principles to the improvement of the human environment. The civil engineering major prepares students to design and supervise the construction of buildings, dams, roads, harbors, airports, tunnels, and bridges. It also provides training in the planning and construction of the complex systems that supply clean water to cities, remove sewage, control floods, and perform other functions which ensure continued health and safety.

Civil engineers are needed in both the private and public sectors. They are employed in the aerospace industry, usually as structural engineers; design and construction of roads, buildings, bridges, airports, dams and other structures; research and teaching at colleges and universities (with an advanced degree); public utilities and transportation; manufacturing; and offshore drilling, environmental pollution, and energy self-sufficiency. New job opportunities in civil engineering will result from growing demands in housing, industrial buildings, power generating plants, and transportation systems.

## Civil Engineering Major

With the B.S. Degree (Major Code: 09081)

All students in civil engineering pursue a common program of study in basic engineering and civil engineering fundamentals. In addition, students are provided with the opportunity to select a pattern of study to satisfy their areas of interest. This pattern of study is indicated in the sequence below as "professional electives" and may be selected from available courses in foundation, structural, environmental, transportation, or water resources engineering; computer programming; advanced surveying; engineering economics; and other areas. *The students' choice of elective courses must be made in consultation with their adviser and documented by the filing of an approved master plan during the first semester of their junior year.*

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**NOTE:** See following page for the recommended sequence of courses for the major in civil engineering.

## Civil Engineering

FRESHMAN YEAR			
Fall Semester	Units	Spring Semester	Units
Chem. 200, General Chemistry .....	5	Phys. 195, Principles of Physics .....	3
Math. 150, Single Variable Calculus ....	5	Math. 151, Calc. and Anal. Geom. ....	4
ME 190, Engineering Drawing .....	2	Engr. 140, Engr. Meas. Analysis .....	2
General Education .....	3	Engr. 120, Engr. Problem Analysis .....	2
		General Education .....	6
	15		17
SOPHOMORE YEAR			
Fall Semester	Units	Spring Semester	Units
Phys. 196, Principles of Physics .....	3	Phys. 197, Principles of Physics .....	3
Math. 252, Multivariable Calculus .....	4	EM 220, Dynamics .....	3
EM 200, Statics .....	3	EE 204, Principles of Elec. Engr. ....	3
ME 260, Engineering Materials .....	3	CE 218, Surveying for CE .....	3
General Education .....	3	General Education .....	3
	16		15
JUNIOR YEAR			
Fall Semester	Units	Spring Semester	Units
CE 301, Intro. to Solid Mechanics .....	3	EM 340, Fluid Mechanics .....	3
CE 302, Solid Mechanics Lab .....	1	EM 341, Fluid Mechanics Lab .....	1
Engr. 280, Methods of Analysis .....	3	CE 253, Geology for Engrs. ....	2
ME 352, Thermo. & Heat Transfer .....	3	CE 321, Structural Analysis I .....	4
General Education .....	6	CE 355, CE Environmental Studies ....	2
	16	General Education .....	6
			18
SENIOR YEAR			
Fall Semester	Units	Spring Semester	Units
CE 444, Applied Hydraulics .....	3	CE 421, Reinforc. Concrete Design .....	3
CE 462, Soil Mechanics .....	3	CE 495, Civil Engr. Design .....	3
CE 463, Soil Mechanics Lab .....	1	# Professional Electives .....	9
CE 481, Transportation Engr. ....	3	American Institutions .....	3
# Professional Electives .....	5		
American Institutions .....	3		
	18		18

# Approved as part of the student's master plan.

## Courses

### LOWER DIVISION COURSES

- 218. Surveying for Civil Engineers (3) I, II**  
Two lectures and three hours of laboratory.  
Prerequisites: Engineering 140 and Mathematics 151.  
Principles of plane surveying. Measurement of horizontal distance, difference in elevation, and angles. Traverse surveys and computations. Horizontal and vertical curves. Principles of stadia. Topographic surveys. Earthwork.
- 253. Geology for Engineers (2) I, II**  
One lecture and three hours of laboratory.  
Prerequisite: Civil Engineering 218.  
Earth materials, geologic processes, and methods of geologic interpretation of concern to engineers. Open only to students majoring in engineering. (Formerly numbered Geological Sciences 253.)

### UPPER DIVISION COURSES (Intended for Undergraduates)

- 301. Introduction to Solid Mechanics (3) I, II**  
Prerequisites: Engineering Mechanics 200 with a grade of C or better, and credit or concurrent registration in Engineering 280 and Engineering Mechanics 220.  
Mechanics of solid deformable bodies involving analytical methods for determining strength, stiffness, and stability of load-carrying members. (Formerly numbered Engineering Mechanics 301.)

### 302. Solid Mechanics Laboratory (1) I, II

Three hours of laboratory.  
Prerequisite: Credit or concurrent registration in Civil Engineering 301.  
Laboratory studies in solid mechanics. Experimental stress analysis. Experimental confirmation of theory. (Formerly numbered Engineering Mechanics 302.)

### 321. Structural Analysis I (4) I, II

Prerequisite: Civil Engineering 301 with minimum grade of C.  
Principles of mechanics applied to analysis of beams, frames, trusses, and three-dimensional frameworks. Graphical methods, influence lines, deflections; introduction to statically indeterminate structures and moment distribution.

### 355. Civil Engineering Environmental Studies (2) I, II

Prerequisites: Chemistry 200 and credit or concurrent registration in Engineering Mechanics 340.  
The application of civil engineering methodology to the solution of environmental problems.

### 421. Reinforced Concrete Design (3) I, II

Prerequisite: Civil Engineering 321 with minimum grade of C.  
Properties and characteristics of reinforced concrete; design of structural components. Introduction to plastic theory and limit design.

**423. Timber Design (2) I**

Prerequisite: Civil Engineering 321 with minimum grade of C.  
Physical and mechanical properties of wood. Sawn lumber, glulam, plywood. Design of various types of wood structures. Connection design.

**444. Applied Hydraulics (3) I, II**

Prerequisite: Engineering Mechanics 340.  
Open channel and pressure conduit flow, pumps and turbines, hydroelectric power, and water law.

**445. Applied Hydrology (3) II**

Prerequisite: Civil Engineering 444 with minimum grade of C.  
Basic hydrologic principles, hydrologic measurements, small and mid-size catchment hydrology, frequency analysis, regional analysis, reservoir, stream channel and catchment routing, hydrologic design.

**462. Soil Mechanics (3) I, II**

Prerequisites: Civil Engineering 253; Civil Engineering 301 with minimum grade of C, credit or concurrent registration in Engineering Mechanics 340, and concurrent registration in Civil Engineering 463.  
Mechanics of soils as they apply to engineering problems, soil classification, compaction, swelling, consolidation, strength and permeability. Applications to geotechnical engineering problems.

**463. Soil Mechanics Laboratory (1) I, II**

Three hours of laboratory.  
Prerequisite: Concurrent registration in Civil Engineering 462.  
Laboratory procedures of soil testing for engineering problems.

**465. Foundation Engineering (3) II**

Prerequisites: Civil Engineering 462 and 463 with minimum grades of C.  
Soil mechanics theories applied to the design of shallow and deep foundations; lateral pressure of soils, design of retaining walls.

**479. Construction Materials (3) II**

Two lectures and three hours of laboratory.  
Prerequisites: Civil Engineering 462 and 481.  
Selection, design and control of mixes of portland cement and asphalt concrete. Properties of these and other materials used in construction.

**481. Transportation Engineering (3) I, II**

Prerequisite: Civil Engineering 218 with minimum grade of C.  
Function and design of different modes of transportation for moving people and goods; and corresponding terminal facilities.

**482. Highway Engineering (3) I, II**

Two lectures and three hours of laboratory.  
Prerequisite: Civil Engineering 481 with minimum grade of C.  
Highway design, facility sizing, geometric design, drainage, earthwork, pavement design, traffic control devices, safety and environmental considerations.

**491. Construction Methods (3) I**

Prerequisite: Civil Engineering 321.  
Components and methods of construction including earthwork; foundations; wood, steel, and concrete construction; roofing and cladding; interior construction.

**492. Construction Engineering (3) II**

Prerequisites: Civil Engineering 491 and Engineering 430.  
Project oriented. Cost estimating; alternative cost-saving changes; critical path scheduling.

**495. Civil Engineering Design (3) I, II**

One lecture and six hours of laboratory.  
Prerequisites: Civil Engineering 321, 355, 444, 462, 481, and credit or concurrent registration in Civil Engineering 421.  
Application of engineering principles and design techniques to the design of civil engineering projects.

**496. 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 six units for any combination of Civil Engineering 496, 499 and 596.

**499. Special Study (1-3) I, II Cr/NC**

Prerequisites: Minimum grade point average of 3.0 and consent of instructor.

Individual study. Maximum credit six units for any combination of Civil Engineering 496, 499 and 596.

**UPPER DIVISION COURSES**  
(Also Acceptable for Advanced Degrees)

**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.  
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.  
Water and wastewater. Physical, chemical and biological methods of treatment. Advanced waste treatment processes. Water reclamation.

**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**  
Refer to the Graduate Bulletin.

# Classics

In the College of Arts and Letters

OFFICE: Adams Humanities 4231  
TELEPHONE: (619) 594-5186

**Faculty**

Emeritus: Burnett, Warren  
Chair: Genovese  
Professors: Eisner, Genovese, Hamilton, Schaber  
Assistant Professor: Gingras  
Lecturer: Chamberlain

**Offered by the Department of  
Classics and Humanities**

Major in classics with the B.A. degree in liberal arts and sciences.

Emphasis in classical humanities.

Emphasis in Greek.

Emphasis in Latin.

Emphasis in Greek and Latin.

Teaching major in classics (concentration in Latin) for the single subject teaching credential in foreign languages.

Minor in classics.

**The Major**

Classics literally means works of the first class or rank. As a university discipline, classics is the study of the languages, literatures, and civilizations of ancient Greece and Rome. Because of the basic truths and disciplined proportions cultivated by classical authors and artists, their simple yet powerful themes have assured their works lasting relevance. Classics students share the oldest European and American traditions of the humanities and the liberal arts. By studying the accomplishments of antiquity, they acquire the skills of free citizens able to choose their futures as truly educated persons, not merely as trained graduates.

Although the prime purpose of a major in classics is to satisfy the quest for values according to the intellectual and artistic legacy of Western civilization, classics graduates enjoy a range of professional career choices. Aside from preparation for graduate degrees in history, language, literature, and philosophy, as well as classics, majors in this field may look forward to renewed demands for teaching Latin and the classical world in the high schools.

Many classics majors find themselves incomparably prepared for law school, and with supplementary coursework in business, economics, or information systems, a classics graduate is very competitive in the business world. In fact, the best firms now seek out broadly educated graduates from challenging programs for their greater executive potential. Classics graduates also have an advantage in the world of the printed word as editors, librarians, journalists, and technical writers. Opportunities are also available in public relations, mass communications, government, and other fields where general knowledge, insight, perspective, and a facility with language serve not only the public good but one's own success.

**High School Equivalents**

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high school courses will not count as college credit toward graduation.

Secondary school language courses can be used as follows:  
1. The first **two years** of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.

2. The first **three years** of high school level language count as the equivalent of the first two college semesters, although students with

fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not receive credit for the first semester college course unless at least five years separate the last high school course and the first college course.

3. **Four years** of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

**Advising**

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

**Classics Major**

**With the B.A. Degree in Liberal Arts and Sciences**  
(Major Code: 15041)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in classics courses can apply to the degree.

**During their last semester all seniors majoring in classics shall submit to the department a portfolio of their scholarly work.**

A minor is not required with this major.

**Emphasis in Classical Humanities**

**Preparation for the Major.** Classics 101G-202G or 250G; or Classics 101L-202L or 250L; and six units from Classics 140, Comparative Literature 270A, History 105, Humanities 140, (14-16 units)

Students should note that a number of the upper division required and recommended courses listed below have lower division prerequisites, but these prerequisites do not constitute requirements per se for the completion of the major.

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through coursework for preparation for the major plus one language course in the major.

**Upper Division Writing Requirement.** Passing the University Writing Examination or one of the following courses with a grade of C (2.0) or better: English 503W, History 430W.

**Major.** A minimum of 30 upper division units to include Classics 320, 330, History 500A-500B, and Philosophy 411 (prerequisites are waived for students in this major); six units from classics, Anthropology 478, Art 568, Religious Studies 310, or Speech Communication 450; six units of Greek or Latin; and three units of Classics 599 as a directed senior project.

**Minor.** A minor in art history, comparative literature, English, foreign language, history, philosophy, or religious studies is recommended with this major.

**Emphasis in Greek**

**Preparation for the Major.** Classics 101G-202G or Classics 250G; and six units from Classics 140, Comparative Literature 270A, History 105, Humanities 140, (14-16 units)

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through coursework for preparation for the major plus one language course in the major.



**Upper Division Writing Requirement.** Passing the University Writing Examination or one of the following courses with a grade of C (2.0) or better: English 503W, History 430W.

**Major.** A minimum of 30 upper division units to include Classics 320 and History 500A; 9-12 additional units selected from classics, History 500B, or Philosophy 411; and 12-15 units of Greek.

**Minor.** A minor in art history, comparative literature, English, foreign language, history, philosophy, or religious studies is recommended with this major.

#### Emphasis in Latin

**Preparation for the Major.** Classics 101L-202L or Classics 250L; and six units from Classics 140, Comparative Literature 270A, History 105, Humanities 140. (14-16 units)

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through coursework for preparation for the major plus one language course in the major.

**Upper Division Writing Requirement.** Passing the University Writing Examination or one of the following courses with a grade of C (2.0) or better: English 503W, History 430W.

**Major.** A minimum of 30 upper division units to include Classics 320 and History 500B; 9-12 additional units selected from classics, History 500A, or Philosophy 411; and 12-15 units of Latin.

**Minor.** A minor in art history, comparative literature, English, foreign language, history, philosophy, or religious studies is recommended with this major.

#### Emphasis in Greek and Latin

**Preparation for the Major.** Classics 101G-202G or 250G, and 101L-202L or 250L; and six units from Classics 140, Comparative Literature 270A, History 105, Humanities 140. (22-26 units)

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through coursework for preparation for the major plus one language course in the major.

**Upper Division Writing Requirement.** Passing the University Writing Examination or one of the following courses with a grade of C (2.0) or better: English 503W, History 430W.

**Major.** A minimum of 30 upper division units to include Classics 320; nine additional units selected from classics, History 500A, 500B, or Philosophy 411; nine units of Greek; and nine units of Latin.

**Minor.** A minor in art history, comparative literature, English, foreign language, history, philosophy, or religious studies is recommended with this major.

### Classics Major

**For the Single Subject Teaching Credential in Foreign Languages With the B.A. Degree in Liberal Arts and Sciences (Major Code: 15041)**

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under Policy Studies or Teacher Education. For students completing the single subject teaching credential program, no more than 48 units in classics can apply to the degree.

This major may be used by students in policy studies or teacher education as an undergraduate major for the B.A. degree in liberal arts and sciences.

#### Emphasis in Latin

**Preparation for the Major.** Classics 101L-202L or Classics 250L; and six units from Classics 140, Comparative Literature 270A, History 105, Humanities 140. (14-16 units)

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through coursework for preparation for the major plus one language course in the major.

**Upper Division Writing Requirement.** Passing the University Writing Examination or one of the following courses with a grade of C (2.0) or better: English 503W, History 430W.

**Major.** A minimum of 30 upper division units to include Classics 301L, 302L, 320, 450L, 496L (3 units), 599L (Special Study in Latin Teaching Methods, 3 units), History 500B; nine units selected from Classics 310, 330, 340, 496C (maximum of 9 units for 496C and 496L), History 500A, or Philosophy 411.

**Minor.** A minor in art history, comparative literature, English, foreign language, history, philosophy, or religious studies is recommended with this major.

### Classics Minor

The classics minor consists of a minimum of 18 units, nine of which must be upper division, including 6-12 units from Classics 310, 320, 330, or 340; the remaining 6-12 units must be selected from courses in classics (Greek, Latin, or nonlanguage), Art 568\*, History 500A, 500B, Philosophy 411\*, or Religious Studies 310\*.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

\* Additional prerequisites required.

### Foreign Language Requirement for the B.A. Degree in Liberal Arts and Sciences

Students electing the study of Greek or Latin to fulfill the foreign language requirement for the Bachelor of Arts degree in liberal arts and sciences must successfully complete Classics 303G or 303L or the equivalent level of achievement. The usual sequence of course work is either Classics 101G, 202G, and 303G, OR Classics 101L, 202L, and 302L. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

### Courses

Classics includes courses in Greek and Latin as well as nonlanguage courses. Greek course numbers have a G suffix; Latin courses have an L suffix.

No credit will be given for Classics 101G, 202G, 303G, 304G taken out of sequence.

No credit will be given for Classics 101L, 202L, 301L, 302L taken out of sequence.

#### LOWER DIVISION COURSES

##### 101G. Elementary Greek I (5) I

Introduction to ancient Greek, emphasizing grammatical foundations of Attic and Koine prose. Not open to students who have completed three years of high school ancient Greek unless the third course was completed five or more years ago. Not open to students with credit in Classics 250G.

##### 101L. Elementary Latin I (5) I

Introduction to Latin, emphasizing grammatical foundations of classical prose. Not open to students who have completed three years of high school Latin unless the third course was completed five or more years ago. Not open to students with credit in Classics 250L.

##### 120. English from Latin and Greek (3)

General philology, emphasizing Latin and Greek bases and their English derivatives. Etymology, word analysis and construction, language history and structure. (Formerly titled "Latin and Greek Word Derivation.")

##### 140. Our Classical Heritage (3) I, II

Greek and Roman art, literature, and institutions as reflected in the Western tradition.

##### 202G. Elementary Greek II (5) II

Prerequisite: Classics 101G.

Continuation of Greek grammar with selections illustrating syntax and style. Not open to students who have completed four years of high school ancient Greek unless the fourth course was completed five or more years ago. Not open to students with credit in Classics 250G.

##### 202L. Elementary Latin II (5) II

Prerequisite: Classics 101L.

Continuation of Latin grammar with selections illustrating syntax and style. Not open to students who have completed four years of high school Latin unless the fourth course was completed five or more years ago. Not open to students with credit in Classics 250L.

##### 250G. Accelerated Elementary Greek (8) Extension S Offered only in Extension.

Intensive one-semester introduction to ancient Greek, emphasizing basic grammar, vocabulary, syntax. Preparation for Classics 303G. Not open to students who have completed three years of high school ancient Greek unless the third course was completed five or more years ago. Not open to students with credit in Classics 101G and 202G.

##### 250L. Accelerated Elementary Latin (8) Extension S Offered only in Extension.

Intensive one-semester introduction to Latin, emphasizing basic grammar, vocabulary, syntax. Preparation for Classics 303L. Not open to students who have completed four years of high school Latin unless the fourth course was completed five or more years ago. Not open to students with credit in Classics 101L and 202L.

##### 296. Experimental Topics (1-4)

Selected topics. 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.

C. Experimental Topics in Classics.

G. Experimental Topics in Greek.

L. Experimental Topics in Latin.

#### UPPER DIVISION COURSES (Intended for Undergraduates)

##### 301L. Readings in Latin Poetry (3) II

Prerequisites: Classics 202L or 250L, and completion of the General Education requirement in Foundations II.C., Humanities. General Education prerequisite not required for Classics majors.

Readings selected from classical Latin epic, lyric, elegy, comedy. Authors such as Vergil, Catullus, Ovid, Plautus. (Formerly numbered Classics 304L.)

##### 302L. Readings in Latin Prose (3) I

Prerequisites: Classics 301L, and completion of the General Education requirement in Foundations II.C., Humanities. General Education prerequisite not required for Classics majors.

Readings selected from classical Latin history, philosophy, oratory, letters. Authors such as Sallust, Cicero, Pliny the Younger. (Formerly numbered Classics 303L.)

##### 303G. Readings in Greek Prose (3) I

Prerequisites: Classics 202G or 250G, and completion of the General Education requirement in Foundations II.C., Humanities.

Readings selected from Greek history, philosophy, oratory, and New Testament. Authors such as Xenophon, Plato, Lysias, the Evangelists. Emphasis on rapid reading.

##### 304G. Readings in Greek Poetry (3) II

Prerequisites: Classics 303G, and completion of the General Education requirement in Foundations II.C., Humanities.

Readings selected from Greek epic, elegy, tragedy. Authors such as Homer, Sophocles, Euripides.

##### 310. Classical Mythology (3) I, II

Prerequisites: English 200 and nine units from General Education courses in Foundations II.C., Humanities.

Mythological elements in Greek and Roman art, literature, and religion.

##### 320. Classical Literature (3) I

Prerequisites: English 200 and nine units from General Education courses in Foundations II.C., Humanities. General Education prerequisite not required for Classics majors.

Reading in translation of Greek and Latin masterpieces. Emphasis on epic and prose genres. Authors such as Homer, Herodotus, Plato, Vergil, Apuleius. Literary and historical criticism.

##### 330. Classical Drama (3) II

Prerequisites: English 200 and nine units from General Education courses in Foundations II.C., Humanities. General Education prerequisite not required for Classics majors.

Reading in translation of Greek and Roman tragedies and comedies. Playwrights such as Aeschylus, Sophocles, Euripides, Aristophanes, Plautus, Seneca. Literary, dramatic, historical criticism.

##### 340. Classical Civilization (3)

Prerequisites: English 200 and nine units from General Education courses in Foundations II.C., Humanities.

Greek and Roman civilization from Bronze Age to Late Empire. Integration of history, philosophy, literature, the arts, and society.

##### 450L. Advanced Latin (3)

Prerequisite: Classics 304L.

Advanced reading in authors such as Vergil, Cicero, Ovid, Tacitus, Lucretius; or Latin prose composition. May be repeated with new title and content. Maximum credit six units.

##### 496. Topics in Classical Studies (1-4)

Topics in classical languages, literatures, cultures, and linguistics. May be repeated with new content. See Class Schedule for specific content. Maximum credit nine units. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

C. Topics in Classics.

G. Topics in Greek. Advanced reading in an author, genre, or period, or work in linguistics.

L. Topics in Latin. Advanced reading in an author, genre, or period, or work in linguistics.

#### UPPER DIVISION COURSE (Also Acceptable for Advanced Degrees)

##### 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 301L or 304G. For 599G: 304G. For 599L: 301L.

Individual study. Maximum credit six units.

C. Special Study in Classics.

G. Special Study in Greek.

L. Special Study in Latin.



# Communicative Disorders

In the College of Health and Human Services

OFFICE: Communications Clinic 118  
TELEPHONE: (619) 594-6774

Accredited by the American Speech-Language-Hearing Association and the Council on Education of the Deaf.

## Faculty

Emeritus: Earnest, Kopp, Plaff  
Chair: Kramer  
Professors: Allen, Christensen, Kramer, Müller, Nichols, Novak, Riedman, Seitz, Thile  
Associate Professors: Cheng, Thal  
Assistant Professors: Davies, Gutierrez-Ciellen, Williams  
Lecturers: Fischer, Launer  
Adjunct: Bartell, Sandlin, Schiff, Singh

## Offered by the Department.

Master of Arts degree in communicative disorders.  
Major in communicative disorders with the B.A. degree in liberal arts and sciences.  
Minor in communicative disorders.  
Certificate in professional services bilingual/multicultural.  
Special education specialist credential for the communication handicapped.  
Clinical-rehabilitative services credential.

## The Major

Speech and language pathology, audiology, and education of the hearing impaired are professions which identify, help, and study persons with communicative disorders. Those entering these professions should possess a strong motivation to help individuals with genetically, physically, or psychologically caused communication problems. Preparation involves acquiring the knowledge and skills necessary to assume responsibility for assessment, education and rehabilitation of the speech, language, and hearing handicapped.

The bachelor's degree serves as the basis for graduate and professional study in communicative disorders. There are no employment opportunities for holders of the bachelor's degree. A school credential or a master's degree, national certification and state licensure are needed for professional practice.

The undergraduate curriculum is broad, involving coursework on normal and disordered speech, language, and hearing, as well as clinical procedures. All communicative disorders majors cover a set of general studies in early coursework (16 units) before specialization (24 upper division units). Students interested in the communicative disorders program are advised to take college level courses in anatomy, biology, psychology, English, physiology, linguistics, physics, and mathematics. Studies leading to private practice, hospital work, industrial work, work in school settings, or preparation for the master's degree are similar in many ways; it is the area of specialization that serves to differentiate courses of study.

The communicative disorders minor is open to all majors but is strongly recommended for those in special education or the social and behavioral sciences who wish to broaden their competencies in a related applied discipline.

The master's degree is an advanced degree for those wishing to work professionally as a speech-language pathologist, speech and hearing scientist, audiologist and/or deaf educator.

The Bilingual Certificate Program provides the theoretical background and practical experience that will enable qualified speech-language pathologists to work effectively with children from bilingual and multicultural communities.

Positions in communicative disorders are available in many public and private settings working with the speech, language, and hearing impaired and the deaf-blind. Graduates with certification or licensure work in rehabilitation centers, schools, hospitals, private agencies, private practice, industry, research, and university teaching and research centers. Career opportunities are particularly good for minority, bilingual or bicultural persons.

## Communicative Disorders Major With the B.A. Degree in Liberal Arts and Sciences (Major Code: 12201)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in communicative disorders courses can apply to the degree.

A minor is not required with the major.

**Preparation for the Major.** Passing the Mathematics Department Placement Examination, Part IA; Communicative Disorders 106, 110, and 205; Physics 201; Psychology 101 and 260. (18 units)

Psychology 270 is recommended for students planning to apply for the graduate program in communicative disorders.

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to the section of this catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Communicative Disorders 396W with a grade of C (2.0) or better, or passing the University Writing Examination.

**Major.** A minimum of 24 upper division units in communicative disorders to include Communicative Disorders 320, 321, 322, 340, 340L, 500, and seven units of electives selected from Communicative Disorders 358, 358L, 450, 458, 458L, 459, 501, 505, 511, 512, 513, 517, 539, 542, 547, 550, 558.

## Communicative Disorders Minor

The minor in communicative disorders consists of 20 units in communicative disorders to include Communicative Disorders 104, 106, 205, 320, 321, 340\*, and one of the following: Communicative Disorders 322, 500, or 550. Communicative Disorders 341 is not required for the minor.

Prerequisites for the minor include Communicative Disorders 110, Physics 201, Psychology 101 and 260. (12 units.)

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

\* Prerequisites for this course waived for students in this minor.

## 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 levels.

Each credential has designated areas of specialization. Students wishing to prepare to be Teachers of the Deaf or Deaf-Blind are obliged to meet the requirements 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 or as Classroom Teachers of Severe Language Handicapped (or Aphasic) (Special Class Authorization) (SCA) pupils may pursue either the CH or C-RS Credential Program.

## Special Education Specialist Credential for the Communication Handicapped (Credential Code: 00461)

The Special Education Specialist Credential for the Communication Handicapped prepares students for an emphasis in one or more of the following areas of handicap:

Deaf and Severely Hard of Hearing  
Deaf-Blind  
Severe Oral Language (including aphasia)  
(Special Class Authorization) (SCA)  
Speech and Hearing

The Special Education 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 College of Education for specific requirements.
4. Students applying to the program at the postbaccalaureate level must satisfy the admission requirements of the department for classified graduate standing.
5. Completion of Special Education 500 and 501.

## Program

Persons interested in the Special Education Specialist Credential shall:

1. Concurrently or prior to completion of the specialist credential, complete the single subject credential (preliminary or clear) or the multiple subject credential (preliminary or clear). Students may choose to pursue either a. or b.:  
a. Major in Liberal Studies (offered by the College of Education) in conjunction with specified communicative disorders courses.  
b. Pursue a departmental major; complete specified prerequisites for the College of Education; pass the National Teacher Examination prior to entering the College of Education professional education sequence.
2. Complete a minimum of one year of study, including:  
a. The Special Education generic coursework: Special Education 500, 501.  
b. Courses outside of the Department of Communicative Disorders including Psychology 101, 260, Physics 201.  
c. Advanced work in the area of specialization in the Department of Communicative Disorders including:  
(1) Communication Handicapped Specialization generic coursework: Communicative Disorders 106, 205, 320, 321, 322, 340, 340L, 358, 500, 511, 512, 513, 953\*

\* Additional prerequisites required for this course.

(2) 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 an adviser.

3. A postbaccalaureate year (minimum of 30 semester units which may include courses applicable toward the master's degree if approved by the candidate's adviser) is required of all candidates.

## Clinical-Rehabilitative Services Credential (Credential Code: 00900)

Clinical-Rehabilitative Services (C-RS) Credentials are available in the following areas:

Language, Speech and Hearing (LSH)  
Audiology  
Severe Language Handicapped/Aphasic (SLH)  
(Special Class Authorization) (SCA)

A postbaccalaureate year (minimum of 30 semester units which may include courses applicable toward the master's degree if approved by the candidate's adviser) is required of all candidates. The following generic courses in Communicative Disorders are required: Communicative Disorders 106, 110, 205, 320, 321, 322, 340, 340L, 341, 500, 511, 517, 526, 546, and 630. Courses from other departments include Psychology 101 or Sociology 101; Psychology 260 or Biology 150; Psychology 330; Family Studies and Consumer Sciences 271 or 697; Physics 201; and Special Education 500 and 596\*.

The Advanced Specialization Program in Language, Speech and Hearing (LSH) requires the following additional courses: Communicative Disorders 501, 512, 513, 546, 614, 618, 619, 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 358, 512, 513, 542, 545, 547, 550, 600\*, 610, 611, 644, 647, 648 (Pediatrics), 656\*, 657, 929 and 933 (Audiology class placement).

\* See Department Credential Coordinator for options.  
\* Consent of instructor.

## 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 units of coursework, 30 units of which must be completed at the graduate level; 300 clock hours of supervised clinical experience, 150 graduate level; 300 clock hours of supervised clinical experience, 150 graduate level; 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 Hearing Impaired 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 nonpublic 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, 526, 545, 546, 556, 626, 645, 646, 656, 933 are required to purchase professional liability insurance.

### Courses

#### LOWER DIVISION COURSES

#### 104. Voice and Articulation (3) I, II

Vocal and articulatory dynamics as bases of standard and non-standard oral language patterns. Practice in recognition and self-analysis of such patterns. Introduction to use of the International Phonetic Alphabet in broad transcription.

#### 106. Communicative Disorders (3) I, II

Orientation to field of speech pathology and audiology. Survey of communicative disorders, covering all areas of exceptionality, normal growth and development as it relates to speech and language. Waiver of this course is permitted only upon satisfactory passage of a competency examination.

#### 107. Management of Clinical Activities (1) I, II Cr/NC

Assisting in the operations of the speech and hearing clinic. Maximum credit two units.

#### 108. Oral Communication Laboratory (1) I, II Cr/NC

Two hours of laboratory.  
Prerequisite: Consent of instructor.  
Individual laboratory training on specific speech problems. Student chosen through testing by Department of Communicative Disorders.

#### 110. Observation: Communicative Disorders (2) I, II Cr/NC

One lecture and two hours of observation per week.  
Prerequisites: Credit or concurrent registration in Communicative Disorders 106; affidavit for Certificate of Clearance.  
Observation and discussion of diagnosis and remediation with speech-disordered and hearing-impaired children in varied clinical settings. Observation in the public schools. Satisfies credential and certification requirements.

#### 205. Introduction to Audiology (3) I, II

Prerequisites: Communicative Disorders 110 and credit or concurrent registration in Physics 201.  
Audiology in diagnosis and rehabilitation of hearing impairment, medical practice, hearing conservation and research. Includes physics of sound, decibel, and ear anatomy as applied to fundamentals of audiologic assessment and tuning fork tests.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 305. Speech and Language Development and Communication Disorders (3) I, II

Normal development and processes of speech, language and hearing. Identification, prevention and remediation of speech, hearing and language disorders. Five hours of observation required. Not open to communicative disorders majors.

#### 320. Phonetics (3) I, II

Two lectures and three hours of laboratory.  
Prerequisite: recommended: Communicative Disorders 104.  
Auditory, kinesthetic and visual analysis of the sounds of the English language, including regional and foreign dialect and disordered speech. Competency in I.P.A. broad transcription and introduction to narrow transcription.

#### 321. Anatomy, Neurology, and Physiology of Speech (4) I, II

Three lectures and three hours of laboratory.  
Prerequisite: Biology 150 or Psychology 260. Recommended: Credit or concurrent registration in Communicative Disorders 106.  
Anatomy and physiology of the speech-related structures of the head, neck and thorax and nervous system which activates them. Laboratory exercises and demonstrations using charts, models, histological materials and cadavers.

#### 322. Psychological Foundations of Communicative Disorders (3) I

Prerequisites: Communicative Disorders 106; Psychology 101.  
Recommended: Credit or concurrent registration in Psychology 330.  
Conceptual and theoretical bases for understanding communication as a psychological process determined by principles of learning within social contexts. Application of theories of personality, behavior and cognitive social learning to speech and language development, pathology, assessment and remediation. For students in all areas of communicative disorders.

#### 340. Audiometry: Principles (3)

Prerequisites: Communicative Disorders 205, Physics 201, Psychology 260 and concurrent registration in Communicative Disorders 340L.  
Anatomy and physiology of the human ear, theories of hearing, transmission, measurement of sound, medical aspects, pathology and surgery of the ear, survey of current audiometric techniques and diagnostic implications of basic test battery.

#### 340L. Techniques of Audiometry (1) I, II

Three hours of laboratory.  
Prerequisite: Credit or concurrent registration in Communicative Disorders 340.  
Laboratory experience with pure tone, speech, and impedance audiometric tests. Audiological competencies needed by nurses for the California School Audiometrist Certificate. (Formerly offered as a part of Communicative Disorders 341.)

#### 341. Hearing Screening of Children (1) I, II

Three hours of laboratory.  
Prerequisite: Communicative Disorders 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.

#### 357. Fieldwork with the Deaf (1-2) I, II Cr/NC

Two hours of activity per unit of credit and one hour of staffing.  
Prerequisite: Credit or concurrent registration in Communicative Disorders 106. Recommended: Communicative Disorders 205.  
Field observation and participation under supervision in school settings with small groups of hearing impaired youngsters. Maximum credit three units.

#### 358. Beginning Sign Language (3) I, II

Prerequisites: Demonstrated professional need and consent of instructor. Recommended: Communicative Disorders 106 or 205; concurrent registration in Communicative Disorders 357 and 358L.  
Receptive and expressive sign language skills. American Sign Language (ASL) and Sign Language Systems.

#### 358L. Beginning Sign Language Laboratory (1) I, II

Prerequisite: Concurrent registration in Communicative Disorders 358.  
Practice and review of basic sign language skills, including community site projects.

#### 396W. Writing in Health and Human Services (3) II

Prerequisites: An introductory level course from one department or school within the College of Health and Human Services. 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; grade report or copy of transcript.  
Theory and practice of clinical writing, including reports, individual educational and therapeutic plans, communication samples, and educational ethnography.

#### 450. Introduction to Deaf Culture (3) I

Prerequisite: Credit or concurrent registration in Communicative Disorders 358.  
Sociolinguistic research within the American deaf community. Observation of educational and social settings for deaf individuals. Focus on American sign language research, evolution of deaf culture, and current social practices.

#### 458. Total Communication for Teachers of the Hearing Impaired (2)

Prerequisites: Communicative Disorders 358 and 358L. Recommended: Concurrent registration in 458L.  
Intermediate level course in the use of total communication with emphasis on developing formal and informal nonverbal communication skills.

#### 458L. Total Communication Laboratory (1)

Three hours of laboratory.  
Prerequisites: Communicative Disorders 358 and 358L; credit or concurrent registration in Communicative Disorders 458.  
Laboratory experience to develop receptive and expressive total communication skills. Maximum credit two units.

#### 459. Fingerspelling (1) I

Prerequisite: Communicative Disorders 358.  
Instruction and practice in proper formation, positioning, rhythm, and pace associated with fingerspelling.

#### 496. Topics in Communicative Disorders (1-3) I, II

Study of some problem in communicative disorders. 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 six units.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 500. Language Structure (3)

Prerequisites: Communicative Disorders 106 and 320. Recommended: Linguistics 101.  
Systematic study of the design features of language as they relate to communication behavior. Focus on role of language structure in disordered communication. (Formerly numbered Communicative Disorders 531.)

#### 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. (Formerly numbered Communicative Disorders 401.)

#### 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. (Formerly numbered Communicative Disorders 422.)

#### 511. Speech Reading and Auditory Training (3)

Prerequisites: Communicative Disorders 320 and 340; competency examination. Recommended: Communicative Disorders 357, 500 and 513.  
Theory and methods of speech reading; auditory rehabilitation methods including survey of amplification systems. (Formerly numbered Communicative Disorders 551.)

#### 512. Articulation Disorders and Methods (3)

Prerequisites: Communicative Disorders 320, 321, 340, 500.  
Significant theories and research in prevention and remediation of articulatory disorders. Includes emphases on speech habilitation of hearing impaired, cognitive and motor processing. (Formerly numbered Communicative Disorders 552.)

#### 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. (Formerly numbered Communicative Disorders 553.)

#### 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. (Formerly numbered Communicative Disorders 527.)

#### 526. Clinical Practice in Speech-Language Pathology (1) I, II, S

Three hours of laboratory.  
Prerequisites: Consent of department; Communicative Disorders 110; and grade of C or better in Communicative Disorders 512, 513, and 517.  
Supervised observation and/or practice with representative speech and language problems. Up to two units may be taken concurrently; maximum credit three 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.

**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, and special audiologic testing and with hearing aid evaluation. One unit represents two hours of clinical contact and one hour of staffing per week. Up to three units may be taken concurrently; maximum credit three units.

**546. Clinical Practice with Hard of Hearing (1) I, II, S**

Three hours of laboratory.  
Prerequisites: Grade of C or better in Communicative Disorders 511, 512, 513.  
Supervised practicum in aural habilitation with hard-of-hearing clients. One unit represents two hours of clinical contact and one hour of staffing per week. Up to three units may be taken concurrently; maximum credit three units.

**547. Hearing Conservation (2-3) II**

Prerequisite: Communicative Disorders 340L.  
Module I: Core information (noise measurement, analysis, reduction, its effect on hearing conservation); application to school hearing conservation programs. (2 units.)  
Module II: Damage risk criteria and methods of hearing protection; application of core information to industrial settings. (1 unit.)  
Students may elect Module I (2 units) or Modules I and II (3 units).

**550. Education of the Hearing Impaired (3) II**

Prerequisite: Communicative Disorders 106.  
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 357, 358; credit in two of the following and concurrent registration in the third: Communicative Disorders 511, 512, 513. Admission to clinical practicum includes successful completion of competency examination.  
Supervised therapy with representative problems found in the hearing impaired population. Maximum one unit first semester; maximum credit two units.

**558. Advanced Sign Language (2) I, II**

Prerequisite: Communicative Disorders 458.  
Theory of sign language for the classroom interpreter. Emphasis on conceptual sign, signed idioms and appropriate usage for the academic setting.

**562. Oral Communication for the Hearing Impaired (3)**

Prerequisites: Communicative Disorders 512 and 550.  
Current methods for developing oral/aural communication skills with hearing-impaired children and youth. Differential problems of acquisition of communicative competence. Assessment and intervention procedures for classroom and clinical settings.

**568. Multicultural Perspectives in Communication with Deaf Individuals (2)**

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**  
Refer to the Graduate Bulletin.

# Comparative Literature

In the College of Arts and Letters

OFFICE: Adams Humanities 4158  
TELEPHONE: (619) 594-5327

## Faculty

Faculty assigned to teach courses in comparative literature are drawn from departments in the College of Arts and Letters.

## Offered by the Department of English and Comparative Literature

Major in comparative literature with the B.A. degree in liberal arts and sciences.

Teaching major in comparative literature for single subject teaching credential in English.

Minor in comparative literature.

## The Major

Comparative literature is the study of literature from around the world, transcending the restrictions of national and linguistic boundaries. Traditionally, comparative study has been based on literary movements, periods and lines of influence, as well as on genres, themes, myths, and legends. In recent years comparative literature has come to include the comparison of literature with other areas of human experience.

Comparative literature offers students the opportunity to study an extremely broad range of literary subjects from various cultures throughout the world. Courses are offered in European literature from ancient to contemporary times; in the literature of Asia, Africa, and Latin America; in folk literature, legend, fantasy, and science fiction; in literary theory; and in special topics such as travel literature, literature and existentialism, Japanese literature and film, and rock poetry. All reading is done in English translation (majors choosing Plan II, however, are also required to take courses in foreign language literature).

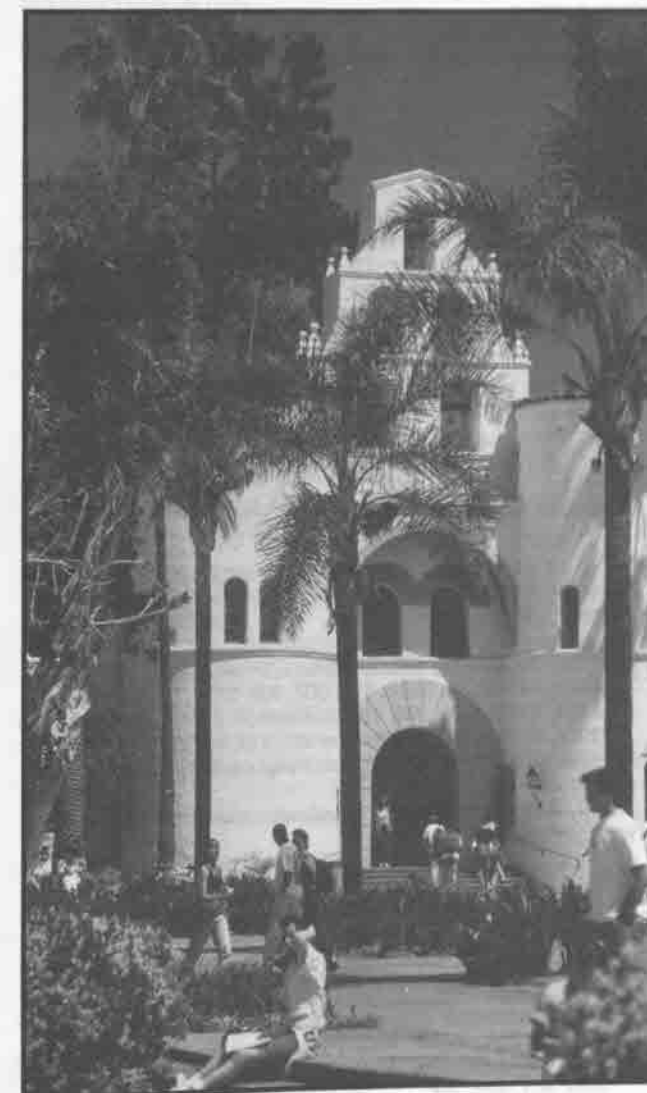
Because the field covers so wide a range, the comparative literature student does not acquire a comprehensive knowledge of any basic list of "great works." Such a list, for all of world literature, would be far too long. Instead, students learn various approaches to literature, along with specialized knowledge of areas which particularly interest them.

Comparative literature is an excellent major for anyone desiring a broadening and enriching liberal arts education. Its application to foreign cultures is particularly useful for careers in foreign service and international trade. Translating, editing and publishing, journalism, broadcasting, and film are other possibilities, as well as advertising and public relations, politics, writing, library work, and criticism. Comparative literature is also, like English, an excellent foundation for careers in the professions, especially law.

The comparative literature major may also be used as preparation for the single subject (high school) teaching credential in English. Graduate study in comparative literature may lead to teaching at more advanced levels. The Plan II major has been specifically designed for students who plan to do graduate work in this area.

## Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.



## Comparative Literature Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 15031)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in comparative literature and English courses can apply to the degree.

A minor is not required with this major.

**Preparation for the Major.** Fifteen units to include Comparative Literature 210, 270A, 270B, and six units selected from English 220, 250A, 250B, 260A, 260B, 280; Classics 140; Humanities 130, 140; Philosophy 103; Religious Studies 101; and Women's Studies 205.



**Foreign Language Requirement. Plan I:** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Plan II:** See below.

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 500W, 508W, 581W, 584W with a grade of C (2.0) or better.

**Major. Plan I:** General literature. For students who do not intend to enter a graduate program in comparative literature. This program is suitable as a teaching major for students pursuing the single subject teaching credential in English.

**Required:** A minimum of 33 upper division units to include 18 units in one of the three areas (A, B, and C) below; nine units in American literature, British literature, or creative writing; and an additional six units in comparative literature.

**Plan II:** For students who intend to enter a graduate program in comparative literature.

**Required:** A minimum of 33 upper division units to include 18 units in one of the three areas (A, B, and C) below: Comparative Literature 582; six units in a foreign language literature (read in the original language); and six units in another literature (which may be English or American) read in the original language. It is strongly recommended that even those students choosing English or American as their second literature attain competency in a second foreign language.

**A. European Literature.** Eighteen units selected from the following:

1. Comparative Literature 510, 511, 512, 514, 526.
2. Up to six units in other, variable-content comparative literature courses with appropriate content approved by the departmental adviser.
3. Up to six units from Anthropology 440; Art 371, 557, 558, 559, 573A, 573B, 574, 575; Classics 310, 320, 330; History 407A, 407B, 440, 503A, 503B, 506, 507, 509, 510A, 510B, 511A, 511B, 512A, 512B, 526, 528; Humanities 401, 402, 403, 404; Music 351A, 351B, 351C; Philosophy 412, 413, 414, 506, 508; Political Science 301A, 301B, 302, and Religious Studies 314, 316, 318.

**B. Asian, African, and Latin American Literature.** Eighteen units selected from the following:

1. Comparative Literature 440, 445, 455, 460, 530.
2. Up to six units in other, variable-content comparative literature courses with appropriate content approved by the departmental adviser.
3. Up to six units from Anthropology 442, 449; Art 562; Asian Studies 458, 459, 596 (with appropriate content approved by the departmental adviser); History 415A, 415B, 420, 421, 473A, 473B, 475A, 475B, 555, 556, 557, 558, 561A, 561B, 565; Humanities 450, 460; Music 351E, 351F; and Religious Studies 340, 401, 403, 506.

**C. Comparative Literary Theory (Theory of literature, genre study, literature in relation to other arts and disciplines).** Eighteen units selected from the following:

1. Comparative Literature 561, 562, 563, 580, 582, 594, 595. *Note:* Students following Plan I must include Comparative Literature 582 under area C. For Plan II students, this course is required separately and will not be counted among the 18 units under area C.
2. Up to six units in other, variable-content comparative literature courses with appropriate content approved by the departmental adviser.
3. Up to six units from Drama 460A, 460B; English 493, 507 (strongly recommended), 570, 571, 573, 578; Music 592; Philosophy 334, 541, 542; Religious Studies 360; and Women's Studies 352, 553.

## Comparative Literature Major

**For the Single Subject Teaching Credential in English With the B.A. Degree in Liberal Arts and Sciences (Major Code: 15031)**

For a description of the single subject teaching credential in English with a major in comparative literature, refer to this section of the catalog under English. For students completing the single subject teaching credential program, no more than 48 units in English and comparative literature courses can apply to the degree.

## Comparative Literature Minor

The minor in comparative literature consists of a minimum of 15 units in comparative literature, 12 units of which must be in upper division courses. The 12 units of upper division work must be selected, with adviser's approval, from within one of the following interest areas:

**European Literature:** Comparative Literature 510, 511, 512, 514, 526.

**Asian, African, and Latin American Literature:** Comparative Literature 440, 445, 455, 460, 530.

**Comparative Literary Theory (Theory of literature, genre study, literature in relation to other arts and disciplines):** Comparative Literature 561, 562, 563, 580, 582, 594, 595.

In addition to the following variable content courses may be used in any of the above categories when they are appropriate: Comparative Literature 490, 571, 577, 596.

The comparative literature minor is not available to students majoring in English.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

**210. Introduction to Comparative Literature (3) Cr/NC**

Introductory study of comparative literature, its current status, its historical development, range of comparative approaches. Generally includes guest presentations by various members of the comparative literature faculty.

**270A-270B. World Literature (3-3) I, II**

Comparative study of selected major works from various continents and cultures, with emphasis on the way literature deals with enduring human problems and values. Semester I: prior to 1500; Semester II: since 1500. 270A is not a prerequisite to 270B, and either may be taken separately.

**296. Topics in Comparative Literature (3) I, II**

An introduction to the subject matter of comparative studies in literature. Focus on a specific movement, theme, figure, genre, etc. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

### UPPER DIVISION COURSES (Intended for Undergraduates)

**405. The Bible as Literature (3) I, II**

Same course as English 405.  
Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.  
Prose and poetry of the King James version.

**440. African Literature (3)**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
Comparative study of African literature as well as Black literature of North and South America and the Caribbean; intercontinental influences and the theme of Black identity.

**445. Modern Latin American Literature (3) I, II**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
Reading selections from major Latin American authors.

**455. Classical Asian Literature (3) I**

Prerequisites: Comparative Literature 270A or 270B or English 220; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Survey of one or more Asian literatures from the classical period of China, Japan, India, Korea, the Philippines, Vietnam, and others. Not open to students with six units of credit in Comparative Literature 430.

**460. Modern Asian Literature (3) II**

Prerequisites: Comparative Literature 270A or 270B or English 220; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Survey of one or more Asian literatures from the modern period of China, Japan, India, Korea, the Philippines, Vietnam, and others. Not open to students with six units of credit in Comparative Literature 430.

**470. Folk Literature (3)**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Studies in the ballad, bardic poetry, oral and popular literature and folklore.

**490. Literary Movements (3)**

A movement or theme in world literature—such as symbolism, existentialism, revolution, or romantic love. See Class Schedule for specific content.

**499. Special Study (1-3) I, II Cr/NC**

Prerequisites: Consent of instructor and approval of department chair.

Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

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.

**510. Medieval Literature (3)**

Representative selections from authors of the Middle Ages.

**511. Continental Renaissance (3)**

Representative selections from authors of the Renaissance period in continental Europe.

**512. Seventeenth and Eighteenth Century European Literature (3)**

Selected works by European writers prior to 1800.

**514. Modern European Literature (3)**

Selected works by European writers of the twentieth century.

**526. Modern Jewish Literature (3)**

Prerequisite: Upper division standing.  
Selected works by Jewish authors from the last half of the nineteenth century to the present, with emphasis on the Jewish literary tradition in Europe.

**530. Topics in Asian Literature (3) I**

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) I, II**

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.



# Computer Science

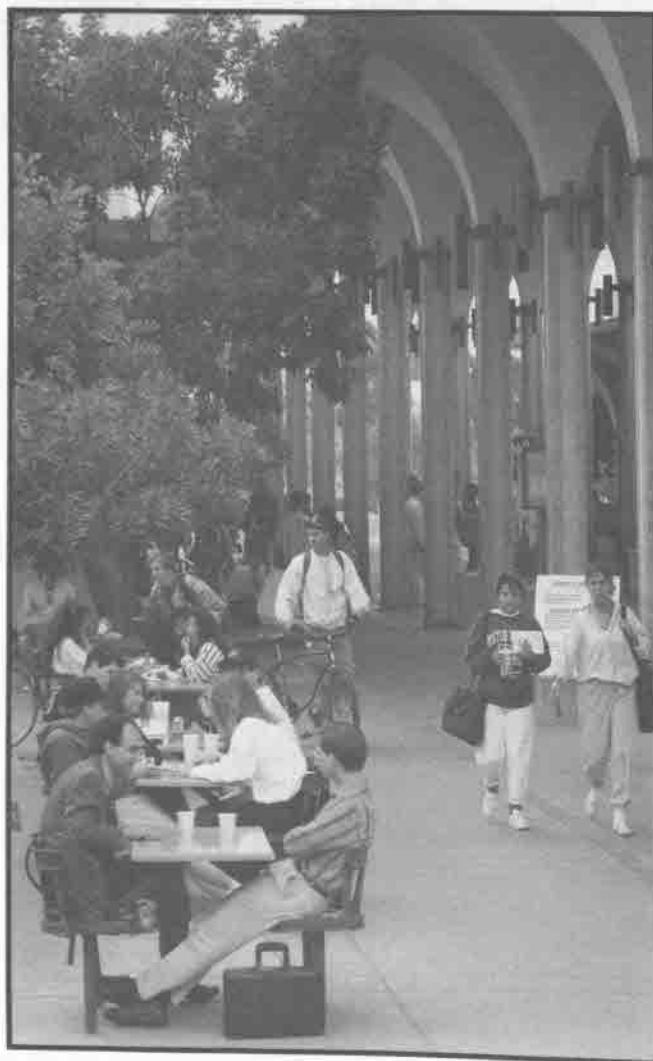
In the Department of Mathematical Sciences  
In the College of Sciences

## Faculty

Chair: Elwin  
Coordinator for Computer Science: Beck  
Professors: Anantha, Baase, Beck, Carroll, Deaton, Donald, Marovac, Swiniarski, Vuskovic  
Associate Professors: Eckberg, Stewart, Tarokh, Vinge, Whitney

## Offered by the Department of Mathematical Sciences

Master of Science degree in computer science.  
Major in computer science with the B.S. degree in applied arts and sciences.  
Minor in computer science.



OFFICE: Business Administration/Mathematics 203  
TELEPHONE: (619) 594-6191

## Computer Science Major

With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 07011)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required for this major.

**Preparation for the Major.** Computer Science 107, 108, 237; Mathematics 150 and 151, or 155 and 156 and 157, and 245, 254; and Physics 195, 195L, 196, 196L, or Chemistry 200, 201, or Biology 201, 202. (32-34 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units to include Computer Science 310, 320, 370, 530, 560, 570; at least one course selected from Mathematics 541, 550, 551A, or 579; and 15 units of electives selected with the approval of a computer science major adviser. The student must complete an outline for the major and file a copy signed by a major adviser with the Evaluations Office.

## Computer Science Minor

The minor in computer science consists of a minimum of 18-24 units in computer science and mathematics to include Computer Science 107, 108; and at least 12 upper division units, or at least nine upper division units if the student completes a full calculus sequence, i.e., Mathematics 121 and 122, or 150 and 151, or 155 and 156 and 157. The courses selected are subject to the approval of the minor adviser.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

#### 101. Computers and Computing (3)

Two lectures and three hours of laboratory.  
Prerequisite: Satisfactory completion of the Mathematics Departmental Placement Examination, Part IA.

History and ethics of computing. Use of word processors, spreadsheets, and database management systems. Programming in a procedural language. Use of widely available personal computers and timesharing computers. Not open to students with credit in Computer Science 107.

#### 106. Introduction to Computer Programming with FORTRAN (3) (CAN CSCI 4)

Prerequisite: Satisfaction of the Entry-Level Mathematics requirement. **Proof of completion of prerequisite required:** Copy of ELM score or verification of exemption; copy of Placement Examination score; grade report or copy of transcript.

Introduction to problem solving on a computer, design of algorithms, and use of FORTRAN language. Extensive programming (Formerly numbered Mathematics 106.)

#### 107. Introduction to Computer Programming (3) I, II, S

Prerequisite: Satisfaction of the Entry-Level Mathematics requirement. **Proof of completion of prerequisite required:** Copy of ELM score or verification of exemption; copy of Placement Examination score; grade report or copy of transcript.

Programming methodology and problem solving. Basic concepts of computer systems, algorithm design and development, data types, program structures. Extensive programming in Pascal. (Formerly numbered Mathematics 107.)

#### 108. Intermediate Computer Programming (3) I, II, S

Prerequisites: Qualification on the Mathematics Departmental Placement Examination, Part IA; and Computer Science 107. **Proof of completion of prerequisites required:** Copy of ELM score or verification of exemption; copy of Placement Examination score; grade report or copy of transcript.

Further training in program design and development. Introduction to data structures: stacks, queues, linear lists, trees, sets. Pointers and recursion. Implementation and analysis of sorting and searching algorithms. Extensive programming in Pascal. (Formerly numbered Mathematics 108.)

#### 220. UNIX and the C Programming Language (3)

Prerequisite: Computer Science 108.

Introduction to the UNIX operating system: shell programming, major system services and utilities. The C language: its features and their significance in the UNIX programming environment.

#### 237. Machine Organization and Assembly Language (3) I, II, S

Prerequisite: Computer Science 108. **Proof of completion of prerequisite required:** Copy of ELM or verification of exemption; copy of Placement Examination score; grade report or copy of transcript.

General concept of machine and assembly language, including data representation, looping and addressing techniques, subroutine linkage, macros, interrupts, and traps. (Formerly numbered Mathematics 137.)

#### 296. Experimental Topics (1-4)

Selected topics. 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.

#### 299. Special Study (1-3)

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 310. Data Structures (3) I, II, S

Prerequisites: Computer Science 108 and Mathematics 245.  
Representation of and operations on basic data structures. Arrays, linked lists, stacks, queues, orthogonal lists, trees; recursion; hash tables; dynamic storage management and garbage collection. (Formerly numbered Mathematics 370 and 570.)

#### 320. Programming Languages (3) I, II

Prerequisite: Computer Science 108.  
Principles of high-level programming languages, including formal techniques for syntax specification and implementation issues. Language concepts studied through at least two imperative languages (one static and one block structured) and at least one applicative language. (Formerly numbered Mathematics 372.)

#### 370. Computer Architecture (3) I, II

Prerequisite: Computer Science 237.  
Communication between the components of a computer. Microprogramming. Programming with coroutines, traps, and interrupts. Characteristics of I/O devices and media. I/O programming.

#### 420. Ada and Programming Methodologies (3)

Prerequisite: Computer Science 310.

Introduction to programming in Ada. Advanced concepts and features present in a variety of modern programming languages and programming methodologies as applied in Ada. (Formerly numbered Mathematics 480.)

#### 496. Experimental Topics (1-4)

Selected topics. 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.

#### 498. Directed Readings in Computer Science Literature (1)

Prerequisite: Credit or concurrent registration in the upper division computer science course in which readings are to be undertaken.

Individually directed readings in computer science literature. May be repeated for a maximum of three units, taken each time from a different instructor.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 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. (Formerly numbered Mathematics 582.)

#### 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. (Formerly numbered Mathematics 575.)

#### 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. (Formerly numbered Mathematics 580.)

#### 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. (Formerly numbered Mathematics 586.)

#### 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. (Formerly numbered Mathematics 576.)

#### 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 systems and natural language translation. Implementation and use of chaining, recursion, lists. Substantial programming practice. (Formerly numbered Mathematics 577.)



**553. Neural Networks (3)**

Prerequisites: Computer Science 320 and Mathematics 254.  
Principles of neural networks, their theory and applications.

**554. Aspects of Interactive Computer Graphics (3)**

Prerequisites: Computer Science 310 and Mathematics 254.  
Theoretical and practical concepts and software requirements related to use of interactive computer graphics. Mathematical functions used in 3D graphics; data structures and languages both for programming graphical systems and for communication between a user and a graphical system. (Formerly numbered Mathematics 584.)

**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.

**558. Computer Simulation (3)**

Prerequisites: Computer Science 310 and Mathematics 550.  
Methodology of simulation for discrete and continuous dynamic systems. State-of-the-art programming techniques and languages. Statistical aspects of simulation. Students will design, program, execute, and document a simulation of their choice. (Formerly numbered Mathematics 583.)

**560. Algorithms and Their Analysis (3) I, II**

Prerequisites: Computer Science 310 and Mathematics 245.  
Algorithms for solving frequently occurring problems. Analysis techniques, lower bounds. Sorting, merging, graph problems (shortest paths, depth-first and breadth-first search), and others. NP-complete problems. (Formerly numbered Mathematics 578.)

**562. Automata Theory (3)**

Prerequisite: Mathematics 245 or 521A.  
Definition 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. (Formerly numbered Mathematics 573.)

**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. (Formerly numbered Mathematics 574.)

**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. (Formerly numbered Mathematics 571.)

**570. Operating Systems (3) I, II**

Prerequisites: Computer Science 310, 370, and knowledge of the C programming language.  
File systems, processes, CPU scheduling, concurrent programming, memory management, protection. Relationship between the operating system and underlying architecture. (Formerly numbered Mathematics 585.)

**572. Microprocessor Architecture (3)**

Prerequisites: Computer Science 370 and knowledge of the C programming language.

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.

**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. (Formerly numbered Mathematics 588.)

**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.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**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

# Counseling and School Psychology

In the College of Education

OFFICE: North Education 179

TELEPHONE: (619) 594-6109

Accredited by the California Commission on Teacher Credentialing.

**Faculty**

Emeritus: Bruce, Hawley, Howard, Malcolm, Manjos, Ramage  
Chair: Robinson-Zañartu

Professors: Carnevale, Cook, Cummins, Feinberg, Miller, Senour

Associate Professors: Ingraham, Robinson-Zañartu, Terry, Thompson, Velasquez

Assistant Professors: Grant-Henry, Johnson, Rocha-Singh

Lecturer: Rowell

**Offered by the Department**

Master of Arts degree in education with a concentration in counseling.

Master of Science degree in counseling.

Pupil personnel services (school counseling) credential.

School psychology credential.

**Courses****UPPER DIVISION COURSES  
(Intended for Undergraduates)****310. Group Leadership in Educational Settings (3)**

Two lectures and two hours of activity.

Prerequisites: Anthropology 102 or Psychology 101 or Sociology 101; and completion of 60 units.

Identifying, classifying, and analyzing the components essential to the development of leadership in educational settings. Simulation activities assist students in acquisition of group leadership skills. Not applicable to a B.S. degree in Business Administration. (Formerly numbered Counselor Education 310.)

**400. Counseling and the Helping Professions (3) I, II**

Serves as an introduction to the field of counseling and introduces the student to those professions considered to be helping professions. (Formerly numbered Counselor Education 400.)

**401. Theories and Processes of Personal Integration (3) I, II**

Perspectives of and strategies for developing and maintaining a functional balance among intellectual, physical, emotional, and interpersonal aspects of daily living. (Formerly numbered Counselor Education 401.)

**496. Experimental Topics (1-3)**

Selected topics. 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. (Formerly numbered Counselor Education 496.)

**499. Special Study (1-3) I, II**

Prerequisite: Consent of instructor. Open only to senior and graduate students in education who have shown ability to work independently.

Individual study. Maximum credit six units. (Formerly numbered Counselor Education 499.)

**Advice—**

“Like snow; the softer it falls, the longer it dwells upon, and the deeper it sinks into, the mind.”

—Samuel Taylor Coleridge

**UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)****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. (Formerly numbered Counselor Education 585A.)

**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. (Formerly numbered Counselor Education 585B.)

**596. Selected Studies (1-3)**

Prerequisite: Consent of instructor.

A series of lecture and discussion sessions centering on current problems in counseling and guidance. Designed to serve the needs of any person desiring to keep informed of developments in this area. May be repeated with new content. See Class Schedule for specific content. Maximum credit of six units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree. (Formerly numbered and entitled Counselor Education 506, Guidance Conference, and 596.)

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

# Criminal Justice Administration

In the School of 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

Professors: Boostrom, Gitchoff, Henderson, Sutton

## Offered by the School of Public Administration and Urban Studies

Major in criminal justice administration with the B.S. degree in applied arts and sciences.

## The Major

The purpose of the criminal justice administration program is to provide current and future decision-makers in criminal justice with the foundation for critical and balanced as well as responsible and effective administrative responses. As the systems designed to deliver justice services are continually asked to accomplish more with fewer resources, the need for able and professional administrators becomes more and more pressing. The mission of the department is to provide graduates with the background and ability to meet this challenge.

Criminal justice administration majors with the B.S. degree have typically found employment at entry-level positions in local, state, and federal criminal justice agencies or in private business or security positions (e.g., loss prevention officer). At the local level, graduates can begin service in various capacities with police, sheriff's and marshal's offices, probation, county supervisors, city administration, and criminal justice planning agencies. At the state level, graduates may enter the Highway Patrol, Alcohol Beverage Control, Attorney General's Office, Department of Corrections, California Youth Authority, or related agencies. At the federal level, graduates are employed in agencies such as the FBI, Customs Service, Border Patrol, Secret Service, Drug Enforcement Agency, Naval Intelligence Service, Defense Investigative Services, CIA, and Department of Agriculture.

A significant number of graduates of this degree program also enter law school after graduation.

## Criminal Justice Administration Major

With the B.S. Degree in Applied Arts and Sciences  
(Premajor Code: 21050) (Major Code: 21051)

Applications will be accepted only during the months of August for the following spring semester and November for the fall semester. Change of major and declaration of major will be accepted only during specific filing periods. Please contact the School for deadlines.

All candidates for a degree in applied arts and sciences must complete the graduation requirements in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

**Preparation for the Major.** Criminal Justice Administration 200, Political Science 102, Sociology 101 and 150, and a three-unit course in elementary statistics (e.g., Sociology 201, Mathematics 250, Psychology 270). (15 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units to include Public Administration 301; Criminal Justice Administration 301, 497 or 498, 540; six units (in addition to Public Administration 301) selected from all upper division Public Administration courses; and 18 additional

upper division units selected with the approval of a department adviser. Within this program students may focus their study in areas such as law, law enforcement administration, court administration, correctional administration, juvenile justice administration, and deviance and social control. Interested students must seek guidance from a faculty adviser (may be any of the full-time faculty listed above) in selecting appropriate courses. A master plan for courses in the major must be approved by a faculty adviser and filed with the Evaluations Office at least one semester before graduation. It is recommended that the student complete a preliminary master plan of courses as soon as possible after declaring the major.

**IMPACTED PROGRAM.** The criminal justice administration major is designated as an impacted program and specific regulations related to admissions are imposed. Consult the department for regulations and admissions criteria.

## Courses

### LOWER DIVISION COURSE

#### 200. Introduction to Criminal Justice Administration (3) I, II (CAN AJ 2)

Survey of the structure, functions and problems of controlling criminal activity while preserving individual freedoms in a democratic society.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 301. Social Control, Social Policy and Administration of Justice (3) I, II

Prerequisites: Criminal Justice Administration 200 with a grade of C or better and completion of all other lower division preparation for the major courses.

Interrelationship of social control, social policy and administration of criminal justice in contemporary American society.

#### 305. Professions, Practices and Ethics in Criminal Justice Administration (3) I

Prerequisite: Criminal Justice Administration 301.  
Professional roles and responsibilities of practitioners and administrators in criminal justice agencies, including consideration of the ethical responsibilities of criminal justice practitioners.

#### 310. Law Enforcement Administration (3)

Administrative relationships within the criminal justice process with special reference to problems of courts and police and probation agencies.

#### 320. The Administration of Criminal Law (3)

Prerequisite: Criminal Justice Administration 301.  
Constitutional law principles as implemented in criminal courts with emphasis on critical analysis of factual situations and the argument of legal issues in criminal cases from both defense and prosecution perspectives.

#### 321. Juvenile Justice Administration (3)

Prerequisite: Criminal Justice Administration 301.  
Assessment of the structure and functions of agencies and institutions which comprise the juvenile justice system in America; evolution of policies and programs for prevention of delinquency and treatment of the juvenile offender.

#### 330. Contemporary Correctional Administration (3)

Prerequisite: Criminal Justice Administration 301.  
Contemporary policies and practices of local, state and federal correctional agencies, the influence of reform movements; and the interrelationship of corrections with other criminal justice system components.

#### 333. Judicial Administration (3)

Prerequisites: Criminal Justice Administration 301 and Public Administration 301.

Review of significant developments at the state and federal levels, including court unification and financing, leadership, congestion, training, selection, tenure, discipline, removal and retirement of court-related personnel; and technological applications.

#### 420. Constitutional Issues in the Administration of Justice (3)

Prerequisites: Criminal Justice Administration 200 and 301.  
Constitutional legal theories and principles, especially the Fourth, Fifth, Sixth, and Eighth Amendments to the Constitution, as they affect criminal justice procedures and practices.

#### 430. Prisons in Theory and Practice (3) Cr/NC Offered only in Extension.

Two lectures and three hours of supervised activity.  
Prerequisites: Criminal Justice Administration 200 and consent of instructor.  
Design and operation of state and federal prisons in California from the perspective of staff and inmates. Onsite study and critique of facilities.

#### 496. Selected Topics in Criminal Justice Administration (1-3)

Selected current topics in criminal justice administration. 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 six units. (Formerly numbered Criminal Justice Administration 495.)

#### 497. Investigation and Report (3) I, II Cr/NC

Prerequisites: Consent of instructor and senior standing.  
Analysis of special topics.

#### 498. Internship in Criminal Justice Administration (2-6) I, II Cr/NC

Prerequisites: Consent of instructor and senior standing.  
Students are assigned to various government agencies and work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences.

#### 499. Special Study (1-3) I, II Cr/NC

Prerequisites: Twelve units of upper division criminal justice administration and consent of instructor.  
Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 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.

### GRADUATE COURSES Refer to the Graduate Bulletin.



# Dance

In the Department of Physical Education  
In the College of Professional Studies and Fine Arts

OFFICE: Physical Education 351  
TELEPHONE: (619) 594-5541

## Faculty

Professor: Carlson  
Associate Professors: Nunn, Sandback, Willis

## Offered by the Department of Physical Education

Major in dance with the B.A. degree in liberal arts and sciences.  
Minor in dance.

## The Major

The dance program of the Department of Physical Education provides professional preparation for dance majors in choreography, performance, scholarship, and teaching; more specifically, as choreographers and dancers with professional companies; teachers in community and recreation programs, schools and colleges, movement educators, and candidates for graduate work in dance scholarship.

Philosophically, the program promotes dance as a communicative and expressive medium uniquely effective in the conveyance of meaning, emotion, and cultural values. Dance is a rigorous and specialized area of the performing arts, demanding a high level of physical preparation as well as a thorough understanding of aesthetics.

As members of the University Dance Company, students perform in faculty choreography and repertory works set by distinguished guest artists in periodic workshops and residencies. Each student also stages original work in a senior recital. Dance activity courses provided in the department offer experiences for the general student population in modern, jazz, ballet, folk, and social forms.

## Dance Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 10081)

All candidates for a degree in liberal arts and sciences must complete the requirements listed in the section of this catalog on "Graduation Requirements." No more than 64 units in dance courses can apply to the degree.

**Preparation for the Major.** Dance 101, 111, 121, 141, 171, 181, 183, 221, 231, 241, 253, 255, 256, 261 (four units), 271, 281, 285; Anthropology 102; Biology 150, 336; Psychology 101. (48 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to the section of this catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 32 upper division units to include Dance 321, 341, 353, 354, 365 (two units), 371, 381, 441, 453, 481, 483, 486, 487, and Physical Education 303.

## Dance Minor

Prerequisites to the minor: Dance 101, 121, and 231. (6 units)  
The minor in dance consists of a minimum of 24 units in dance, of which eight units must be upper division, to include Dance 141, 171, 181, 183, 241, 253, 255, 271, 341, 353, 354, and 371.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

**101. Historical and Contemporary Social Dance Forms (2) I**  
Four hours of activity.  
Court and country dances of Renaissance and Baroque periods. Social dances of the nineteenth and twentieth centuries.

**111. Ethnic Dance Forms (2) II**  
Four hours of activity.  
Techniques, styles, and rhythms of traditional dance in selected cultures.

**121. Ballet I (2) I**  
Four hours of activity.  
Prerequisite: Dance majors and minors only.  
Ballet skills for dance majors and minors emphasizing placement, coordination, ballet terminology, and technical principles. Not open to students with credit in Physical Education 350.

**141. Modern Dance I (3) I**  
Six hours of activity.  
Basic modern dance skills with emphasis on alignment. (Formerly numbered Physical Education 450.)

**171. Dance Production I (1) I Cr/NC**  
Three hours of laboratory.  
Technical experience in dance production. Not open to students with credit in Physical Education 352.

**181. Introduction to Dance (3) I, II**  
Foundations of dance in Western civilization. Dance as art, therapy, fitness, ritual, and social discourse. Analysis of dance in film, video, and live performance with an appreciation for artistic intent, technique, and style. (Formerly numbered Physical Education 153.)

**183. Rhythmic Analysis (2) II**  
One lecture and two hours of activity.  
Music as related to movement; notation and simple music forms applied to all movement activities; percussion accompaniment; writing of percussion scores, music repertoire for dance. (Formerly numbered Physical Education 154.)

**221. Ballet II (2) II**  
Four hours of activity.  
Prerequisite: Dance 121.  
Ballet skills for dance majors emphasizing increased complexity, strength, and endurance.

**231. Jazz Dance I (2) I**  
Four hours of activity.  
Prerequisite: Dance majors and minors only.  
Jazz dance technique and fundamentals. Not open to students with credit in Physical Education 351.

**241. Modern Dance II (3) II**  
Six hours of activity.  
Prerequisite: Dance 141.  
Continuation of development of modern dance skill with emphasis on function of alignment and articulation of the extremities in motion. (Formerly numbered Physical Education 451.)

**253. Choreography I (2) I**  
Four hours of activity.  
Using concepts of space, time, and energy to investigate and explore basic elements of choreography. Studies and compositions emphasizing solo and small group works. (Formerly numbered Physical Education 550.)

**255. Dance Improvisation I (1) II**  
Two hours of activity.  
Exploring improvisation through specific stimulus leading to the acquisition of basic improvisational skills. (Formerly numbered Physical Education 454.)

**256. Dance Improvisation II (1) I**  
Two hours of activity.  
Prerequisite: Dance 255.  
Practice in more complex arrangements of improvisation. (Formerly numbered Physical Education 455.)

**261. Dance Rehearsal and Performance (1) II Cr/NC**  
Three hours of laboratory.  
Prerequisite: Entrance by audition.  
Practical experience in departmental public performance. Maximum credit four units.

**271. Dance Production II (1) II Cr/NC**  
Three hours of laboratory.  
Prerequisite: Dance 171.  
Technical experience in dance production.

**281. Dance in World Cultures (2) I**  
Prerequisites: Dance 111 and Anthropology 102.  
Dance in selected cultures; geographic, historical, social, and aesthetic factors which have shaped development and function.

**285. Dance Pedagogy (2) I**  
Four hours of activity.  
Teaching theory as applied to ballet, modern, jazz, and social dance for adult populations. (Formerly numbered Physical Education 456.)

### UPPER DIVISION COURSES (Intended for Undergraduates)

**321. Ballet III (2) II**  
Four hours of activity.  
Prerequisite: Dance 221.  
Ballet skills for dance majors emphasizing turns, jumps, batterie, extended sequences, and movement quality.

**341. Modern Dance III (3) I**  
Six hours of activity.  
Prerequisite: Dance 241.  
Progressively difficult movement patterns based on previously developed skills with emphasis on elevation, rhythm, body design, and dynamic flow of movement. (Formerly numbered Physical Education 452.)

**353. Choreography II (2) II**  
Four hours of activity.  
Prerequisite: Dance 253.  
Introducing large group works, solo and small group work in organizing more complex arrangements of the basic elements of dance composition. Utilizing music and sound as aural contributions to choreography. (Formerly numbered Physical Education 551.)

**354. Choreography III (2) I**  
Four hours of activity.  
Prerequisite: Dance 353.  
Approaching dance as a fundamental means of communication. Recognizing the relationship between form and content. (Formerly numbered Physical Education 552.)

**365. University Dance Company: Major Performance (1) I Cr/NC**  
More than three hours of activity per week.  
Prerequisites: Open only to dance majors. Audition and approval by dance faculty.  
Practical experience in University dance company including concert performances of dance repertory, production of choreographic works, presentation of master classes and workshops, and participation in major production. Maximum credit four units.

**371. Dance Production III (1) I Cr/NC**  
Three hours of laboratory.  
Prerequisite: Dance 271.  
Technical experience in dance production.

**381. Dance History (3)**  
Prerequisite: Dance 181.  
Integrated approach to understanding of historical forces shaping the development of dance. (Formerly numbered Physical Education 376B and 556.)

**441. Modern Dance IV (3) II**  
Six hours of activity.  
Prerequisite: Dance 341.  
Advanced modern dance techniques based on skills developed in Dance 141 through Dance 341 with emphasis on performance qualities in projection, vitality, and executing. (Formerly numbered Physical Education 453.)

**453. Choreography IV (2) II**  
Four hours of activity.  
Prerequisite: Dance 354.  
Choreography of solo and group works utilizing symbiotic relationship of movement, sound, lighting, costuming, and other interdisciplinary media. Presentation of a recital. (Formerly numbered Physical Education 553.)

**481. Dance Philosophy and Criticism (2) I**  
Prerequisite: Dance 381.  
Philosophy and aesthetics of dance. Historical foundations of dance criticism. Major contemporary schools of thought. Professional preparation and function of the dance critic. (Formerly numbered Physical Education 557.)

**483. Dance Notation (3) I**  
Prerequisite: Completion of preparation for the major in dance.  
Theories and application of dance notation systems and other methods of recording dance. Basic skills in writing dance in Labanotation; reading notated dance scores; experiences in recording ethnic, ballet, jazz, and modern dance.

**486. Dance Practicum: Folk, Square, Ballroom (2) II**  
Four hours of activity.  
Prerequisite: Dance 285.  
Teaching techniques in folk, square, and ballroom dance and practice in the use of these techniques.

**487. Dance Practicum: Modern, Ballet, Jazz (2) II**  
Four hours of activity.  
Prerequisite: Dance 285.  
Teaching techniques in modern dance, jazz dance, and ballet and practice in the use of these techniques.



# Drama

In the College of Professional Studies and Fine Arts

OFFICE: Dramatic Arts 204  
TELEPHONE: (619) 594-6363

Accredited by the National Association of Schools of Theatre.

## Faculty

Emeritus: Howard, Povenmire, Stephenson  
Chair: Annas  
The Don W. Powell Chair in Scene Design: Funicello  
Professors: Annas, Harvey, A.C., Harvey, M., McKerrow,  
O'Donnell, Owen, Salzer  
Associate Professors: Larham, Reid, Wolf  
Assistant Professors: Bellinghiere, Kalustian  
Lecturer: Holly

## Offered by the Department

Master of Arts degree in drama.  
Master of Fine Arts degree in drama.  
Major in drama with the B.A. degree in applied arts and sciences.  
Emphasis in children's drama.  
Emphasis in design for drama.  
Emphasis in design for television and film.  
Emphasis in performance.  
Teaching major in drama for the single subject teaching credential in English.  
Minor in drama.

## 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 SDSU. The first holder of The Scene Design Chair is the nationally acclaimed designer Ralph Funicello.

## The Major

The bachelor's degree in drama prepares students for excellence as professional actors, directors, and costume, lighting, and scenic designers. To achieve that goal, the department offers not only a rich diversity of course offerings, but also an eight-play season open to the San Diego public with many performance and design opportunities for the student. In addition, lectures and professional growth opportunities are provided through interaction with guest artists and professionals from many different areas of the industry: theatre managers, directors, scenic designers, lighting designers, costume designers, playwrights, and actors. The program is structured in a way that ensures that each student, prior to graduation, will have been exposed to all the backstage areas that support a theatre performance.

The Department of Drama offers students a wide variety of courses and several degree programs. The mission of the department is twofold. First of all, we wish to provide quality education on the undergraduate and graduate levels for students who desire to pursue a career in theatre, whether that career be in acting, directing, design, technical theatre, or teaching. Our second, and equally important mission, is a strong commitment to the philosophy of the University as a liberal arts institution. We want to provide undergraduate students with an opportunity to enrich their present and future lives by learning to understand and enjoy the art of theatre.

The faculty of the Department of Drama believes that theatre is a rewarding undergraduate major, even for those who do not plan a career in the field. The study of theatre enriches the lives of men and

women because it helps them to know themselves and to interact effectively with one another. Theatre is the fine art which is often considered to be a combination of all the arts. Through it, we experience the work of some of the greatest writers and thinkers and artists our civilization has ever known. As we learn about theatre, we understand more about ourselves and develop a remarkable respect for the human spirit.

The Department of Drama's training is specifically geared toward assisting students in their efforts to seek professional work in various fields of theatre arts, to seek teaching positions in various levels of educational theatre, to contribute to the cultural life of the community by participating in civic and community theatre work, and to further their awareness of drama as a significant art form in order to become informed and discriminating members of the theatre public.

In addition, the Department of Drama offers a wide variety of courses which provide excellent enrichment opportunities for the nondrama major. Students pursuing study in "people/service related" disciplines such as education, business administration, telecommunications and film, counseling, advertising, journalism, and prelaw are encouraged to explore the many courses available in the department's curriculum which will prove rewarding and beneficial to their career objectives.

## Drama Major

With the B.A. Degree in Applied Arts and Sciences  
(Major Code: 10071)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

### General Drama Program

**Preparation for the Major.** Drama 105, 107, 110, 120, 130, 231, 240A, 240B. (24 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 305W or 500W with a grade of C (2.0) or better.

**Major.** A minimum of 41 upper division units in drama to include Drama 325, 359, 425, 442A, 442B, 442C (four units required), 460A, 460B, 461; and six units selected from Drama 440, 447, 450, 452; three units selected from Drama 350 or 351, 355, 532, 551, 555; and six units selected from Drama 310, 315, 459, 475A, 475B, 589.

### Emphasis in Children's Drama

**Preparation for the Major.** Drama 105, 107, 110, 120, 130, 240A, 240B. (21 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 305W or 500W with a grade of C (2.0) or better.

**Major.** A minimum of 50 upper division units to include Drama 310, 315, 325, 329A or 329B, 359, 425, 442A, 442B, 442C (four units required), 460A, 460B, 461, 480, 510, 515; Teacher Education 530; and three units selected from Drama 440, 447, 452, or 459.

### Emphasis in Design for Drama

**Preparation for the Major.** Drama 105, 107, 110, 120, 130, 240A, 240B. (21 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 503W with a grade of C (2.0) or better.

**Major.** A minimum of 50 upper division units in drama to include Drama 325, 359, 425, 440, 442A, 442B, 442C (four units required), 447, 450, 452, 460A, 460B, 461, 470A (one unit required), 539; and three units selected from Drama 540, 547, 548, or 552; and six units selected from Drama 349, 448A, 448B, 541, 543, 554A, or 554B. Suggested drama electives include Drama 470B, 475B, 551.

### Emphasis in Design for Television and Film

**Preparation for the Major.** Drama 105, 107, 130, 240A, 240B; Telecommunications and Film 250. (18 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 503W with a grade of C (2.0) or better.

**Major.** A minimum of 57 upper division units to include Drama 325, 359, 425, 440, 442A, 442B, 442C (four units required), 447, 450, 452, 460A, 460B or 461, 470A (one unit required), 539; Telecommunications and Film 325, 401, 550; and six units selected from either Drama 540, 547, 548, 552 or Industrial Technology 320 or Telecommunications and Film 551; and four units selected from Drama 349, 448A, 448B, 541, 543, 554A, or 554B.

### Emphasis in Performance

**Preparation for the Major.** Drama 105, 107, 110, 120, 130, 231, 240A, 240B. (24 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 305W or 500W with a grade of C (2.0) or better.

**Major.** A minimum of 47 upper division units in drama to include Drama 325, 355, 359, 425, 442A, 442B, 442C (four units required), 445 (two units required), 460A, 460B, 461, and either 320 or 330; five units selected from Drama 523, 551, or 555; and nine units selected from Drama 350, 351, 431, 434, 532, 533A, or 533B. Recommended electives: Drama 349, 459, 475A or 475B.

## Drama Major

For the Single Subject Teaching Credential in English  
With the B.A. Degree in Applied Arts and Sciences  
(Major Code: 10071)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under Policy Studies or Teacher Education.

This major may be used by students in policy studies or teacher education as an undergraduate major for the B.A. degree in applied arts and sciences.

**Preparation for the Major.** Drama 105, 107, 110, 120, 130, 240A, 240B; English 100, 200, 250A or 250B; and English 260A\* or 260B\*. Drama 105 and 107 must be taken early in the student's program in order to satisfy prerequisites. (30-33 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 500W with a grade of C (2.0) or better.

**Major.** A minimum of 38-41 upper division units to include Drama 310, 325, 359, 442A, 442B, 442C (four units required), 425, 460A, 460B, 480; English 560A\* or 560B\*; English 500W or 508W; three units selected from English 527, 533, 541A, 541B, 544, 547, 548; and three units from Linguistics 410, 520, 524.

\* Only three units from English 260A, 260B, 560A, or 560B are required.

## Drama Minor

The following courses are prerequisite to the drama minor and do not count toward the 24 units required for the minor: Drama 105, 110, and 120. (9 units)

The minor in drama consists of a minimum of 24 units in drama to include Drama 107, 115, 240A, 240B, 325, 359, 425, and 460A or 460B.

## Drama

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and General Education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

#### 100. Theatre and Western Civilization (3) I, II

Theatre as a reflection of society and as a contributor to the development of Western civilization. Emphasis on theatre's continuing relevance to contemporary society. Attendance at selected theatre events required.

#### 105. Introduction to the Theatre (3) I, II

Theory and practice in the theatre, including its literary, critical, technical and artistic aspects viewed against historical backgrounds. Students required to participate in a minimum of five hours of related theatre experience. Preparatory to drama major sequence.

#### 107. Design Communication and the Audience Response (3)

Use of visual and aural design components by the actor, director, and designer in relation to audience response. Preparatory to drama major sequence.

#### 110. Voice and Diction for the Theatre I (3) I, II (CAN DRAM 6)

Exercises and drills to improve the quality, flexibility and effectiveness of the speaking voice leading to good usage in standard American speech.

#### 115. Acting for Nonmajors (3) I, II

Improvisational exercises (verbal and nonverbal) in sensory awareness, observation, concentration, listening, and response skills with application to other fields. Individual presentation techniques for the preprofessional in other disciplines. Not open to drama majors.

#### 120. Heritage of Dramatic Literature (3) I, II

Three lectures and attendance at selected performances. Survey of dramatic literature from classical to the modern period, including classical, medieval, Renaissance, Restoration, neoclassical, romantic, realistic and modern plays.

#### 130. Acting I (3) I, II (CAN DRAM 8)

Development of individual's ability to express thought and emotion through effective use of the voice and body. These fundamental concepts may be applied to stage, film, and television acting.

#### 231. Acting II (3) I

Prerequisite: Drama 130.  
Continuation of Drama 130, emphasizing application of fundamental skills to problems of emotion, timing, characterization, and ensemble acting.

#### 240A. Theatre Design and Technology I (3) I, II

Two lectures and three hours of laboratory.  
Prerequisites: Drama 105 and 107.  
Design, technical practices, and production organization for the theatre. Scenery design, stagecraft, properties, and drafting. Part one of a two-part course. (Formerly numbered Drama 240.)

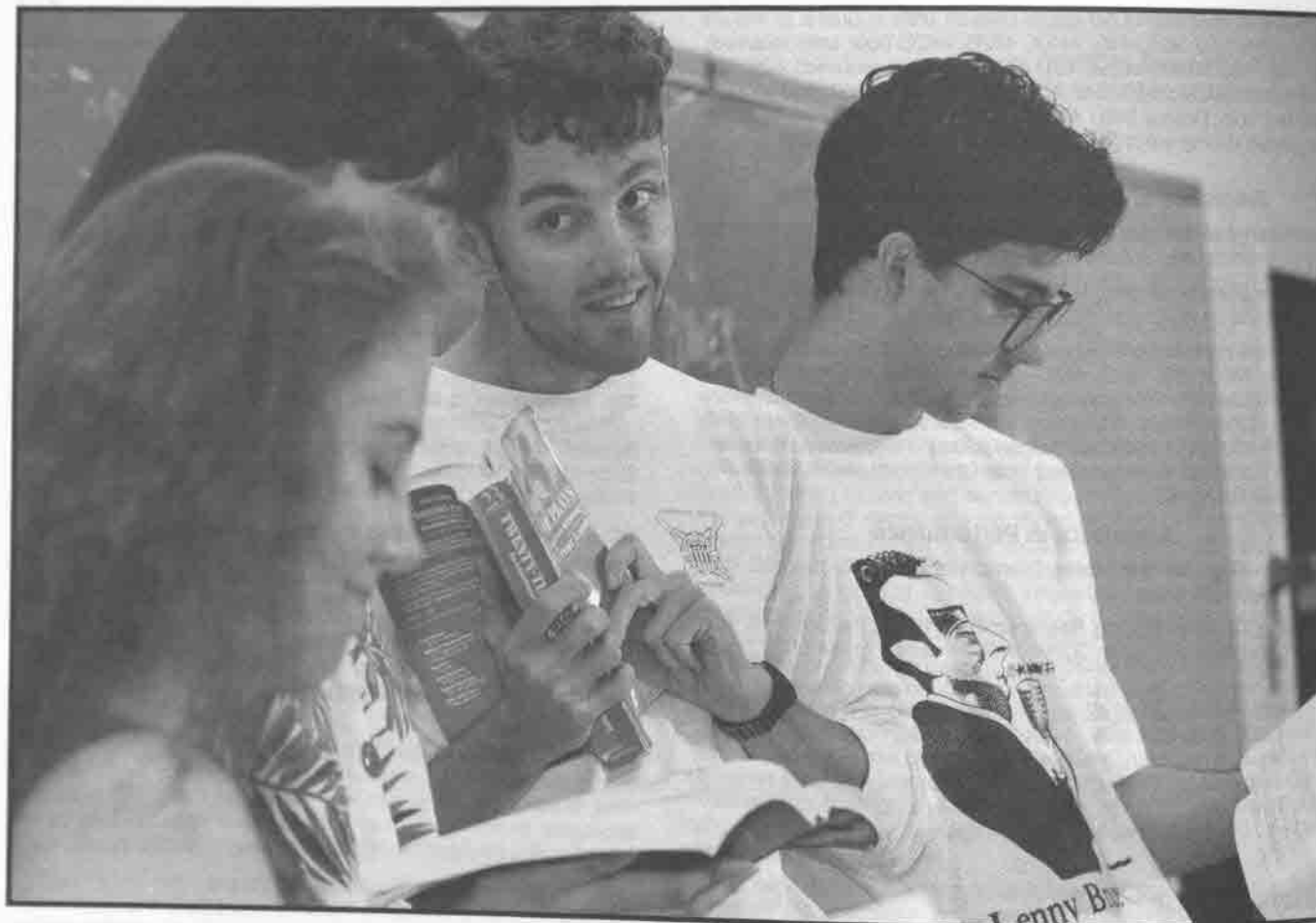
#### 240B. Theatre Design and Technology II (3) I, II

Two lectures and three hours of laboratory.  
Prerequisite: Drama 240A.  
Design, technical practices, and production organization for the theatre. Costume design and technology, makeup, lighting design, sound design, and related technology. Part two of a two-part course. Not open to students with credit in either Drama 245 or 250.

#### 296. Experimental Topics (1-4)

Selected topics. 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.





#### UPPER DIVISION COURSES (Intended for Undergraduates)

##### 310. Creative Drama I (3) I, II, S

Current philosophies, principles, and techniques of creative drama. Development of the individual through use of dramatic play, imaging, improvisation, and theatre games. Applicable to classroom teaching, counseling, recreation, and senior citizen programs.

##### 315. Theatre for Young Audiences (3) I, II

Current philosophies and practices in theatre for young audiences. Techniques of selecting and producing plays for and with youth. Theatre styles, script analysis, and functions of the production team.

##### 320. Voice and Diction for the Theatre II (3) II

Prerequisite: Drama 110.  
Techniques of vocal expression in the theatre, primarily in plays of Shakespeare and classical Greek drama. Emphasis on individualized instruction and vocal problem solving.

##### 325. Play Analysis (3) I, II

Prerequisites: Drama 105 and 107.  
Analysis of representative plays with emphasis on plot and character development, dramatic structure, action, and style. (Formerly numbered Drama 420.)

##### 329A-329B. Practicum in Theatre for Young Audiences (3-3) Cr/NC

Six hours of activity.  
Prerequisites: Drama 315 and consent of instructor.  
Practical experience in departmental public performance of plays for young audiences.

##### 330. Accents and Dialects for the Stage (3)

Prerequisite: Drama 130.  
Various accents and dialects most frequently occurring in stage productions.

##### 349. Theatrical Makeup (2) I

Two hours per unit.  
Prerequisite: Drama 240B.  
Planning and application of makeup for stage, film, and television. Classroom exercises and production-related activities. (Formerly numbered Drama 249.)

##### 350. Acting Studies in Musical Theatre (3) I

Two lectures and two hours of activity.  
Prerequisite: Admission by consent of instructor.  
Basic techniques of performers in musical theatre. Emphasis on application of acting theory to musical theatre literature.

##### 351. Musical Theatre Song and Scene Analysis (3) II

Prerequisite: Consent of instructor.  
Vocal selections and scenes in musical theatre. Emphasis on characterization requirements; appropriate performance styles.

##### 355. Movement for the Theatre I (2) II

Two hours of activity per unit.  
Prerequisite: Drama 105.  
Locomotor and axial body movement for the stage director and actor; introduction to mime. Relationship between body expression and character portrayal. (Formerly numbered Drama 232.)

##### 359. Directing I (3) I, II

Prerequisites: Drama 115 (for minors) or 130 (for majors), and 325.  
Principles and techniques of directing for the stage: play selection, analysis, and interpretation; casting methods; stage composition and movement; and rehearsal procedures. (Formerly numbered Drama 457.)

##### 425. Production Synthesis (3) I, II

Prerequisite: Drama 359.  
Integration of artistic vision and production considerations through synthesis of text analysis, performance, and design in collaborative process unique to the theatre.

##### 431. Workshop in Improvisational Acting (3) I

Prerequisite: Drama 231.  
Theories and principles of improvisational acting.

##### 434. Audition Techniques for the Actor (3) II

Two lectures and two hours of activity.  
Prerequisite: Drama 231.  
Techniques of auditioning and interviewing in the theatre, film, and television; selecting audition pieces, rehearsing, and performing auditions.

##### 440. Scene Design I (3) I

Two lectures and three hours of laboratory.  
Prerequisites: Drama 240B and 325.  
Techniques and procedures in application of design, color, and perspective in designing scenery.

##### 442A-442B-442C. Practicum in Theatrical Production (2-2-2) I, II Cr/NC

Two hours of activity per unit.  
Prerequisite: Drama 240B.  
Technical theatre production experience for departmental public performances. (Formerly numbered Drama 442.)  
A. Scenery Construction  
B. Costume Construction  
C. Production Crews. (Four units required.)

##### 445. Practicum in Performance (1-6) I, II Cr/NC

Two hours per unit.  
Practical experience in departmental public performances. Maximum credit six units.

##### 447. Lighting Design I (3) II

Two lectures and three hours of laboratory.  
Prerequisites: Drama 240B and 325.  
Concepts and technologies in lighting for theatre and related performance areas. Emphasis on mechanics of stage lighting, color, instruments, and control. Laboratory and production related activities. (Formerly numbered Drama 545A.)

##### 448A. Scene Design Technology I (2) I

Four hours of activity.  
Prerequisite: Drama 240B.  
Theatre drafting standards and techniques with emphasis on multi-set production: floor plans, sections, elevations, working drawings, perspective drawings, and light plots. (Formerly numbered Drama 448.)

##### 448B. Scene Design Technology II (2) I

Four hours of activity.  
Prerequisite: Drama 240B.  
Current materials and practices of scenery technology. Advanced construction techniques, research, budget and management procedures. (Formerly numbered Drama 448.)

##### 450. Period Dress and Decor (3) II

Prerequisite: Drama 240B.  
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.

##### 452. Costume Design I (3) I

Two lectures and three hours of laboratory.  
Prerequisites: Drama 240B and 325.  
Theory and creative application of principles of costume design for various types of production. Emphasis on concept development, character interpretation, research methods, color organization, and fabric selection. Laboratory and production related activities.

##### 459. Directing II (3) II

Two lectures and two hours of activity.  
Prerequisites: Drama 359 and consent of instructor.  
Experience and group evaluation in directing one-act plays before an audience. Attendance at selected public performances required.

##### 460A-460B. History of the Theatre (3-3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities. Prerequisite not required for Drama majors.

The theatre from primitive times to the beginnings of modern theatre. Special attention will be given to the theatre as a mirror of the social and cultural background of the various countries and periods in which it is studied. Drama 460A is not prerequisite to 460B.

##### 461. Contemporary World Theatre (3) II

Prerequisite: Drama 460A or 460B.  
Development of Western theatre from Ibsen to present, including roots in primitive and non-Western cultures.

##### 470A-470B. Practicum in Theatrical Design (1-3) I, II

Prerequisites: Upper division standing and consent of instructor.  
Design projects in areas of scenery, costumes, lighting, sound, or makeup. Maximum credit six units.

A. Independent Studies with Don W. Powell Chair in Scene Design  
B. Design for Departmental Public Performances

##### 475A. Stage Management—Theory (2) I

Prerequisites: Drama 240B and 359.  
Development of the prompt script, organizational methods, and collaborative personnel interaction. (Formerly numbered Drama 475.)

##### 475B. Stage Management—Practicum (2) I, II

Hours vary.  
Prerequisite: Drama 475A.  
Practical experience in stage managing department productions. Maximum credit four units. (Formerly numbered Drama 475.)

##### 480. Drama in the Classroom: K-12 (3) II

Methods of teaching drama in elementary, middle, and secondary schools. Emphasis on organization of curriculum, play selection, and principles of producing plays in the classroom.

##### 496. Experimental Topics (1-4)

Selected topics. 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.

##### 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

#### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

##### 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. (Formerly numbered Drama 511.)

**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.

**523. Stage Combat (2) II**

Four hours of activity.  
Prerequisite: Drama 355 for undergraduates. Admission to M.F.A. program for graduate students.  
Skills and choreography of armed and unarmed stage combat. Performance application to selected scenes from world drama.

**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. Rendering for the Theatrical Designer (2) I**

Four hours of activity.  
Prerequisite: Drama 240B.  
Development of skills necessary for the theatrical designer to complete successful set and costume renderings: lighting studies. Techniques, media, and portfolio presentation. (Formerly numbered Drama 560.)

**540. Scene Design II (3) II**

Prerequisites: Drama 440, 450, and 539.  
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 450.  
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 450.  
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 and Special Effects Techniques in Stage and Television Lighting (3)**

Two lectures and three hours of laboratory.  
Prerequisite: Credit or concurrent registration in Drama 547.  
Functional study of computer systems in stage and television lighting with emphasis on realizing effective methods of using such systems in production.

**547. Lighting Design II (3) I**

Two lectures and three hours of laboratory.  
Prerequisites: Drama 447 and 539.  
Advanced design theories and lighting practice for theatre and dance. Laboratory and production related activities. (Formerly numbered Drama 545B.)

**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 450, 452, and 539.  
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. (Formerly numbered Drama 554.)

**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. (Formerly numbered Drama 554.)

**555. Movement for the Theatre II (2) I**

Four hours of activity.  
Prerequisite: Drama 130.  
Movement techniques for the theatre student. Emphasis on movement patterns, phrase development, and musical theatre styles. Maximum credit six units. (Formerly numbered Drama 555A.)

**589. Playwriting: The Full-Length Play (3)**

Two lectures and two hours of activity.  
Prerequisite: Drama 325 or English 578. 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**  
Refer to the Graduate Bulletin.

# Economics

In the College of Arts and Letters

OFFICE: Nasatir Hall 304  
TELEPHONE: (619) 594-1675

**Faculty**

Emeritus: Anderson, Babilot, Barckley, Flagg, Gifford, Jencks, Leasure, Neuner, Poroy, Sebold, Turner  
Chair: Boddy  
Professors: Boddy, Clement, Frantz, Green, Grossbard-Shechtman, Hageman, Kartman, Madhavan, Nam, Popp, Stewart, Thayer, Venieris  
Associate Professors: Hambleton, Naughton, Singh  
Assistant Professors: Gerber, Steinberg

**Offered by the Department**

Master of Arts degree in economics.  
Major in economics with the B.A. degree in liberal arts and sciences.  
Minor in economics.

**The Major**

Economics is the science which studies the production, distribution, and consumption of goods and services. Economics majors explore how producers, distributors, and consumers make their decisions. Majors also analyze the events that shape and result from these decisions. Inflation, unemployment, taxation, money and banking, efficiency, international exchange, and growth are some of the many parts of this complex system studied through the economics major at SDSU.

The curriculum in economics satisfies a wide range of career goals and student interests. Majors may find employment in government positions, financial institutions, business firms, and international agencies. The combination of an economics major with a business minor provides a foundation for a variety of careers. And, students interested in studying the third world, the environment, government policies, or population will find that economics is a useful approach.

Many beginning positions in business and government are available to students with a bachelor's degree in economics. A graduate may find employment as a research, statistical, data, or pricing analyst. There are management trainee positions with banks, savings and loan associations, or other lending institutions. Economics majors may also be employed as sales representatives for firms which produce both "high tech" and consumer-related goods. A student contemplating graduate study in the field of economics should consider a career as an economics consultant, or as an economist for banks, investments, or industry.

**Advising**

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

**Economics Major**

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 22041)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in economics courses can apply to the degree.

A minor is not required with this major.

**Preparation for the Major.** Economics 101, 102, 201; one course from Mathematics 120, 121, 150, or 155, and Computer Science 106 or three units of Social Science 201. (15-17 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units in economics to include Economics 320, 321, and 341, plus 15 units of electives. Students are encouraged to complete the required courses during their junior year.

Although there are no formal emphases within this major and any upper division course is recommended to any student majoring in the discipline, the department strongly recommends that all majors consult an undergraduate adviser. The following program areas have been devised to aid students in selecting their upper division courses.

**Theoretical Economics:** Students interested in building a theoretical background in economics are advised to take courses in alternative economic theories, history of thought and quantitative economics to include Economics 307, 311, 313, 330, 338, 360, 365, 380, 420, 421, 422, 441, 453, 464, 474, 502, 520, 561, and 592.

**Economics of Business and Government:** Students interested in preparing for operational positions in business or government are advised to take courses from among Economics 360, 370 or 476, 380, 401, 422, 452, 453, 454, 458, 474, 490, 502, and 592.

**Pre-Law:** Students interested in preparing for law school are strongly recommended to take courses from among Economics 370 or 476, 380, 401, and 490. Also recommended are Economics 330, 453, 454, and 474.

**General Economics:** Students seeking a general background in the discipline are encouraged to take at least one course from each of the following: Economic History and Systems: Economics 311, 313, 330, 336, 338; Human Resources: Economics 365, 380, 483, 489; International Economics: Economics 336, 360, 365, 464, 465, 483, 561, 565, 592; Public Issues: Economics 370 or 476, 401, 420, 422, 452, 453, 454, 458, 474, 489, 490, 502.

Students considering graduate school should consult an adviser.

**Economics Minor**

Prerequisites to the minor include Economics 100 or 101.

The minor in economics consists of a minimum of 15 units in economics, 12 units of which must be in upper division courses. Students must select their 12 upper division units from the economics courses in one of the four areas described in the major. In addition, students may include Economics 320, 321, or 341, in their chosen area.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.



## Courses

## LOWER DIVISION COURSES

**100. Contemporary Economic Problems (3) I, II**

Investigates economic bases for such current problems as inflation, unemployment, economic power, consumer protection, poverty, discrimination, urban and environmental deterioration, and international domination. Examines such policies as fiscal-monetary policy, tax reform and government controls and provision of services.

**101. Principles of Economics (3) I, II, S (CAN ECON 2)**

Principles of economic analysis, economic institutions, and issues of public policy. Emphasis on macroanalysis including national income analysis, money and banking, business cycles, and economic stabilization.

**102. Principles of Economics (3) I, II, S (CAN ECON 4)**

Principles of economic analysis, economic institutions, and issues of public policy. Emphasis on direction of production, allocation of resources, and distribution of income, through the price system (microanalysis); and international economics.

**201. Statistical Methods (3) I, II**

Prerequisite: Course in intermediate algebra.  
Introduction to descriptive statistics, statistical inference, regression and correlation. Students with credit or concurrent registration in the following lower division statistics courses will be awarded a total of four units for the two (or more) courses: Biology 215; Economics 201; Engineering 140; Mathematics 119, 250; Political Science 201; Psychology 270; and Sociology 201.

**296. Experimental Topics (1-4)**

Selected topics. 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.

UPPER DIVISION COURSES  
(Intended for Undergraduates)**307. Mathematical Economics (3)**

Prerequisites: Economics 101, 102, and Mathematics 121 or 150 or 155.

Mathematical concepts as tools in understanding, developing and illustrating economic theories. Applications of calculus and linear equations to constrained optimization, macro models, elasticity, general equilibrium, and input-output analysis.

**311. History of Economic Thought (3)**

Prerequisites: Economics 101 and 102.  
The development of economics. Contributions of schools of thought and individual writers are examined with regard to their influence on economic theory and policy.

**313. Marxian Economic Theory (3)**

Prerequisite: Six units in economics.  
Analysis of the theories of Marx, Engels, Lenin, Mao Tse-tung, Baran, Sweezy and others as they pertain to the periods in which they were conceived and to modern times.

**320. Intermediate Economic Theory (3) I, II, S**

Prerequisite: Economics 101 or Economics 100 with approval of department. Recommended: Mathematics 120 or 121 or 150 or 155.  
Economic theory with special reference to national income analysis and the theory of investment.

**321. Intermediate Economic Theory (3) I, II, S**

Prerequisite: Economics 102 or Economics 100 with approval of department. Recommended: Mathematics 120 or 121 or 150 or 155.  
Economic theory with special reference to the theory of the firm and the industry; value and distribution.

**330. Comparative Economic Systems (3)**

Prerequisites: Six units of economics to include Economics 102; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences. General Education prerequisite not required for Economics majors.  
The economic aspects of laissez-faire and regulated capitalism, cooperatives, socialism, communism, nazism, fascism. Criteria for evaluating economic systems. The individual and government in each system. Planning in a liberal capitalistic society.

**336. Economic History of Emerging Nations (3)**

Prerequisite: Six units of economics to include Economics 101.  
Evolution of economic organization, institutions, and policies of Africa, Asia, and Latin America. Regional emphasis will vary. Maximum credit six units.

**338. Economic History of the United States (3)**

Prerequisite: Six units of economics to include Economics 101.  
American economic development and national legislation. Studies of agriculture, industry, the labor force, and national output.

**341. Introduction to Econometrics (3) I, II**

Prerequisites: Economics 101, 102, 201; Mathematics 120 or 121 or 150 or 155; Social Science 201 or Computer Science 106. Recommended: Economics 320 or 321.  
Econometric techniques with emphasis on single-equation models. Applied skills learned through computer assignments.

**360. International Economic Problems (3)**

Prerequisites: Economics 101 and 102.  
International problems, economic communities, organizations, and other selected topics. Not open to students with credit in Economics 561.

**365. Economics of Underdeveloped Areas (3)**

Prerequisite: Six units of economics to include Economics 101.  
The nature and causes of economic underdevelopment. Problems of and policies for the economic development of underdeveloped areas of the world.

**370. Government and Business (3)**

Prerequisite: Six units of economics to include Economics 102.  
Governmental activities affecting business; the state as an entrepreneur and manager; governmental assistance to business; governmental regulation of business in its historical, legal and economic aspects, including recent developments in the United States and abroad; proposed policies.

**380. Labor Problems (3)**

Prerequisite: Six units of economics to include Economics 102.  
Labor force and mobility, human capital, labor demand, discrimination, determination of compensation and employment, productivity, impact of labor organizations, labor disputes, and social legislation.

**382. Economics of Marriage and the Family (3)**

Prerequisite: Economics 102.  
Microanalysis of marriage and divorce; labor supply and marriage; marriage and productivity, consumption and savings; macroanalysis of household structure and the economy.

**401. Public Finance (3)**

Prerequisites: Economics 101 and 102.  
Principles and practices of taxation and public expenditures. Economic effects of public spending, debts and taxation. Financing social security and other services. Fiscal policy and prosperity. Relation to inflation and deflation. Special emphasis on social problems involved.

**420. Topics in Macroeconomics (3)**

Prerequisites: Economics 320, 321, and Mathematics 120 or 121 or 150 or 155.  
Microfoundations of macroeconomic analysis: Walras' law, macrotheory when markets do not clear, alternative theories of expectations, macrodynamic and growth theory. Implications for inflation, unemployment and the effectiveness of fiscal and monetary policy.

**421. Applied Microeconomics (3)**

Prerequisites: Economics 321 and Mathematics 120 or 121 or 150 or 155.  
Consumer and producer behavior using mathematical optimization techniques. Mathematical approaches to oligopoly, bargaining theory and to policy issues.

**422. Business Cycles (3)**

Prerequisites: Economics 101 and 102.  
Fundamental factors in economic fluctuations. Examination of business cycle theories, and various policy proposals for economic stabilization. A consideration of current economic conditions and an examination of methods employed in preparing national economic forecasts.

**441. Research Design and Method (1-3)**

Prerequisites: Economics 341; 320 or 321.  
Modular course. The first module (1 unit) covers time series and forecasting. The second (2 units) covers simultaneous equations or other econometric techniques which will then be applied in an independent research project.

**452. Economics of Energy Resources (3)**

Prerequisite: Six units of economics.  
Economic structure of energy supply in the United States: electric power, fossil fuels, nuclear energy. Economic potential of alternative energy sources. Public policy issues: oil imports and self-sufficiency; energy costs, conservation, and curtailment; energy growth and its environmental impact.

**453. Economics and Ecology (3)**

Prerequisites: Economics 101 and 102.  
Relation of ecological problems to basic economic institutions. Examination of the apparent conflict between economic needs and ecological requirements. Economics of air, fresh water, ocean and land pollution, overpopulation and natural resource utilization. Investigation of possible solutions.

**454. Economics of the Ocean (3)**

Prerequisites: Economics 101 and 102.  
Economic analysis of fisheries, seabed resources, shipping lanes, allocation of the coastal zone, and ocean pollution. Economic implications of alternative legal arrangements concerning the ocean.

**458. Urban and Regional Economics (3)**

Prerequisites: Economics 101 and 102.  
Major influences on the economic conditions of urban and nonurban areas; specific urban problems including housing, land use, and growth. Discussion of San Diego problems.

**464. Economic Problems of Latin America (3)**

Prerequisites: Six units of economics to include Economics 101; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences. General Education prerequisite not required for Economics majors.  
Economic development, institutions, and problems of Latin America in the context of a global economy.

**465. Economic Problems of South and East Asia (3)**

Prerequisites: Six units of economics to include Economics 101; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences. General Education prerequisite not required for Economics majors.

Economic development, institutions, and problems of China, India, and other developing countries in the region.

**474. Industrial Organization (3)**

Prerequisites: Economics 101 and 102.

Causes and implications of economic concentration and monopoly power. Evaluation of industry structure, conduct, and performance in terms of social and economic goals.

**476. Economics of Antitrust and Regulation (3)**

Prerequisites: Economics 101, 102, and 474 or 321.

Attempts to control monopoly power through antitrust laws and government regulation.

**483. Comparative Labor Problems (3)**

Prerequisites: Economics 101 and 102.

Comparative study of labor relations systems and labor movements in both advanced and developing nations. Individual study of a particular country of the student's choice.

**489. Economics and Population (3)**

Prerequisites: Six units of economics to include Economics 102; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences. General Education prerequisite not required for Economics majors.

Relation of fertility, marriage, migration, and other dimensions of population to various economic factors affecting household behavior. Demographic measures and projections, application to product markets and to policies of developed and less developed countries.

**490. Money and Banking (3) I, II, S**

Prerequisites: Economics 101 and 102.

The elements of monetary theory. History and principles of banking with special reference to the banking system of the United States.

**495. Economics Internship (3) I, II Cr/NC**

Prerequisite: Consent of instructor.

Internship with business firms, nonprofit organizations and government agencies. Work done under joint direction of activity supervisor and instructor. Project report and internship conferences required. Maximum credit six units.

**496. Experimental Topics (1-3)**

Prerequisite: Consent of instructor.

Selected topics in economics. May be repeated with 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 six units.

**499. Special Study (1-3) I, II**

Prerequisite: Consent of instructor.

Individual study. May be repeated for a maximum of six units. Maximum credit six units.

**UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)**

**502. Public Economics (3)**

Prerequisite: Economics 321.

General equilibrium. Externalities of consumption and production, their impact on allocative efficiency. Theory of social wants and public goods supply. Theoretical treatment of individual and community preference ordering and decision making. Proposals for improving the allocation of resources.

**520. Advanced Economic Theory (3)**

Prerequisite: Economics 320.

Recent contributions to the advanced theory of the firm, consumer demand, employment and growth.

**561. International Trade Theory (3)**

Prerequisites: Economics 320 and 321.

The pure theory of international trade and commercial policy.

**565. U.S.-Mexico Economic Relations (3)**

Prerequisite: One course in economics.

Mexico's socioeconomic development since World War II. Problem areas affecting the U.S., including foreign trade, multinational corporations, energy, migration patterns and border relations.

**592. International Monetary Theory and Policy (3)**

Prerequisite: Economics 320 or 490.

Balance of payments, international capital movements and foreign exchange in relation to current theories and policies.

**596. Experimental Topics (3)**

Prerequisite: Consent of instructor.

Intensive study in specific areas of economics. Topics to be announced in the Class Schedule. 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  
Refer to the Graduate Bulletin.**

# Education

In the College of Education

Accredited by the California Commission on Teacher Credentialing.

**Faculty**

Faculty assigned to teach in education are drawn from departments in the College of Education.

**Courses**

**UPPER DIVISION COURSES  
(Intended for Undergraduates)**

**350. Education in American Society (3) I, II, S**

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences.

Philosophical, historical and psychological roots of education in America; current models, instructional designs and strategies of education. Contemporary concerns in education.

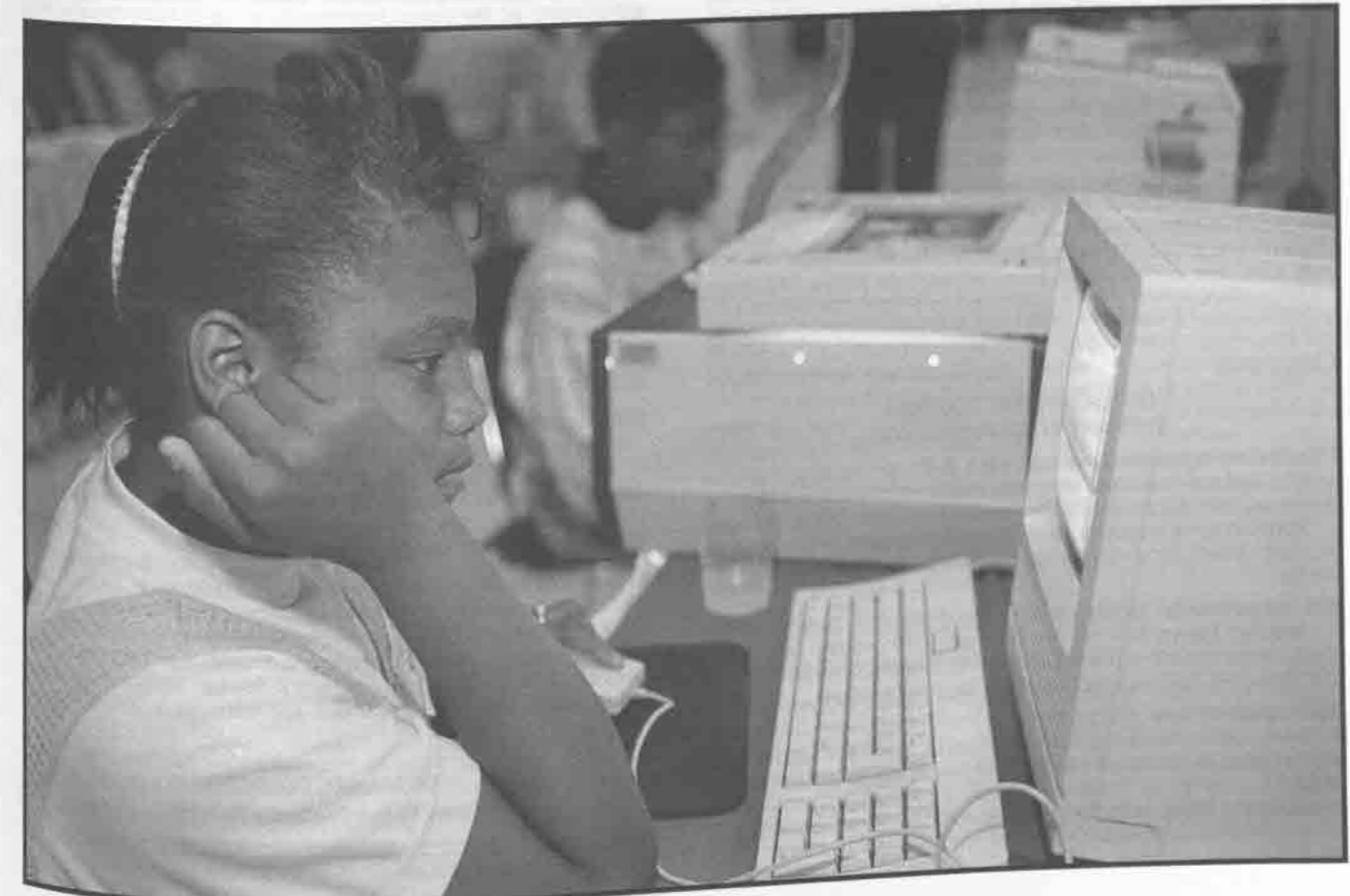
**451. Introduction to Multicultural Education (3)**

Overview of cultural pluralism in education, industry, business, other institutions, and society at large. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 451.)

**GRADUATE COURSES  
Refer to the Graduate Bulletin.**

“The secret of teaching is to appear to have known all your life what you learned this afternoon.”

—Author Unknown





# Educational Technology

In the College of Education

OFFICE: North Education 280  
TELEPHONE: (619) 594-6718

Accredited by the California Commission on Teacher Credentialing.

## Faculty

Emeritus: Anthony, McAllister, Weir  
Chair: Harrison  
Professors: Allen, Harrison, Rossett, Saba  
Associate Professor: Dodge  
Assistant Professor: Ritchie

## Offered by the Department

Master of Arts degree in education.  
Concentration in educational technology.  
Specialization in educational computing.  
Minor in educational technology.  
Certificate in instructional microcomputer software design.  
Certificate in instructional technology.

## Educational Technology Minor

The minor in educational technology consists of a minimum of 15 units, 12 of which must be upper division selected from Educational Technology 470, 540, 541, 544, 553, 572, and 596 (when applicable). Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Instructional Technology Certificate

To receive a certificate in instructional technology, candidates must meet departmental admission requirements which include relevant work experience or academic preparation, letters of recommendation, and a writing sample, and must complete the following 15 units of coursework: Educational Technology 540, 541, 544, and six units selected from Educational Technology 553, 572, or 596.

With the approval of the department, a student may apply no more than three units of coursework from the certificate program toward a major or minor.

## Courses

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 470. Technologies for Teaching (3) I, II, S

One and one-half hours of lecture and three hours of activity.  
Prerequisite: Education 451 or Teacher Education 290 or 453.  
Application of computer and video technologies to practice of teaching. Meets computer literacy requirement for clear teaching credential.

#### 496. Experimental Topics (1-4)

Selected topics. 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.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor. Open only to senior and graduate students in education who have shown ability to work independently.

Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 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, communication, aesthetic, and learning theories applicable to designing instructional products. Planning, producing, and disseminating technology-based instruction with authoring systems composed of integrated text, audio, graphics, and electronic dissemination. Not open to students with credit in Educational Technology 532.

#### 544. Instructional Design (3) I, II

One lecture and six hours of laboratory.  
Prerequisite: Educational Technology 540.  
Systematic approach to instructional design. Review of research and theory in instructional strategy development. Analysis, design and development of instructional and training products and programs.

#### 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. Not open to students with credit in Telecommunications and Film 320.

#### 572. Technology for Course Delivery (3) I, II

One lecture and six hours of laboratory.  
Prerequisites: Educational Technology 541; admission to a credential program or a teaching credential or experience in teaching.  
Technological tools and instructional strategies for development and management of classroom learning.

#### 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 Refer to the Graduate Bulletin.

# Electrical Engineering

In the College of Engineering

OFFICE: Engineering 409  
TELEPHONE: (619) 594-5718

The undergraduate degree in Electrical Engineering is accredited by the Accreditation Board for Engineering and Technology, Inc.

## Faculty

Emeritus: Brown, Chan, Learned, Lodge, Mann, Skaar, Stuart  
Chair: Marino  
Professors: Abut, Chang, Harris, J., Harris, J., Iosupovici, Lee, Lin, Marino, Massey, Panos, Suto, Szeto, Thyagarajan  
Associate Professors: Betancourt, Kolen, Powell  
Lecturer: Wilson

## Offered by the Department of Electrical and Computer Engineering

Master of Science degree in electrical engineering.  
Major in electrical engineering with the B.S. degree.

## Transfer Credit

No credit will be given for upper division engineering coursework taken at an institution having an engineering program which has not been accredited by the Accreditation Board for Engineering and Technology, Inc., unless the student successfully completes the first 12 units of engineering work attempted at this university. At that time, and upon recommendation of the department, credit will be given for the unaccredited work.

## General Education

Students will complete a minimum of 50 units in General Education, to include a minimum of nine upper division units taken after attaining junior class standing. At least three of the nine upper division units must be taken from Explorations; the remaining six units may be taken from Explorations or from specifically approved upper division course substitutions for Foundations areas B and C (Social and Behavioral Sciences and Humanities). No more than twelve units may be used for General Education credit from any one department or academic unit.

### I. Communication and Analytical Reasoning: 15 units

- Written Communication (6 units to include):
  - Composition (3 units)
  - Intermediate Composition (3 units)
- Oral Communication (3 units)
- Mathematics (6 units) applicable to General Education
  - Mathematics 150
  - Mathematics 151

### II. Foundations: 29 units

- Natural Science (17 units to include):
  - Life Science (3 units)
  - Physical Science (14 units)
    - Chemistry 200
    - Physics 195
    - Physics 196
    - Physics 197
- Social and Behavioral Sciences (3 units)
- Humanities (9 units to include three of the four Humanities areas)

### III. Explorations: 6 units

- Three units of upper division cultural diversity Explorations coursework from the area in Humanities not selected in Foundations.

B. Three units of upper division social sciences coursework. Three units of a six-unit upper division American Institutions sequence from any department but History may be used to satisfy this requirement.

## The Major

The technologically oriented world of today is filled with products and services based on electrical engineering, and those with the interest and ability to enter the engineering profession will enjoy the status and rewards befitting the creators of these new technological advances. The demand for new engineering graduates has remained strong during the last decade, and projections indicate that it will stay that way far into the future.

Electrical and computer engineering is involved in all areas of science and technology and has an impact on nearly every human activity. These engineers work in such diverse areas as biomedical instrumentation; electronics for communications, vehicle guidance, consumer products, signal processing, and robotics; speech synthesis; microprocessor controlled systems; computer design; information theory; electron device design; power systems; sonics and ultrasonics; systems studies; lasers and electro-optics; and microwave/millimeter wave technology.

Graduates of this program are prepared to enter industry at the junior engineer level, take the engineer-in-training examination as a first step toward professional registration, or continue formal education at the graduate level in preparation for more advanced technical or leadership positions. The engineer's work is predominantly intellectual and constantly varying. The program emphasizes mastery of a basic core of mathematics, physical sciences, and the engineering sciences, so that the graduate will be able to continue his/her education as required to keep up with rapid technological change. Woven through this pattern is a study of the social sciences and humanities, because success in the profession requires a high level of skill in working and communicating with other people, and because engineering graduates should be well educated citizens, conscious of the social and economic implications of their decisions.

Career opportunities in the electrical and computer engineering fields are numerous, and due to the rapid expansion of applications of this technology, the competition for a limited number of graduates has resulted in high starting salaries. Positions for electrical engineers exist in many agencies of the federal government, in a wide variety of large and small corporations, and (for engineers with graduate degrees) at many universities. Opportunities are available in a wide variety of work environments, including, for example, instrument development in a small corporation, project management in a large defense contracting firm, applied research in a federal government, or corporate laboratory, or systems studies in a utility company.

## Electrical Engineering Major With the B.S. Degree (Major Code: 09091)

The program below describes the requirements for the degree. Each course specifically listed in the program is required. In addition, the total number of units specified in each of the elective categories represents a minimum requirement. These are: General Education, 24 units; American Institutions, 6 units; Professional Electives, 28 units. The semester in which each course or elective is listed in the program below is typical, but not required. Any variation that satisfies course prerequisites is acceptable.



The General Education and American Institutions electives must satisfy University requirements described elsewhere in this catalog. Professional Electives include all upper division EE courses and approved upper division courses in other departments. The 28 Professional Elective units must include at least ten units of EE design (see department office for a list of design courses and credits); at least three units of basic engineering (CE 301, EM 340, and ME 352); and at

least one unit of EE laboratory. *The student's choice of electives is subject to the approval of the faculty adviser and the department chair. The student must file an approved Master Plan during the first semester of the junior year.*

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**FRESHMAN YEAR**

Fall Semester	Units	Spring Semester	Units
Chem. 200, General Chemistry .....	5	Phys. 195, Principles of Physics .....	3
Math. 150, Single Variable Calculus .....	5	Math. 151, Calc. and Anal. Geom. ....	4
Engr. 120, Engr. Problem Analysis .....	2	Engr. 140, Engr. Meas. Analysis .....	2
General Education .....	6	General Education .....	6
	18		15

**SOPHOMORE YEAR**

Fall Semester	Units	Spring Semester	Units
Math. 252, Multivariable Calculus .....	4	Phys. 197, 197L, Principles of Physics .....	4
EM 202, Mechanics for Elec. Engrs. ....	3	EE 210, Electrical Network Anal. I .....	3
Phys. 196, 196L, Principles of Physics .....	4	EE 270, Digital Systems .....	3
General Education .....	6	Engr. 280, Methods of Analysis .....	3
	17	General Education .....	3
			16

**JUNIOR YEAR**

Fall Semester	Units	Spring Semester	Units
EE 310, Electrical Network Anal. II .....	3	EE 380L, Elec. Energy Conv. Lab .....	1
EE 330, 330L, Fund. Engr. Electronics .....	4	EE 410, Signals and Systems .....	3
EE 340, Electric and Magnetic Fields .....	3	EE 430, Electronic Circuits .....	3
EE 371, Computer Organization .....	3	EE 434, Electronic Matis. and Devices .....	3
EE 380, Electrical Energy Conv. ....	3	Professional Elective .....	3
	16	General Education .....	3
			16

**SENIOR YEAR**

Fall Semester	Units	Spring Semester	Units
Professional Electives .....	12	EE 430L, Electronic Circuits Lab .....	1
General Education .....	3	Professional Electives .....	13
American Institutions .....	3	American Institutions .....	3
	18		17

**Courses****LOWER DIVISION COURSES****203. Principles of Electrical Engineering (3) I, II**

Prerequisites: Physics 196 and Mathematics 151 or 157.  
Direct and alternating current analysis; phasor diagrams; single-phase and three-phase power; diodes, transistors, integrated circuits, transformers, motors, and generators. Not acceptable for electrical, aerospace, or civil engineering majors.

**204. Principles of Electrical Engineering (3)**

Prerequisites: Mathematics 151 or 157, and Physics 196.  
Circuit analysis; phasor diagrams; single-phase and three-phase power; semiconductor devices and applications; and energy conversion devices. Not acceptable for electrical or mechanical engineering majors.

**210. Electrical Network Analysis I (3) I, II (CAN ENGR 12)**

Prerequisites: Physics 196 and Mathematics 151 or 157.  
Circuit analysis by reduction methods, source transformations, mesh and nodal analysis. Operational amplifier model, transient analysis, alternating current circuits, impedance, power, phasor diagrams, and three-phase balanced networks. Computer programming and application of computer software for circuit analysis.

**270. Digital Systems (3) I, II**

Prerequisite: Mathematics 151 or 157.  
Modelling, analysis and design of digital systems; primarily at the Logic Design level. Combinational and sequential networks. Not open to students with credit in Electrical Engineering 370.

**UPPER DIVISION COURSES  
(Intended for Undergraduates)****303. Electronics, Instrumentation, and Electrical Energy Conversion (3) I, II**

Prerequisite: Electrical Engineering 203 with minimum grade of C.  
Theory and application of diodes and transistors in typical electronic circuits. Instrumentation and electronic measuring devices. Fundamentals of electro-mechanical energy conversion including motors and transformers. Not open to electrical engineering majors.

**310. Electrical Network Analysis II (3) I, II**

Prerequisites: Electrical Engineering 210, Engineering 120, and Mathematics 252.  
Mesh and nodal analysis using network equations, frequency and time response of networks, two-port parameters, transient analysis of circuits, state-space, and computer-aided network analysis and applications.

**330. Fundamentals of Engineering Electronics (3) I, II**

Prerequisite: Electrical Engineering 210.  
Application of diodes—JFETs, MOSFETs, and BJTs—in typical electronic circuits. Analysis and design of rectifiers, filters, and simple amplifiers using transistors and operational amplifiers.

**330L. Engineering Electronics Laboratory (1) I, II**

Three hours of laboratory.  
Prerequisite: Credit or concurrent registration in Electrical Engineering 330.  
Experimental study of laboratory instruments, diodes, rectifier circuits, filters, transistors, and operational amplifiers.

**340. Electric and Magnetic Fields (3) I, II**

Prerequisite: Engineering 280.  
Electrostatic and magnetostatic field theory using vector notation; Coulomb's Law, Gauss' Law and potential theory. Solutions to Poisson's and Laplace's equations; capacitance and inductance. Time-varying fields; Maxwell's equations.

**371. Computer Organization (3) I, II**

Prerequisites: Engineering 120 and Electrical Engineering 270.  
Organization and operation of computer hardware and software. Operating system shell and services. Program design and development. Input-output programming. Multi-module and mixed-language programming. Assembler and C language.

**373. Computer Design (3) I, II**

Prerequisite: Electrical Engineering 371.  
Systematic techniques for designing digital computers and other complex digital systems. Machine arithmetic, Register Transfer Level design, hardwired and microprogrammed control units. Not open to students with credit in Electrical Engineering 573.

**380. Electrical Energy Conversion (3) I, II**

Prerequisites: Electrical Engineering 210 and Engineering 120.  
Magnetic circuits, transformers and polyphase AC networks. Fundamentals of electro-mechanical energy conversion; induction motors, synchronous machines and DC machines.

**380L. Electrical Energy Conversion Laboratory (1) I, II**

Three hours of laboratory.  
Prerequisite: Electrical Engineering 380.  
Experimental study of DC, single and polyphase AC circuits, transformers, and machines.

**403. Biomedical Instrumentation (3)**

Prerequisite: Electrical Engineering 303 or 330.  
Instrumentation systems to monitor, control and record physiological functions.

**410. Signals and Systems (3) I, II**

Prerequisite: Electrical Engineering 310.  
Linear time-invariant systems, Fourier analysis, continuous and discrete signals and systems, filtering, sampling, and z-transform techniques.

**420. Control Systems Components (3) II**

Prerequisites: Electrical Engineering 310, 330 and 380.  
Position transducers, phase-sensitive demodulators, static magnetic and rotating amplifiers, and servomotors. Derivation of component transfer functions.

**430. Analysis and Design of Electronic Circuits (3) I, II**

Prerequisites: Electrical Engineering 310, 330, and Engineering 280.  
Single and multiple transistor amplifiers, power stages. Frequency response, feedback, stability, and operational amplifier circuits.

**430L. Electronic Circuits Laboratory (1) I, II**

Three hours of laboratory.  
Prerequisites: Electrical Engineering 330L and 430.  
Transistor dynamic characteristics; single stage and multistage amplifier circuits including feedback, tuned amplifiers, voltage regulators, active filters, and A/D-D/A converters.

**434. Electronic Materials and Devices (3)**

Prerequisites: Electrical Engineering 330 and 340.  
Crystal properties and growth of semiconductors, quantum mechanics of solids, shot noise and thermal noise, energy band and charge carriers, excess carrier in semiconductors, p-n junctions, solar cells, tunnel diodes, photodetectors.

**450. Communication Networks (3)**

Prerequisites: Electrical Engineering 310, 340, and Engineering 280.  
Theory and application of transmission lines, including analysis by matrix notation; use of Smith chart and other transmission line charts; impedance-matching with transmission line stubs and lumped constants; theory and design of constant-k, m-derived, and other types of filter networks.

**470. Digital Circuits (3) I**

Prerequisites: Electrical Engineering 270 and 330.  
Operating characteristics, specifications, and applications of standard commercially available high-speed digital integrated circuit devices.

**470L. Digital Logic Laboratory (1) I**

Three hours of laboratory.  
Prerequisite: Credit or concurrent registration in Electrical Engineering 470.  
Hands-on experience in characterization and application of standard digital integrated circuit devices.

**473L. Microprocessor Laboratory (1) II**

Three hours of laboratory.  
Prerequisites: Electrical Engineering 373 and 470.  
Design, documentation, assembly, circuit checkout, programming, and software validation of a microprocessor-based system.

**475. Microprocessors (3) I, II**

Prerequisites: Electrical Engineering 371 and 470.  
Bus design, memory design, interrupt structure, input/output, and program development for microprocessor-based systems. Not open to students with credit in Electrical Engineering 575.

**483. Power Distribution Systems (3) II**

Prerequisite: Electrical Engineering 380.  
Design and operation of electric power distribution systems. Design of primary and secondary systems, application of one phase and three phase transformer banks, and metering principles and practices.

**496. 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 six units for any combination of Electrical Engineering 496, 499 and 596.

**499. Special Study (1-3) I, II**

Prerequisite: Approval of project adviser and department chair.  
Individual study. Maximum credit six units for any combination of Electrical Engineering 496, 499 and 596.



**UPPER DIVISION COURSES**  
(Also Acceptable for Advanced Degrees)

**502. Electronic Devices for Rehabilitation (3) II**

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.

**521. Advanced Feedback Control Systems (3) II**

Prerequisite: Electrical Engineering 520.  
A continuation of Electrical Engineering 520 to include feedback compensation, advanced compensation techniques, signal flow theory, state-variable techniques, introduction to nonlinear and sampled-data control systems.

**530. Analog Integrated Circuit Design (3) I, II**

Prerequisite: Electrical Engineering 430.  
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 430.  
Conduction theory of solids. Characteristics of tunnel, backward, breakdown, multilayer and varactor diodes; silicon controlled rectifiers and switches, unijunction transistors, hot electron devices. Lasers and laser applications.

**540. Microwave Communications (3) II**

Prerequisite: Electrical Engineering 340. Recommended: Engineering 510.

Applications of Maxwell's equations to wave propagation; skin effect, circuit impedance elements; vector potential, and other timevarying electrical phenomena; waveguides and resonators; strip line circuits, electromagnetic radiation.

**540L. Microwave Measurements Laboratory (1) II**

Three hours of laboratory.  
Prerequisites: Credit or concurrent registration in Electrical Engineering 430L and 540.

Experimental study of microwave generation including klystrons, Gunn and IMPATT oscillators, TWT and microwave transistor amplifiers. Microwave modulation and detection. Microwave transmission and antennas.

**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.

**554. Communication Principles and Circuits (3) II**

Prerequisite: Electrical Engineering 430.  
Signal transmission in linear networks; modulators and detectors; wide-band and narrow-band amplifiers; oscillators; AM, FM, and phase modulation; transient response of amplifiers.

**554L. Communication Circuits Laboratory (1)**

Three hours of laboratory.  
Prerequisite: Electrical Engineering 430L.  
Regulated power supply systems; oscillator, modulator, detector, and switching circuits; superheterodyne receivers and television circuitry.

**555. Modulation Theory (3) I**

Prerequisite: Electrical Engineering 410.  
Theory and performance characteristics of analog modulation and demodulation. Spectral characteristics and noise performance of amplitude, frequency, phase, and compound modulation. System noise figure.

**556. Digital Signal Processing (3)**

Prerequisite: Electrical Engineering 410 or Physics 516A.  
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.

**557. Two-Dimensional Digital Signal Processing (3) II**

Two lectures and three hours of laboratory.  
Prerequisite: Electrical Engineering 410 or Physics 516A.  
Two-dimensional analysis of signals and systems in areas of signal representation, enhancement, restoration, source coding of images, radar signals, and other two-dimensional information. Computer experiments in image processing.

**558. Digital Communication Systems (3) II**

Prerequisite: Electrical Engineering 410.  
Foundations and interrelationships of subsystems in modern digital communication systems. Regulatory considerations, channel descriptions, modems, error rates, digital coding of speech, line coding, intersymbol interference, networking, error control and cryptography.

**570. Advanced Digital Circuits (3)**

Prerequisite: Electrical Engineering 470.  
Digital applications of linear devices, the digital/analog interface, and ultra high speed logic devices.

**571. Bit-Slice Digital Systems (3)**

Prerequisites: Electrical Engineering 373 and 470.  
Design of high-speed microprogrammable bit-slice digital systems. Case studies of CPU and controller designs.

**576. Microprocessor Systems Development (3) I**

Prerequisite: Electrical Engineering 373.  
Design and development of software for real-time microprocessor-based systems using modern tools. In-circuit emulation. Multi-tasking and interrupt programming. Assembler and C-language are used.

**578. 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.

**579. VLSI System Design (3) II**

Prerequisite: Electrical Engineering 373.  
Design of Very Large Scale Integrated circuits based on standard cell and gate array techniques; introduction to algorithms used in computer-aided design; VLSI systems for digital circuit and signal processing applications.

**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.

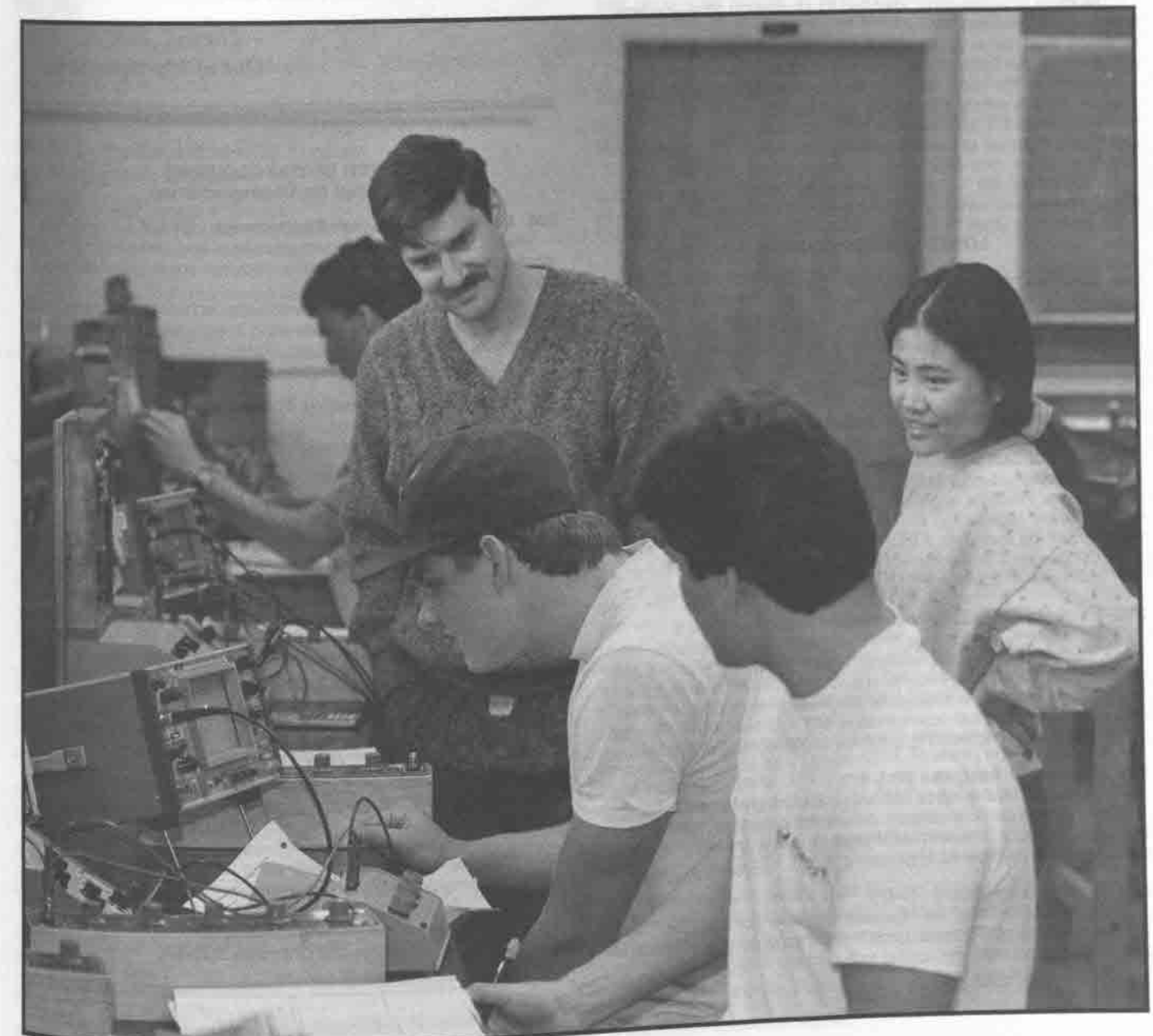
**582. Power Relay Systems (3) I**

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 six units for any combination of 496, 499 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**  
Refer to the Graduate Bulletin.



# Engineering

In the College of Engineering

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

## Faculty

Faculty assigned to teach courses in engineering are drawn from departments in the College of Engineering.

## Minor in Engineering

The minor in engineering, intended for students in other academic areas of the university, consists of 15 units in engineering, 12 units of which must be in upper division courses. The courses must be approved by the Dean of the College of Engineering.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

#### 120. Engineering Problem Analysis (2) I, II

One lecture and three hours of laboratory.  
Prerequisite: Concurrent registration in Mathematics 150.  
Analysis of engineering problems and solutions using the digital computer. Fundamentals of programming and programming language commands.

#### 140. Engineering Measurement Analysis (2) I, II

Prerequisite: Mathematics 140.  
Methods of data presentation. Analysis and treatment of engineering data. Design of engineering experiments. Correlation and regression analysis. Practical applications are stressed. Students with credit or concurrent registration in the following lower division statistics courses will be awarded a total of four units for the two (or more) courses: Biology 215; Economics 201; Engineering 140; Mathematics 119, 250; Political Science 201; Psychology 270; and Sociology 201.

#### 210. Elements of Interactive Computer Graphics (3) I, II

Prerequisite: Credit or concurrent registration in Mathematics 150.  
Computer graphics. Familiarization with computer systems and graphics packages. Engineering applications program development for two-dimensional and three-dimensional data representation. Basic concepts in geometrical representation and approximations. Figures, graphs and other engineering graphics applications. Color graphics.

#### 280. Methods of Analysis (3) I, II

Prerequisite: Mathematics 252 with minimum grade of C.  
Selected topics from ordinary differential equations, the Laplace transform, Fourier series, and linear algebra, with engineering applications. (Formerly numbered Engineering 310.)

#### 296. Experimental Topics (1-4)

Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of six units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

OFFICE: Engineering 426B  
TELEPHONE: (619) 594-6061

“Education is that which remains when one has forgotten everything he (she) learned in school.”

—Einstein, 1936  
*Out of My Later Years*

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 320. Control of the Human Environment (3) I, II

Prerequisites: Upper division standing and completion of six or more units of the General Education requirement in Foundations, II.A. Natural Sciences.

Human interaction with the land, water and air environment; environmental pollution; role of engineering in controlling the environment. Not open to engineering majors. (Formerly numbered Engineering 150.)

#### 430. Principles of Engineering Economy (3) I, II

Prerequisite: Mathematics 252.  
Application of the mathematics of finance to engineering and managerial decision making.

#### 496. Advanced Engineering Topics (1-3) I, II

Prerequisite: Minimum grade point average of 2.0 in engineering. Modern developments in engineering. See Class Schedule for specific content. Maximum credit six units for any combination of 496, 499, and 596 applicable to a bachelor's degree.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 510. Methods of Analysis (3) I, II

Prerequisite: Engineering 280 with minimum grade of C.  
Selected topics from vector calculus, partial differential equations, and complex analysis, with engineering applications.

#### 511. Digital Solutions of Engineering Problems (3)

Prerequisites: Engineering 120 or Computer Science 106, and Engineering 280.  
Digital solution of classes of engineering problems. Application of numerical methods with consideration of limitations imposed by computer and programming language characteristics.

### GRADUATE COURSES Refer to the Graduate Bulletin.

# English

In the College of Arts and Letters

OFFICE: Adams Humanities 4158  
TELEPHONE: (619) 594-5237

## Faculty

Emeritus: Adams, J., Baker, Brown, Burnett, Chater, Gross, Haskell, Ingham, Kohler, Monteverde, O'Reilly, Perkins, Redding, M., Redding, R., Sanderlin, Sandstrom, Shouse, Sullivan, Taylor, Tozer, Vanderbilt, Widmer

Chair: Wall

Professors: Adams, E., Alcosser, Benson, Borkat, Brashear, Bumpus, Butler, Davis, Farber, Gellens, Gervais, Griswold, Henig, Jaffe, Kehler, Kuznets, McCaffery, McLeod, Moramarco, Nelson, Neumeyer, Rogers, Rother, Santangelo, Savvas, Sheres, Shojai, Stuehl, Wall

Associate Professors: Boe, Gregory, Hicks, Little, Luria-Sukenick, Rose, Wheeler

Assistant Professors: Allison, Aninger, Chin, Colquitt, Koolish, Nericcio

## Offered by the Department of English and Comparative Literature

Master of Arts degree in English.

Master of Fine Arts degree in creative writing.

Major in English with the B.A. degree in liberal arts and sciences.

Single subject teaching credential in English.

Minor in English.

Certificate in children's literature.

Certificate in technical and scientific writing.

Courses in comparative literature. (Refer to this section of the catalog under Comparative Literature.)

## The Major

The study of English today encompasses a wide range of materials and approaches to ways in which both students and established writers – past and present – may use language to express feelings, convey ideas, and give aesthetic pleasure. As the largest English Department in California, SDSU can offer not only historical, analytical, sociopolitical and other approaches to literature and literary theory, but a variety of creative and expository writing classes as well.

English majors take fifteen units of lower division preparatory work designed to develop writing potential and analytical reading skills. More specialized upper division study focuses on particular areas: British literature before 1800; British literature after 1800; American literature; modern literature; literary types, theory, and criticism; creative writing; or expository writing.

Students going on to the single subject credential program in English can complete most of the credential requirements through courses taken in the major.

The English minor requires twelve units of upper division study that can be tailored to individual requirements. In addition the department offers certificates in Children's Literature and in Technical and Scientific Writing.

Teaching is one of the many career opportunities available to English graduates; English studies are also good preparation for radio and television broadcasting, editing, writing, politics, film and library work, journalism, criticism, advertising, public information, public relations, and technical writing.

A study by the Modern Language Association, "English: The Pre-Professional Major," shows that training in English and literature is

valuable preparation for futures in law, medicine, business and federal service.

The SDSU Placement Office has found that liberal arts graduates in general have profited both in terms of job availability and compensation in a recent shift from manufacturing to service in the United States economy. Moreover, after a number of years of decline, the demand for teachers of English in the high schools is now on the rise.

## Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

## English Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 15011)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in English and comparative literature courses can apply to the degree.

A minor is not required with this major.

**Preparation for the Major.** English 100, 200 (also acceptable for General Education) or 280 (not acceptable for General Education), 260A, 260B (unless replaced by 560A-560B), and three units selected from English 220, 250A, 250B, 280, 281, 296, Comparative Literature 210, 270A, 270B, 296. (15 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** English 500W, 508W, 581W, or 584W\*, with a grade of C (2.0) or better.

**Major.** A minimum of 30 upper division units in English selected with the approval of the adviser, to include (a) English 533; (b) at least nine units in one of the areas of study listed below; and (c) at least three units in British Literature before 1800, three units in British literature after 1800, six units in American literature including at least one period course (period courses: English 519, 520, 526, 527, 528), three units in writing (English 500W, 508W, 580\*, 581W\*, 584W\*, 589\*), and electives in English and Comparative Literature as needed to complete the 30 upper division units.

Students who have not taken English 260A as part of the preparation for the major must take English 560A. Students who have not taken 260B must take 560B. The same course may be used to satisfy requirements under both (b) and (c); English 560A or 560B may not be used to satisfy requirement (c). Six units of courses in comparative literature may be included as part of the major in English.

### Areas of Study:

**British Literature before 1800:** English 530, 531, 534\*, 536, 537, 538A, 538B, 540A, 541A, 541B, and Comparative Literature 510.

**British Literature after 1800:** English 540B, 542, 543, 544, 547, 548.

**American Literature:** English 519, 520, 522, 523, 524 and 525.

\* Additional prerequisites required.



**Modern Literature:** English 524, 525, 544, 547, 548, and Comparative Literature 445, 460, 514.

**Literary Types, Theory, and Criticism:** English 501, 507, 508W, 527, 570, 571, 573, 577, 578, and Comparative Literature 561, 562, 563, 580, 582, 594, and 595.

**Creative Writing:** English 570, 571, 573, 576, 577, 578, 579, 580\*, 581W\*, 583\*, 584W\*, 587\*, 588\*, and 589\*.

**Expository Writing:** English 306W, 500W, 503W, 504\*, 508W, 509, 584W\*.

\* Additional prerequisites required.

**NOTE:** In addition to the courses listed above, appropriate sections of English 496, 499, 526, 527, 528, 549, American Studies 580, and selected comparative literature courses may be used to satisfy the requirements for the major if approved by the departmental adviser.

### Selection of Courses

Prospective majors of sophomore standing may, with the consent of the course instructor and subject to general university regulations (see "Credit for Upper Division Courses" in the section of this catalog on General Regulations), substitute six units of upper division electives for six units of lower division work. These courses must be in the same field as those which they replace, and must be approved by the departmental adviser.

Students of junior or senior standing may substitute for any deficiencies in lower division requirements in English (except English 100) an equivalent number of units of upper division courses selected with the approval of the departmental adviser.

## Single Subject Teaching Credential in English

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under Policy Studies or Teacher Education.

The requirements for the Secondary Credential in English are as follows:

- I. A major in English, comparative literature, or linguistics for the B.A. degree which includes a foreign language requirement and an upper division writing requirement. Students whose B.A. degree was awarded more than seven years before evaluation of transcripts for entrance into the credential program must take at least nine units of new coursework approved by the department adviser (including at least three units in literature and three units in composition) to ensure currency in the field. To be recommended for entrance into the credential program, such students must have a GPA of at least 3.0 in the new coursework.
- II. Satisfactory completion of 39 units selected from courses in the following categories: (Many of these courses may also be used to satisfy requirements for the major.)

### A. Courses in Literature (total 18 units)

**NOTE:** Must include at least one course in British literature and one course in American literature.

1. **Lower division survey:** 6 units. (American, British, or World)
  - a. Particularly appropriate: English 250A, 250B, 260A, Comparative Literature 270A.
  - b. Appropriate: English 260B, Comparative Literature 270B. (English 560A-560B may be substituted for 260A-260B.)

### 2. Shakespeare: 3 units.

- a. English 533.

### 3. Modern Literature: 3 units.

- a. Particularly appropriate: English 524, 525, 547, 548, Comparative Literature 514.
- b. Appropriate: English 544, Comparative Literature 440, 445, 460.
- c. The following courses are also applicable when the topic deals with the twentieth century: English 496, 526, 528, 549, Comparative Literature 490, 577, 596.

### 4. A Course in Ethnic Literature: 3 units.

English 519, 520, Africana Studies 460, 461, 462, 463, 464, American Indian Studies 430, Mexican American Studies 335, 464.

### 5. A Course in Genre, Myth, or Literature and Other Disciplines: 3 units.

- a. Particularly appropriate: English 306A, 501, 527, 570, 571, 573, 579, Comparative Literature 470, 561, 594, 595.
- b. Appropriate: English 578, Comparative Literature 562, 563, 571.
- c. The following courses are also applicable when the topic deals with a genre or literature and other disciplines: English 496, 549, Comparative Literature 490, 596.

### B. Courses in Writing (total 9 units).

- a. English 509.
- b. At least one upper division expository writing course: English 306W, 500W, 508W, or 584W\*.
- c. One course in creative writing: English 280, 281, 580\*, 581W\*, 583\*, 587\*, 588\*.

### C. Courses in Linguistics (total 9 units).

- a. Particularly appropriate: Linguistics 410 (History of English), 420 (Linguistics and English) or 520 (Fundamentals of Linguistics), 524 (American Dialectology), 550 (Theory and Practice of English as a Second Language).
- b. Appropriate: Linguistics 101 (Introduction to Language), 551 (Sociolinguistics), 552 (Psycholinguistics).

### D. Speech (total 3 units).

Speech Communication 103 (Oral Communication), 105 (Introduction to Speech Communication), 491 (Group Communication).

\* Additional prerequisites required.

## Course Sequences

All year courses in English may be taken in either semester, and either semester may be taken singly for credit.

## Student Initiated Courses

Students may petition for a course which falls within the competency of the English Department but which is not among the regular course offerings for the present or following semester. Petition forms may be obtained from the department secretary.

## Undergraduate Seminars

Each semester, if adequate staffing permits, the department may offer several of its courses as special, limited-enrollment seminars. These seminars are designed to give English majors (or anyone who has the consent of the instructor) the opportunity as juniors and seniors to engage in advanced work in small discussion groups.

## English Minor

The minor in English consists of a minimum of 15 units; 12 units of which must be in upper division courses. The department offers minors specifically tailored to complement students' majors. All minors will include English 220 (unless a substitution is approved by the departmental adviser) and 12 upper division units selected from one of the following areas, dependent upon the student's major:

**Social Science disciplines,** one course from each group:

1. A course in Shakespeare: English 302 or 533.
2. A course in expository writing: English 305W, 306W, 500W, or 503W.
3. A course in folk or popular literature: English 301, 306A, 405, 491, 501, Comparative Literature 470, or approved sections of other special topics courses.
4. A course in contemporary literature: English 525, 548, or approved sections of special topics courses.

**Fine Arts disciplines,** one course from each group:

1. A course in Shakespeare: English 302 or 533.
2. A course in genre study or criticism: English 306A, 405, 501, 507, 508W, 527, 570, 571, 573, 577, 578, 579, Comparative Literature 561, 562, 563.
3. A course in literature and other arts: English 493, Comparative Literature 594, 595, or approved sections of special topics courses.
4. A course in creative writing: English 580\*, 581W\*, 583\*, 584W\*, 587\*, 588\*, or approved sections of special topics courses.

**Business disciplines,** one course from each group:

1. A course in expository writing: English 305W, 500W, or 503W.
2. A course in Shakespeare, literature and psychology, or popular literature: English 301, 302, 491, 493, 494, 533.
3. A course in American literature: English 522, 523, 524, 525, or approved sections of 526 or 528.
4. A course in British literature: English 540A, 540B, 544, 547, 548, or approved sections of 549.

**Humanities disciplines,** one course from each group:

1. A course in Shakespeare: English 302 or 533.
2. A course in genre study or criticism: English 306A, 405, 501, 507, 508W, 527, 570\*, 571\*, 573\*, 577\*, 578\*, 579\*, Comparative Literature 561, 562, 563.
3. A course in literary history: English 560A, 560B, any course in the 520, 530, and 540 series, Comparative Literature 510, 511, 512, 514.
4. A second course in literary history or a course in literature and other disciplines, English 493, Comparative Literature 594, 595, or approved sections of special topics courses.

**Science disciplines,** one course from each group:

1. A course in technical writing: English 503W\*.
2. A course in Shakespeare or Bible as Literature: English 302, 405, 533.
3. A course in literature and psychology or popular literature or science fiction: English 301, 491, 493, 494, 501, or approved sections of other special topics courses.
4. A course in literary history: English 560A, 560B, any course in the 520, 530, or 540 series, Comparative Literature 510, 511, 512, 514.

\* Additional prerequisites required.

**For students whose needs are not accommodated by any of the above patterns:**

Students whose majors are not represented by the patterns above, students who wish to design a minor more directly tailored to

their specific major, or students who otherwise feel they have special needs are encouraged to consult with their advisers in both major and minor departments to design individualized minors in English. All such minors must have the written approval of both departmental advisers.

The English minor is not available to students majoring in comparative literature. Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Children's Literature Certificate

This certificate attests that the student has successfully completed 18 units (minimum GPA 3.0) of planned, advised, coherent, and articulated study in the field of literature for children. Prerequisites include admission to the University and to upper division or graduate standing. The Certificate in Children's Literature may be earned with a specialization either in Education or in English and Comparative Literature. Nine units in the certificate program may be counted toward the major in English, and six units may be counted toward the minor in English.

**Specialization in Education.** Nine units from courses in group A, six units from group B, and three units of an appropriate elective chosen with the approval of a faculty adviser.

**Specialization in English and Comparative Literature.** Nine units from courses in group B, six units from group A, and three units of an appropriate elective chosen with the approval of a faculty adviser.

**Group A, Education:** Educational Technology 596; Teacher Education 496\*\*, 530, 531.

**Group B, English and Comparative Literature:** Comparative Literature 561 (when offered as European Children's Literature); English 496\*\*, 501, 526\*\*, 527\*\*, 528\*\*, 549\*\*.

\*\* With adviser's permission when the subject is closely related to children's literature.

## Technical and Scientific Writing Certificate

The purpose of this certificate program is to prepare students for careers in technical and scientific writing. The program is designed for people who are working on degrees in nontechnical, technical, and scientific fields. It also provides a self-improvement opportunity for people seeking employment, promotion, or upward mobility on the job who are not enrolled in degree programs. Students will complete a total of 21 units that must be approved by the director of the program in the Department of English and Comparative Literature. Applicants for entrance into the program must complete a writing assessment examination, administered by the director of the program, and may be required to take additional coursework to improve writing proficiency. Nine units in the certificate program may be counted toward the minor in English, and three units may be counted toward the minor in English.

**Required Courses:** (9 units)

English 500W\*, Advanced Composition  
English 503W\*, Technical Writing  
English 504\*, Problems in Technical Communication

**Recommended Courses:** Students should consult with the director of the program before selecting any courses so that an individualized program can be developed. Students with technical or scientific backgrounds should concentrate their coursework in writing. Those with nontechnical or nonscientific backgrounds should concentrate on either a technical or scientific specialty. English 496, Internate on either a technical or scientific specialty. A maximum ship in Technical Writing, is recommended for all students. A maximum of six units of transfer credit may be applied to the program. (12 units.)

\* Additional prerequisites required.



## Courses

## LOWER DIVISION COURSES

**100. College Composition (3) (CAN ENGL 2)**

*International students are advised to take Linguistics 100.*

Prerequisites: Satisfaction of the English Placement Test and Writing Competency requirements. (See Graduation Requirements section of catalog.) **Proof of completion of prerequisites required:** Copy of EPT or competency scores or verification of exemption; proof of Cr in Academic Skills 92A or 92B or 97A or 97B, or notification from Academic Skills.

Principles of effective composition, rhetorical techniques for achieving clarity, interest, and effective organization and development of ideas, based on the reading and analysis of selected texts. Not open to students with credit in Africana Studies 120 or higher numbered composition or creative writing course or Linguistics 100 or Mexican American Studies 111B.

**200. Intermediate Composition (3) I, II**

*International students are advised to take Linguistics 200.*

Prerequisites: Satisfaction of the English Placement Test and Writing Competency requirements and English 100 or Africana Studies 120 or Linguistics 100 or Mexican American Studies 111B. **Proof of completion of prerequisites required:** Test scores or verification of exemption; grade report or copy of transcript.

Further practice in expository writing, with emphasis on mastery of style and organization, and problems of research. Not open to students with credit in Africana Studies 200 or Linguistics 200.

**205. English for Journalists (3)**

Prerequisite: English 100.

Intensive review of grammar, vocabulary, spelling, and other technical aspects of English, with frequent writing. Designed for students seeking mastery of standard English, particularly journalism majors preparing for the GSP Test.

**220. Introduction to Literature (3) I, II**

An inquiry into the basic nature of literature. What prompts human-kind to the creation of imaginative literature? What purposes does literature serve in the cultural life of humanity? What are its social, philosophical, spiritual, and esthetic values? Some consideration may be given to techniques and major critical theories, but the focus will be on practical criticism for the nonspecialist. Specific works studied will be representative of several genres, cultures, and periods of literature.

**250A-250B. American Literature (3-3) (250A: CAN ENGL 14) (250B: CAN ENGL 16)**

American literature from the colonial period to the present. Semester I: from the beginning to the Civil War. Semester II: Civil War to the present. Recommended for English majors.

**260A-260B. English Literature (3-3) I, II (260A: CAN ENGL 8) (260B: CAN ENGL 10)**

English literature from the Anglo-Saxon period to the present, with emphasis on the major works in the literary tradition. Semester I: Ends with the neoclassical period. Semester II: Begins with the Romantic writers.

**280. Introduction to Creative Writing (3)**

Prerequisites: Satisfaction of the English Placement Test and Writing Competency requirements and English 100 or Africana Studies 120 or Linguistics 100 or Mexican American Studies 111B. **Proof of completion of prerequisites required:** Test scores or verification of exemption; grade report or copy of transcript.

Theory and practice of poetry and fiction, with emphasis on basic concepts and techniques. A research paper on a writer, a technique, a period, or a genre required.

**281. Creative Writing: Selected Genres (3)**

Prerequisite: English 100.

Guidance and extensive practice in writing in one or more of the major genres: poetry, drama, fiction, or the essay. See Class Schedule for specific content.

**296. Experimental Topics (1-4)**

Selected topics. 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.

UPPER DIVISION COURSES  
(Intended for Undergraduates)**301. The Psychological Novel (3)**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Psychological novel from its inception to present, including major works from a variety of cultures. Readings designed to aid students in discovering insights which great novelists have unearthed in their explorations of the human psyche.

**302. Introducing Shakespeare (3)**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Representative tragedies, comedies, and histories. Primarily for the general student not specializing in English or comparative literature. This course does not count toward the English or comparative literature majors. Majors are required to take English 533.

**305W. Academic Writing (3)**

*International students are advised to take Linguistics 305W.*

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. It is strongly recommended that the course be taken at the beginning of the junior year, so that students have an opportunity to demonstrate their writing proficiency in upper division courses taken after they pass English 305W. **Proof of completion of prerequisites required:** Test scores or verification of exemption; grade report or copy of transcript.

To develop proficiency in composing, under time constraints, substantial essays which analyze or explicate subjects previously investigated and discussed. Intended for students not majoring in English or Comparative Literature who have not fulfilled the Upper Division Writing requirement by examination.

**306A-306W. Children's Literature and Advanced Composition (3-3) I, II**

Prerequisites: English 200. English 306A and 306W must be taken concurrently. 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; grade report or copy of transcript.

**306A:** Reading, analysis, and discussion of classic works of children's literature.

**306W:** Advanced composition; improvement of student skills through writing assignments based upon reading and work in the lecture part. Primarily designed to meet Upper Division Writing and Literature requirements for Liberal Studies—Emphasis in Education, but also open to students with other majors.

**405. The Bible as Literature (3) I, II**

(Same course as Comparative Literature 405.)

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Prose and poetry of the King James version.

**491. Contemporary Topics in Literature (3)**

Exploration of writers, works and topics in fiction, poetry, drama, and film, emphasizing the relationship between literature and current concerns. Topics include the city in fiction and film, literature and

identity, literature of death, literature of contemporary myth and folklore, women in literature. Primarily for the general student not specializing in English or comparative literature. May count only as an elective course toward the English major. May be repeated with new title and content. Maximum credit six units. See Class Schedule for specific content.

**493. Literature and Film (3)**

Relationships between film and genres of literature, focusing on a critical comparison of the techniques of rhetoric, fiction, and drama and those of film. Topics include literature and film, novel into film, drama and film, reading film. Primarily for the general student not specializing in English or comparative literature. May count only as an elective course toward the English major. May be repeated with new title and content. Maximum credit six units.

**494. Modern American Fiction (3)**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Representative works by twentieth century American authors such as Cather, Hemingway, Steinbeck, Faulkner, Fitzgerald, Ellison, Welty, Bellow, Vonnegut, Heller, Walker, others. Primarily for the general student not specializing in English or comparative literature. May count toward the English major only as an elective.

**496. Selected Topics in English (1-4) I, II**

Specialized study of a selected topic in literature. May be repeated with new title and 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 six units.

**499. Special Study (1-3) I, II**

Prerequisites: Consent of instructor and approval of department chair.

Individual study. Maximum credit six units.

UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)

Prerequisite for all 500-level courses: Six lower division units in courses in literature and/or creative writing.

**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; grade report or copy of transcript.

The theory and practice of expository writing, including the contributions of semantics, rhetoric, and logic.

**501. Literature for Children (3)**

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.

**503W. Technical Writing (3)**

Prerequisites: English 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; grade report or copy of transcript.

Principles and practices of writing required in technical and scientific fields of professions, including technical writing style and rhetorical strategies of designing technical documents. (Formerly numbered English 304W.)

**504. Problems in Technical Communication (3) I, II**

Prerequisite: English 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.

**506. Writing Internship (3) I, II, S Cr/NC**

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.

**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)**

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; grade report or 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.

**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.

**519. American Ethnic Literatures (3)**

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)**

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)**

Representative works by American writers from 1860 to 1920; likely to include works by Kate Chopin, Stephen Crane, Emily Dickinson, Henry James, Carl Sandburg, Mark Twain, Edith Wharton, others.

**524. American Literature, 1920-1950 (3)**

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, Eugene O'Neill, K. A. Porter, Ezra Pound, John Steinbeck, others.

**525. American Literature, 1950 to Present (3)**

American writers from 1950 to the present; likely to include works by Edward Albee, Saul Bellow, Allen Ginsberg, Joseph Heller, Norman Mailer, Toni Morrison, Sylvia Plath, Adrienne Rich, Kurt Vonnegut, Eudora Welty, others.



**526. Topics in American Literature (3)**

Topics in American literature to include the literature of the south, Black writers in America, the frontier and American literature, the history of American literature, the outcast in American literature. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

**527. Genre Studies in American Literature (3)**

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; or Pound and Eliot, Emerson and Thoreau, Vonnegut and Barth, others. See Class Schedule for specific content. May be repeated with new title and content. Maximum credit six units.

**530. Chaucer (3)**

Chaucer's works, with emphasis on *The Canterbury Tales* and *Troilus and Criseyde*.

**531. Renaissance Literature (3)**

English poetry and prose from 1485 to 1603.

**533. Shakespeare (3) I, II**

An introduction to the writings of Shakespeare. This course cannot be used in place of English 302 to satisfy General Education requirements.

**534. Study of Shakespeare (3)**

Prerequisite: English 533.

Advanced study of Shakespeare's achievement as a poet and playwright.

**536. Seventeenth Century Literature (3)**

English poetry and prose from 1603 to 1660.

**537. Milton (3)**

Milton's writings, with emphasis on *Paradise Lost*.

**538A-538B. Restoration and Eighteenth Century Literature (3-3) I, II**

English literature in the neoclassical era. Semester I: Dryden, Swift, Pope, and their contemporaries. Semester II: Writers of the middle and late eighteenth century.

**540A-540B. English Fiction (3-3)**

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, 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, and Drabble.

**549. Topics in English Literature (3) I, II**

The works of Spenser, the metaphysical school of poetry, the English satirists, major movements in contemporary English fiction, and the like. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

**560A. British Literature, Beginnings Through the Eighteenth Century (3)**

Survey of major British writers, with emphasis on reading of complete works. From the beginnings to the neoclassical period. Especially appropriate for those who will teach British literature, and for those proceeding on to graduate study. Not open to students with credit in English 260A.

**560B. British Literature, Romanticism to the Present (3)**

Survey of major British writers, with emphasis on reading of complete works. Begins with the Romantic writers. Especially appropriate for those who will teach British literature, and for those proceeding on to graduate study. Not open to students with credit in English 260B.

**570. Techniques of Poetry (3) I, II**

Prerequisite: English 280.

Techniques of poetry from the creative writer's point of view. Introduction to critical and theoretical literature on poetry. Includes a creative writing workshop.

**571. Techniques of the Short Story (3) I, II**

Prerequisite: English 280.

Techniques of the short story from the writer's point of view. Introduction to critical and theoretical literature on the short story. Includes a creative writing workshop.

**573. Techniques of the Novel (3) I, II**

Prerequisite: English 280.

Techniques of the novel from the writer's point of view. Introduction to critical and theoretical literature on the novel. Includes a creative writing workshop.

**576. Literary Editing and Publishing (3) I, II**

Prerequisite: English 280.

Principles and practices of editing and literary publishing. Workshop on small press publishing. Includes editing and publishing workshop.

**577. Techniques of Screenwriting (3)**

Prerequisite: English 280 or Telecommunications and Film 110 or 410 for telecommunications and film majors.

Techniques of screenwriting. Introduction to critical and theoretical literature on screenwriting. Includes a creative writing workshop.

**578. Techniques of Drama (3)**

Prerequisite: English 280.

Techniques of drama written for the stage from the writer's point of view. Introduction to critical and theoretical literature on drama. Includes a creative writing workshop. (Formerly numbered English 572.)

**579. Topics in Creative Writing (3)**

Prerequisite: English 280.

Techniques of creative writing focusing on a specialized genre such as comedy, science fiction, and biography. Study of the critical and theoretical literature on the genre. Includes a creative writing workshop. See Class Schedule for specific content. Maximum credit six units.

**580. Writing of Poetry (3) I, II**

Prerequisite: English 570.

A creative writing workshop in poetry. Continuation of English 570. Maximum credit six units.

**581W. 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; grade report or 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)**

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; grade report or copy of transcript.

A creative writing workshop in nonfiction, especially the essay as an art form. Maximum credit six units. (Formerly numbered English 582W.)

**587. Writing the Screenplay (3)**

Prerequisite: English 577 or Telecommunications and Film 110 or 410 for telecommunications and film majors.

A creative writing workshop in screenwriting with emphasis on the feature film. Continuation of English 577. Includes playwriting and revising a television script or short film. Maximum credit six units.

**588. Playwriting: The One-Act Play (3) II**

Prerequisite: English 578 or Drama 325.

A creative writing workshop in planning, writing, and revising a one-act play. Selected plays will be submitted to the Department of Drama for production in the One-Act Program. May be repeated with new content. Maximum credit six units.

**589. Senior Workshop in Creative Writing (3)**

Prerequisites: Three units from English 570, 571, 573, 578, or 579; six units from English 580, 581W, 583, 584W, 587, or 588. Not applicable to a master's degree.

Advanced workshop for students who have extensive background in creative writing and who wish to prepare a senior project in poetry writing, fiction writing, or other special topics. See Class Schedule for specific content. 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.

**Comparative Literature**

(See this section of catalog under Comparative Literature.)

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**European Studies**

Refer to "Humanities" in this section of the catalog.



# Family Studies and Consumer Sciences

In the College of Professional Studies and Fine Arts OFFICE: Family Studies and Consumer Sciences 102  
TELEPHONE: (619) 594-5380

Didactic Program in Dietetics is approved by the American Dietetics Association.

## Faculty

Emeritus: Boggs, Cannon, Dickerson, Dorris, Fulcomer, Gunning, Martin, Milne, Price, Somerville, Stout, Warner  
Director: Deutsch  
Professors: Balkwell, Cooke, Deutsch, Hewes, Josephson, Martin, Ross, Spindler  
Associate Professors: Hoover-Plow, Mikitka  
Assistant Professors: Ellis, Kelley, Matheny, Murray, Trayte, Whitney  
Lecturers: Crawford, Fletcher, French, Robasciotti, Toal

## Offered by the School of Family Studies and Consumer Sciences

Master of Science degree in child development.  
Master of Science degree in nutritional sciences.  
Major in child development with the B.S. degree in applied arts and sciences.  
Major in foods and nutrition with the B.S. degree in applied arts and sciences.  
Major in home economics with the B.S. degree in applied arts and sciences.  
Emphasis in fashion merchandising.  
Minor in child development.  
Minor in home economics.  
Certificate in family life education.

## The Majors

The School of Family Studies and Consumer Sciences offers curricula which deal with domains vital to the health and functioning of individuals and families: foods, nutrition, and dietetics; child and family development; and clothing, textiles, and merchandising. As a multidisciplinary entity, the school is a unique and important contributor to the research base of the academic community as well.

**Child Development.** The interdisciplinary major in child development draws from many fields of study, including anthropology, biology, home economics, psychology, and sociology, and prepares students for a variety of professional specialties. Graduates with competencies in this major find positions in preschools, day care centers, schools, hospitals, 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.

Field experience programs offer students supervised work in community agencies, children's programs, and the Associated Students' Campus Children's Center. The School's Child Study Center, Mark Whitney, Director, focuses on undergraduate and graduate training and research by providing programs to children between eighteen months to five years of age from culturally diverse families. Special programs, such as *Art and Music Experiences for Children*, often extend service through the summer and allow for creative collaboration across disciplines. All children's programs are mainstreamed and a wide range of special needs and at-risk populations are served by collaborative efforts with San Diego City and La Mesa Spring Valley School Districts.

The child development degree also provides a flexible curriculum base for continuation into graduate programs in child development or

family relations; in child, family, and marriage counseling; in social work; in psychology, law, or sociology. Also available are programs leading to the multiple subject and single subject teaching credentials, the community college teaching credential, and a specialist credential in either special education or early childhood education.

The child development minor is an important adjunct for students in areas such as anthropology, education, psychology, recreation, social work, and sociology.

**Foods and Nutrition.** This major offers a comprehensive multidisciplinary study of the nature and quality of the food supply and the nutritional requirements for health in people. Students take core sequences of coursework in the areas of nutrition, food science, and food management founded on prerequisite courses in chemistry, biology, biochemistry, physiology, accounting, management, and the behavioral and social sciences. Course emphasis in the major is placed upon the composition, properties, quality, and safety of foods; and food ingredients; the relationships of metabolism and utilization of nutrients in food by the human body to health and disease states; the physiological basis for diet therapy; nutrition problems in the community; and organization, management and operation of food service facilities.

This major is planned for students interested in qualifying professionally for diverse careers in the fields of dietetics, food service management, and food industries. The didactic program in foods and nutrition is approved by the American Dietetic Association (ADA) which allows student eligibility for membership in ADA and for post-baccalaureate dietetic internship or preprofessional practice programs. Students must be admitted to and complete satisfactorily a postbaccalaureate program and pass the ADA Registration Examination prior to qualifying for registration as dietitians.

Professional careers in dietetics include administrative, therapeutic, teaching, research, and public service positions in hospitals, schools, clinics, and other public and private organizations and institutions. Graduates may also qualify as food science technical specialists within food companies, governmental agencies, and laboratories; as food service managers; and as specialists in advertising, sales, or marketing of foods and nutritional products and services.

**Home Economics.** A major in home economics with an emphasis in fashion merchandising deals with the management and marketing of consumer products at the wholesale and retail levels. Students learn managerial strategies for the merchandising industry which is characterized by rapid change in consumer demand.

A major strength of the merchandising program lies in its interdisciplinary nature. Students take courses in the social sciences and the humanities. In addition, they are introduced to basic courses covering areas within the School of Family Studies and Consumer Sciences. Courses required from the College of Business Administration include accounting, management and marketing. Upon completion of course requirements, students receive a baccalaureate degree with a merchandising emphasis.

The field experience is a major strength of the SDSU merchandising program. Students gain firsthand experience and knowledge about the merchandising field under the supervision of both industry and academic advisers.

The current job market is excellent, particularly in retail store management. Exciting positions in buying, personnel, promotion, and management exist as well in fashion marts, wholesale firms, and manufacturing throughout the country.

Currently, no new students are being admitted to the home economics major for the single subject teaching credential.



## Child Development Major

With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 08231)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

**Preparation for the Major.** Family Studies and Consumer Sciences 107, 135, 151 or 240, 201 (one unit), 270, 271; Anthropology 102 or Economics 101; Biology 100, 100L; Psychology 101; Sociology 101; Economics 201 or Psychology 270 or Sociology 201. (32 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 43 upper division units to include Family Studies and Consumer Sciences 335, 370, 375, 376A (one unit), 383, 436, 478 or 578, 580 or 590, 597, 597L; six units selected from Family Studies and Consumer Sciences 371, or 376B (one unit) and 377, or 381; and 12 units selected to form a core of courses that reflects in-depth study in an agreed to area of specialization. A master plan must be filed with approval of the program adviser prior to course enrollment and with the Evaluations Office prior to filing an Application for Graduation. Course selections may be within Family Studies and departmental offerings. No more than six of the 12 units may be in experiential independent study courses (Family Studies and Consumer Sciences 376A, 376B, 499, or similar courses from other departments).

## Foods and Nutrition Major

With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 13061)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

**Preparation for the Major.** Family Studies and Consumer Sciences 204, 205, 206, 207, 208, 221, 240; Accountancy 201; Biology 100; 100L, 210 (or 350); Chemistry 100 (or 200 and 201), 130 (or 230), 160 (except with 200 series); Economics 201 (or Mathematics 250); Psychology 101; Sociology 101. (49-53 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 40 upper division units to include Family Studies and Consumer Sciences 301, 302, 302L, 303, 404, 405, 406; Biology 410; the remaining 15 units selected with the approval of adviser from Family Studies and Consumer Sciences 309, 482, 491, 510; Biology 321; Chemistry 361A, 361B, 567; Health Science 470, and Management 350 and 352 or Psychology 321.

## Home Economics Major

With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 13011)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

**Emphasis in Fashion Merchandising**

**Preparation for the Major.** Family Studies and Consumer Sciences 135, 151, 217, 219, 222, 240, 260, 265; Accountancy 201; Art 157; Psychology 101; Sociology 101; three units selected from Economics 100 or 101 or 102; and three units selected from Economics 201, Psychology 270, or Sociology 201. (42 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 41-43 upper division units to include Family Studies and Consumer Sciences 319, 361, 361L, 362, 383, 462, 520, 541; Management 350; Marketing 370, 372; three units selected from Marketing 373 or Journalism 460; and one course selected from Management 356, Marketing 376, 377, or 473.



## Child Development Minor

The minor in child development consists of a minimum of 18 units to include Family Studies and Consumer Sciences 270+, 271; and 12 units selected from Family Studies and Consumer Sciences 370, 371, 375, 376A (one unit) or 376B (one unit), 436, 437, 476, 477, 478, 537, 570+, 577, 579, 580 or 590; 597, 597L; Psychology 432+. No more than six of the 18 units may be in experiential courses.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

\* Indicates course with prerequisites not included in list of courses acceptable for minor

## Home Economics Minor

The minor in home economics consists of a minimum of 18 to 23 units in family studies and consumer sciences, 12 units of which must be in upper division courses. The 18 to 23 units must be selected from one of the following areas:

**Foods and Nutrition:** Family Studies and Consumer Sciences 204, 205, 207, and 12 units selected from 301, 302, 302L, 303, 404, 405, 406, 510 (and/or 596 if appropriate).

**Child Development:** Family Studies and Consumer Sciences 135, 270, 271, and 12 units selected from Family Studies and Consumer Sciences 335, 370, 371, 375, 376A (one unit), 436, 437, 478, 536, 537, 570 (and/or 596 if appropriate).

**Clothing, Textiles and Fashion Merchandising:** Family Studies and Consumer Sciences 217, 219, 260, 362, 383, 462, 520 (and/or 596 if appropriate).

Students should note that some of these courses have prerequisites not included in requirements listed above, but these prerequisites do not constitute requirements per se for completion of the minor.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Family Life Education Certificate

The purpose of this certificate program is to prepare students for careers in family life education. The program is designed for individuals working on degrees in child development, health science, and home economics. It also provides a self-improvement opportunity for people seeking employment, promotion, or upward mobility on the job who are not enrolled in degree programs.

Awarding of the certificate requires completion of an approved pattern of five courses (15 units) with a grade of "C" or better in each of the courses to include Family Studies and Consumer Sciences 135, 270+ or 371+ or Psychology 330+, Health Science 475, 575; and Biology 307. The course offerings under this program meet the criteria for training and standards of the American Association of Sex Educators and Counselors.

Family Studies and Consumer Sciences 135, 270 or 371 (six units) are applicable to the child development or home economics majors. Health Science 475 and 575 (six units) are applicable to the health science major. Courses in the certificate may not be counted toward the minor.

For further information regarding the Family Life Education Certificate program, consult Lois P. Kessler, Department of Health Science, or Francine Deutsch, School of Family Studies and Consumer Sciences.

\* Indicates course with prerequisites not included in requirements listed above.

## Courses

### LOWER DIVISION COURSES

#### 107. Nutrition Today (3) I, II (CAN H EC 2)

Obtaining nutritional needs from a varied food supply. Not open to foods and nutrition majors or students with credit in Family Studies and Consumer Sciences 204.

#### 135. Marriage and Family (3) I, II

Love, maturity, dating, compatibility, conflict as they relate to preparation for successful marriage and family living.

#### 151. Dynamics of Family Management (3)

Value systems and application of principles of decision making to individual, professional and family management in changing socioeconomic environments.

#### 201. Professional Issues: Child Development and Family Studies (1) I, II

Prerequisite: Family Studies and Consumer Sciences 135. Philosophical base of child development and family studies and its relation to fields of inquiry. Not open to students with credit in Family Studies and Consumer Sciences 221. (Formerly numbered Family Studies and Consumer Sciences 422.)

#### 202. Nutrition for Athletes (3)

Prerequisite recommended: Family Studies and Consumer Sciences 107.

Review of basic diet which will provide nutritional adequacy. Analysis of current theories and practices related to nutrition and athletic performance.

#### 204. Fundamentals of Nutrition (3) I, II

Prerequisites: Biology 100, 100L; Chemistry 100 and 130, or 200 and 201. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Nutrition as applied to the stages of the normal life cycle.

#### 205. Food Preparation (5) I, II

Three lectures and six hours of laboratory. Prerequisites: Chemistry 100 and 130 or 200; 201 and concurrent registration in Chemistry 230. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Composition, preparation, preservation, sensory and consumer evaluation of foods. (Formerly numbered Family Studies and Consumer Sciences 205A-250B.)

#### 206. Cultural Aspects of Foods and Nutrition (2)

Social, psychological, technological, religious, and health value systems that determine food habits. Food habits of ethnic and regional groups and associated nutritional problems.

#### 207. Data Processing in Foods and Nutrition (3) I, II

Two lectures and three hours of activity. Computer application in food service management, diet planning, and analysis. (Formerly numbered Family Studies and Consumer Sciences 507.)

#### 208. Nutrition Throughout the Life Cycle (2)

Prerequisite: Family Studies and Consumer Sciences 204. Nutritive needs of humans at the fetal, infant, child, adolescent, adult, and older adult stages of life. Factors which alter nutritive needs or intake at each stage. Strategies to enable nutritive needs to be met.

#### 217. Fundamentals of Clothing and Human Behavior (3)

Cultural, social, psychological, physical, and aesthetic factors which affect clothing behavior. (Formerly numbered Family Studies and Consumer Sciences 317.)

#### 219. Consumer Issues in Clothing and Textiles (3)

Consumer decision-making processes and behavior patterns in the consumption of clothing and textiles. Social, political, economic, and technological factors affecting consumption patterns.

#### 221. Professional Issues: Foods and Nutrition (1) I, II

Philosophical basis of family studies and relations of its specialties to the field as a whole. Not open to students with credit in Family Studies and Consumer Sciences 201. (Formerly numbered Family Studies and Consumer Sciences 421.)

#### 222. Clothing and Textiles: Historical Influences (3)

Historical overview of clothing and textiles with emphasis on important socioeconomic and cultural influences. (Formerly numbered Family Studies and Consumer Sciences 522.)

#### 240. Family Income Management (3) I, II

Financial problems involved in the effective management of the family resources.

#### 260. Fashion Merchandise Analysis (3)

Prerequisite: Family Studies and Consumer Sciences 217. Introduction to the fashion industry: manufacturing, wholesaling, and retailing of apparel products and household textiles.

#### 265. Visual Merchandising (3) I, II

Effective display of retail merchandise based on aesthetic considerations, profitability, and store image.

#### 270. Principles of Child Development (3) I, II

Prerequisites: Psychology 101 and Sociology 101. Study of the child from conception through adolescence, with emphasis on principles of growth and development. Directed observations of children.

#### 271. Human Development: Early Childhood (3) I, II

Two lectures and three hours of laboratory. Prerequisite: Family Studies and Consumer Sciences 270. **Proof of completion of prerequisite required:** Grade report or copy of transcript. Physical, social, emotional, and intellectual development of the young child with applications for guidance. Observing, recording individual and group behavior of children.

#### 278. Child Care Parent Participation (2) Cr/NC

One lecture and two hours of activity. Child care practices and group management in a child care facility. Not open to students with credit in Family Studies and Consumer Sciences 279.

#### 279. Child Care Observation/Participation (1) Cr/NC

Two hours of fieldwork per week as arranged, plus orientation and evaluation.

Prerequisites: Family Studies and Consumer Sciences 270 and permission of manager of Campus Children's Center.

Observation and participation in Campus Children's Center. Experiences related to cognitive, physical, and social development of young children in group setting. Not open to students with credit in Family Studies and Consumer Sciences 278.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 301. Science of Foods (3) I, II

Prerequisites: Family Studies and Consumer Sciences 205 and Biology 210. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Physical, chemical, nutritional, and functional properties and quality attributes of foods and food additives; food handling; changes and interactions of food components induced by processing and storage; food laws, regulations, legislation, and food safety issues.

#### 302. Advanced Nutrition (3) I, II

Prerequisites: Family Studies and Consumer Sciences 204, Biology 410, and one course in biochemistry. Concurrent registration in Family Studies and Consumer Sciences 302L. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Integration of cellular, physiological, and biochemical relationships with human nutrient requirements.

#### 302L. Advanced Nutrition Laboratory (2) I, II

Six hours of laboratory. Prerequisites: Family Studies and Consumer Sciences 204, Biology 410, one course in biochemistry. Concurrent registration in Family Studies and Consumer Sciences 302. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Application and evaluation of techniques used to assess nutritional status, including basic methods, experimental animal and human studies.

#### 303. Quantity Food Production (3) I, II

Two lectures and three hours of laboratory. Prerequisite: Family Studies and Consumer Sciences 205. Application and evaluation of techniques and equipment utilized in food service operations for quality and financial control, production, distribution and service of food.

#### 309. Eating Disorders and Weight Control (2) Cr/NC

Prerequisite: Upper division standing in foods and nutrition or other majors with consent of instructor.

Obesity and other eating disorders. Review of etiology, incidence, socioeconomic influences, pathogenesis and treatments. Treatment techniques practiced include modification of diet, activity and behavior. Of interest to those wishing to do weight control counseling.

#### 311. Nutrition for Health and Fitness (3)

Prerequisites: Biology 100, 150, and Chemistry 100. Food choices for health contrasted with food fads and eating problems. Nutrition labeling, metabolic roles of nutrients, nutrient needs related to exercise and stage of life, professional and legal concerns with dietetics for allied health fields. May not be used toward a degree in foods and nutrition.

#### 319. Textiles (4) I

Two lectures and six hours of laboratory. Prerequisite: Family Studies and Consumer Sciences 219. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Fiber, yarn, and fabric construction and finishes as they relate to selection, care, and fashion merchandising decisions. Analysis based on physical tests.

#### 335. Interaction in Families (3) I, II

Prerequisite: Family Studies and Consumer Sciences 135. Marriage adjustment and family interaction throughout the life cycle.

#### 361. Fashion Merchandising Field Experience (1) I, II

Prerequisites: Family Studies and Consumer Sciences 260, consent of program adviser and concurrent registration in Family Studies and Consumer Sciences 361L.

Practical application of classroom theory and executive development techniques.

#### 361L. Fashion Merchandising Field Experience Laboratory (5) I, II

Fifteen hours per week. Prerequisites: Family Studies and Consumer Sciences 260; consent of program adviser and concurrent registration in Family Studies and Consumer Sciences 361.

Directed experiences in practical application of classroom theory and executive development techniques.



**362. Fashion Merchandise Budget and Planning (3) I, II**

Two lectures and two hours of laboratory.

Prerequisites: Family Studies and Consumer Sciences 361 and 383. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Current merchandising calculations and techniques necessary for planning stocks by price point, sales and classification. Principles of gross margin, stock turnover and financial statements as they are unique to fashion merchandising. Computer applications.

**370. Research, Assessment, and Evaluation of Children and Families (3)**

Prerequisites: Family Studies and Consumer Sciences 270 and 271. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Methods for measuring child, caregiver, and family behavior. Evaluation of reliability and validity. Includes research design, sampling techniques, data collection strategies, and values/ethics.

**371. Human Development: Middle Childhood and Adolescence (3)**

Prerequisite: Family Studies and Consumer Sciences 270.

Physical, social, emotional, and intellectual development of children during middle childhood and adolescence. Emphasis on parent, sibling, and peer relationships. Prevention and correction of developmental difficulties.

**375. Child Development Programs (3) I, II**

Prerequisites: Family Studies and Consumer Sciences 271; concurrent registration in Family Studies and Consumer Sciences 376A for one unit only. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Program models in early childhood education. Communication techniques; basic skills and strategies in working with young children. Development, implementation and evaluation of an appropriate curriculum and environment.

**376A. Laboratory Experiences in the Child Study Center: Preschool (1-3) I, II**

Three hours of laboratory for each unit of credit.

Prerequisite: First unit requires concurrent registration in Family Studies and Consumer Sciences 375. Application to take additional units requires prior consent of instructor.

Directed experiences with children, ages 3 to 5 years, in a mainstreamed setting. Designing and implementing developmentally appropriate activities in all areas of preschool program. May be repeated, at advanced level, with consent of instructor. Maximum credit three units.

**376B. Laboratory Experiences in the Child Study Center: Infants and Toddlers (1-3) I, II**

Three hours of laboratory for each unit of credit.

Prerequisite: Family Studies and Consumer Sciences 376A. Application to take additional units requires prior consent of instructor.

Directed experiences with infants and toddlers, ages 6 to 30 months, in a mainstreamed setting. Planning developmentally appropriate activities and administering a program for young children and their families. Maximum credit three units.

**377. Infant/Toddler Programs (2)**

Prerequisites: Family Studies and Consumer Sciences 376A and concurrent registration in 376B.

Program models for children from birth to three years of age.

**381. Human Development: Adult Development and Aging (3)**

Prerequisites: Psychology 101 and Sociology 101.

Biological, psychological, and social processes of adult development and aging. Emphasis on a life-span developmental perspective, the family context, intervention, and social policy.

**383. Consumer Information Systems (3) I, II**

Two lectures and two hours of laboratory.

Prerequisite: Completion of lower division major or minor requirements in family studies and consumer sciences.

Electronic data processing systems and capabilities relative to family studies. Computer application in household management

including family resources; problem solving, and decision-making processes. Professional uses of computer-based information systems which interface with households, agencies, and institutions.

**404. Food Systems Management (3) II**

Prerequisite: Family Studies and Consumer Sciences 303. Managerial functions in food service systems.

**405. Experimental Food Science (3) I, II**

One lecture and six hours of laboratory.

Prerequisite: Family Studies and Consumer Sciences 301. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Application of principles and methods of physical and sensory evaluation and food component analysis to conventional and fabricated foods; effects of additives and ingredient variations; project studies; data interpretation and report writing.

**406. Diet Therapy (4) I, II**

Prerequisites: Family Studies and Consumer Sciences 302 and 302L.

**Proof of completion of prerequisites required:** Grade report or copy of transcript.

Dietary management of pathological and debilitating diseases.

**430. Parent-Child Interaction (3)**

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences.

Theories and philosophies of child rearing and development; contemporary strategies for successful parenting. Not open to child development majors or students with credit in Family Studies and Consumer Sciences 335, 478, or 536.

**436. The Individual, Family, and Society (3)**

Prerequisites: Psychology 101 and Sociology 101.

Individual and family needs and the social institutions and agencies attempting to meet these needs. Social issues, service programs, program analyses, and program effectiveness are emphasized.

**437. Violence in Families (3)**

Prerequisite: Family Studies and Consumer Sciences 335. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Abusive interaction in families, physical and emotional. Present conditions, trends, preventive measures and treatment techniques; and organizations analyzed. Theoretical and applied aspects will be studied.

**462. Fashion Merchandising Seminar (3) II**

Prerequisite: Family Studies and Consumer Sciences 260. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Innovative practices in the apparel industry. Individual investigation and report on a research project.

**476. Development of Creative Behavior in Young Children (3) I, II**

Prerequisite: Family Studies and Consumer Sciences 375. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Examination of creative behavior; philosophical and empirical approaches to experiences designed for use with young children.

**477. Administration of Child Development Programs (3) I**

Prerequisite: Family Studies and Consumer Sciences 375. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Historical and philosophical background of programs for young children; current research; laws and regulations; planning; operating; evaluating child care centers and nursery schools.

**478. Working with Parents (3) I, II**

Prerequisite: Family Studies and Consumer Sciences 270.

An investigation of philosophy, issues, and current trends in working with parents.

**482. Educational Practices and Instructional Resources (3)**

Prerequisite: Fifteen units in family studies and consumer sciences.

Principles of learning as they relate to teaching home economics to adults. Organization of material; selection, use and evaluation of teaching techniques.

**491. Research Literature in Foods and Nutrition (1) I, II**

Prerequisites: Family Studies and Consumer Sciences 301, 302, 302L, and consent of instructor.

Current research topics in food science and nutrition.

**496. Experimental Topics (1-4) I, II**

Selected topics. 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.

**499. Special Study (1-3) I, II**

Prerequisite: Consent of instructor.

Individual study. Maximum credit six units.

**UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)****510. Nutrition and Community Health (3)**

Two lectures and three hours of activity.

Prerequisites: Family Studies and Consumer Sciences 302 and 302L.

Nutritional problems in the community with consideration of their resolution. Field placement experience required.

**520. Clothing and Human Behavior (3) II**

Prerequisites: Family Studies and Consumer Sciences 217; Psychology 101; Sociology 101; Economics 201 or Psychology 270 or Sociology 201. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Concepts and theories of human behavior as they apply to clothing usage. Significance of impressions of individuals that result from their attire in the dynamics of social interaction of contemporary Western societies.

**536. Family Study (3)**

Prerequisites: Family Studies and Consumer Sciences 335 and Sociology 101.

Dynamics of family living; attitudes, practices, social and psychological interaction and family life patterns in different cultures, social classes and ethnic groups.

**537. Child Abuse (3)**

Prerequisite: Family Studies and Consumer Sciences 437 for majors; completion of the General Education requirement in Explorations for non-majors; consent of instructor for graduate students.

A multidisciplinary approach to child abuse including study of child maltreatment and mistreatment, child neglect, and sexual abuse.

**541. Consumer Interest (3) II**

Prerequisite: Family Studies and Consumer Sciences 240.

Analysis of consumer legislation, consumer information and consumer protection programs.

**570. Infant/Toddler Development (3) I**

Prerequisites: Family Studies and Consumer Sciences 270 or Psychology 330. Recommended: Biology 350 and Psychology 260. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Physiological, psychological, social and cultural development of the human organism from birth through three years of age.

**577. Advanced Administration of Child Development Programs (3) II**

Prerequisite: Family Studies and Consumer Sciences 477. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Problems of organization in conducting programs for young children; interrelationships of staff; personnel practices, communication with teaching staff, parents, and community; records and reports.

**578. Parent-Child Relationships Across the Life Span (3) II**

Prerequisites: Family Studies and Consumer Sciences 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.

**579. Advanced Child Study (3)**

Prerequisite: Nine units in child development courses.

Physical, social, and psychological factors that determine the direction of child behavior. Readings and interpretations of scientific literature that contribute to an understanding of theories of human development.

**580. Program Evaluation for Human Development Services (3)**

Prerequisite: Twelve units in the child development major.

Principles of human development services program evaluation to enhance management and the quality of services to children and their families.

**590. Developmental Dysfunctions (3)**

Prerequisites: Family Studies and Consumer Sciences 270 or Psychology 330, and twelve upper division units in family studies and consumer sciences for majors; completion of General Education requirement in Explorations for non-majors; consent of instructor for graduate students. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Adaptive and maladaptive processes throughout the life span with emphasis on emotional, psychological, and physical childhood disorders. Etiology, development, and adjustment to these disorders.

**596. Advanced Studies in Family Studies and Consumer Sciences (1-6)**

Prerequisite: Nine upper division units in family studies and consumer sciences.

Advanced study of selected topics. See Class Schedule for specific content. Limit of nine units of any combination of 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 Development and Family Studies Field Experiences (1) I, II**

Prerequisites: Twelve units in the child development major and concurrent registration in Family Studies and Consumer Sciences 597L.

Developmental theories and techniques in child development. (Formerly numbered Family Studies and Consumer Sciences 439.)

**597L. Child Development and Family Studies Field Experiences Laboratory (2) I, II**

Prerequisites: Twelve units in the child development major and concurrent registration in Family Studies and Consumer Sciences 597.

Directed experiences in the practical application of developmental theories and techniques in various community agencies. (Formerly numbered Family Studies and Consumer Sciences 439.)

**GRADUATE COURSES**

Refer to the Graduate Bulletin.



# Finance

In the College of Business Administration

A Member of the American Assembly of Collegiate Schools of Business.

Financial Services major and Personal Financial Planning Certificate are registered with International Board of Certified Financial Planners.

## Faculty

Emeritus: Fisher, H., Hippaka, Hungate, Schmier, Wijnholds  
Chair: Varaiya  
Professors: Gitman, Haddad, Hutchins, Nye, Reints, Salehizadeh, Short, Sterk, Vandenberg, Varaiya, Warschauer (Associate Dean, Academic Affairs)  
Associate Professors: Block, Bost, Cherin, Ely, Houston, Omberg, Sachdeva, Wilbur  
Assistant Professors: Do, Hanson, Hittle, Kim, Song

## Offered by the Department

Master of Science degree in business administration.  
Master of Business Administration.  
Major in finance with the B.S. degree in business administration.  
Major in financial services with the B.S. degree in business administration.  
Major in real estate with the B.S. degree in business administration.  
Teaching major in business for the single subject teaching credential.  
Minor in finance.  
Minor in real estate.  
Certificate in personal financial planning.

## Admission to the Major

The undergraduate business administration program at San Diego State University is structured such that students desiring a business administration major are first admitted to the prebusiness administration major for their first two years of university work. During these first two years students should complete general education courses and a common core of nine lower division preparation for the business major courses — Accountancy 201, Financial Accounting Fundamentals, 202, Managerial Accounting Fundamentals, Finance 140, Legal Environment of Business, Economics 101, Principles of Economics (Macro); Economics 102, Principles of Economics (Micro); Information and Decision Systems 180, Principles of Information Systems; Information and Decision Systems 290, Business Communication (not required for accounting majors); Mathematics 119, Elementary Statistics for Business; and Mathematics 120, Calculus for Business Analysis. These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C. All students must achieve a passing score on a quantitative competency examination. Students must have completed 56 college units.

**Supplemental admissions criteria must be met before students may declare an upper division major and be eligible for upper division courses.** For current information concerning admissions criteria and procedures, contact the Undergraduate Business Advising Office in the College of Business Administration.

Also, before enrolling in upper division courses offered by the College of Business Administration, students must be competent in the

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

operation of personal computers, including word processing and spreadsheets. These skills are required in upper division business courses.

Business administration majors may not complete a minor in the College of Business Administration.

## Transfer Credit

**Lower Division:** Courses clearly equivalent in scope and content to San Diego State University courses required for minors or as preparation for all business majors will be accepted from regionally accredited United States institutions and from foreign institutions recognized by San Diego State University and the College of Business Administration.

**Upper Division:** It is the policy of the San Diego State University College of Business Administration to accept **upper division transfer credits** where (a) the course content, requirements, and level are equivalent to San Diego State University courses and (b) where the course was taught in an American Assembly of Collegiate Schools of Business accredited program. Exceptions require thorough documentation evidencing the above standards.

## The Major

All forms of human endeavor involve finance to some degree. Within our economic system, finance is concerned with capital, which is money or property owned or used in business. Finance majors study both the sources and the uses of capital. The finance curriculum revolves around the valuation process in a free market system. Once an individual or company can value various alternatives, the allocation of resources and the decision process in business becomes much simpler.

Students who are interested in business should have a thorough understanding of the financial process. Upon graduation, students accept a wide variety of positions with business in general. The curriculum of the finance major is designed to give the student breadth in a variety of fields in addition to finance and business.

Employment prospects for graduates with finance majors are very good and forecasts remain encouraging. Graduates are typically found in six types of employment: large and small industrial firms (manufacturers of automobiles, steel, household appliances, and electronic equipment); service oriented firms (electric power, real estate and retail firms); financial institutions (banks, state and federally chartered savings and loan associations, and insurance companies); nonprofit enterprises (universities, labor unions, and foundations); and private businesses.

The diversity of entry level positions obtained by finance majors makes it difficult to describe a typical position. A major in finance does not limit career potential to banking or to any single area of business. A large number of individuals go to work for industrial companies in a variety of entry level positions that allow them to develop into top decision-making positions with those companies. A significant number of chief executive officers and other top officers of corporations have followed the "finance path" to the top.

## Retention Policy

The College of Business Administration is concerned that each individual upper division student makes reasonable academic progress toward earning a degree. To this end, the College will counsel students who have earned less than a "C" (2.0) average each semester. Further, such students will be warned that continued poor performance may result in their removal from any business major.

## Finance Major

With the B.S. Degree in Business Administration  
(Major Code: 05041)

**Preparation for the Major.** Finance 140; Accountancy 201, 202; Economics 101, 102; Information and Decision Systems 180, 290; Mathematics 120 or 150, or 155 and 156; and Economics 201 or Mathematics 119. (27-30 units)

These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C. **Additional progress requirements must be met before a student is admitted to an upper division major.**

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** Forty-eight to fifty upper division units to include Finance 321, 323, 325, 327, 423; Accountancy 300; Economics 490; Information and Decision Systems 302; Management 350; Management 405 or Information and Decision Systems 404; Marketing 370; six units selected from Finance 326, 329, 421, 425; and six to eight units selected from Accountancy 301, 302, Finance 331, 342, 431, 445, 589, or Finance 326, 329, 421, 425 if not used to meet the above requirement.

A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of business administration and economics. A maximum of six lower division units of accountancy courses may be used to satisfy degree requirements. Of the 128 units required for the degree, at least 60 units must be at the upper division level. A "C" average is required in the courses stipulated here for the major.

## Financial Services Major

With the B.S. Degree in Business Administration  
(Major Code: 05043)

**Preparation for the Major.** Accountancy 201 and 202; Economics 101 and 102; Economics 201 or Mathematics 119; Finance 140; Information and Decision Systems 180 and 290; Mathematics 120 or 150, or 155 and 156. (27-30 units)

These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C. **Additional progress requirements must be met before a student is admitted to an upper division major.**

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** Forty-six upper division units consisting of Finance 323, 326, 327, 331, 342 or 521, 589; Accountancy 404; Information and Decision Systems 302; Management 350; Management 405 or Information and Decision Systems 404; Marketing 370; twelve units selected from Finance 421, 425, 431, 433, 435, 445, 525; Accountancy 300, 301, 504; Economics 320, 490; and Marketing 377.

A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of business administration and economics. A maximum of six lower division units of accountancy courses may be used to satisfy degree requirements. Of the 128 units required for the degree, at least 60 units must be at the upper division level. A "C" average is required in the courses stipulated here for the major.

\* Prerequisite waived for this course.

## Real Estate Major

With the B.S. Degree in Business Administration  
(Major Code: 05111)

**Preparation for the Major.** Accountancy 201 and 202; Finance 140; Information and Decision Systems 180, 290; Economics 101 and 102; Economics 201 or Mathematics 119; and Mathematics 120 or 150, or 155 and 156. (27-30 units)



These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C. **Additional progress requirements must be met before a student is admitted to an upper division major.**

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** Thirty-nine to forty upper division units consisting of Finance 323, 331, 335, 433, 435; Information and Decision Systems 302; Management 350; Management 405 or Information and Decision Systems 404; Marketing 370; Public Administration 320; and 9-10 units selected from Accountancy 404; Finance 333, 340, 342, 431; Marketing 373; Economics 422, 490; Geography 354, 559.

A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of business administration and economics. A maximum of six lower division units of accountancy courses may be used to satisfy degree requirements. Of the 128 units required for the degree, at least 60 units must be at the upper division level. A "C" average is required in the courses stipulated here for the major.

## Business Major

For the Single Subject Teaching Credential  
With the B.S. Degree in Business Administration

All candidates for the single subject teaching credential in business must complete all requirements for the applicable specialization as outlined in this section of the catalog under Policy Studies or Teacher Education. Students must complete the requirements of a



major in one of the five departments within the College of Business Administration. In consultation with the single subject credential adviser in the College of Business Administration, undergraduate students must develop programs which fulfill the State credential requirements. All undergraduate majors must demonstrate office skills proficiency. Finance 589, Personal Financial Planning, is required of all teaching credential majors. Of the 128 units required for the degree, at least 60 units must be at the upper division level.

Student program must be approved in advance by the College of Business Administration single subject credential adviser.

### Finance Minor

The minor in finance consists of a minimum of 21 units to include Accountancy 201; Finance 321, 323, 326, 327, and 329; Mathematics 119.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Additional requirements must be met before the student may obtain permission to declare a business minor from the business minor adviser in the college of the student's major.

### Real Estate Minor

The minor in real estate consists of a minimum of 18 units to include Economics 102; Finance 140, 331, 335, 433; and three units selected from Finance 333, 431, and 435.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Additional requirements must be met before the student may obtain permission to declare a business minor from the business minor adviser in the college of the student's major.

### Personal Financial Planning Certificate

The purpose of this program is to provide a strong educational basis for persons desiring careers in the field of personal financial planning. Two categories of students are admitted: Matriculated students who have been admitted to an upper division College of Business Administration major and nonmatriculated students who work in the financial services industry may take the courses on a space-available basis.

Prerequisites to the program include Finance 140; Accountancy 201, 202; Economics 101, 102; Family Studies and Consumer Sciences 240; and Mathematics 119. (21 units.)

The certificate requires 22 units to include Accountancy 404\*, Finance 323, 327, 445, 521, 525, and 589.

Advising is provided by the Assistant Dean for Undergraduate Affairs for the College of Business Administration. All course units may be used for business majors where programmatically specified. Courses in the certificate may not be counted toward the minor.

\* Prerequisite waived for students in this program.

### Courses

#### LOWER DIVISION COURSE

#### 140. Legal Environment of Business (3) I, II

Business legal system, sources of law, social and ethical influences; judicial and administrative systems, contracts, torts, bankruptcy, agency, business organizations, securities regulation, regulation of property, and protection of intellectual property interests.

#### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 317. Individual Investing (3)

Prerequisite: Upper division standing.  
Investment alternatives. Financial institutions related to individual investing. Consumer protection and investing. Tax considerations. Building portfolios. Not open to business majors.

#### 321. Managerial Economics (3) I, II

Prerequisite: Completion of lower division course requirements in major or minor.

Role of economic analysis in management decisions. Study of demand, cost, supply theories from a business viewpoint. Emphasis on managerial decision making.

#### 323. Fundamentals of Finance (3) I, II

Prerequisite: Approved upper division business major, business minor, or another major approved by the College of Business Administration. **Proof of completion of prerequisite required:** Change of major form or other evidence of acceptable major code.

Objectives of financial management. Financing the business enterprise. Internal financial management. Introduction to the cost of capital, valuation, dividend policy, leverage, international finance, and the techniques of present value and its applications. Sources of capital.

#### 325. Intermediate Finance (4) I, II

Prerequisites: Finance 323 with minimum grade of C and Information and Decision Systems 302.

The capital expenditure decision process. Measuring and evaluating benefits and costs. The cost of capital and the evaluation process. Capital rationing problems. Risk and uncertainty in the decision process. Agency theory, option pricing, and arbitrage pricing in the decision process.

#### 326. Financial Institutions Management (3)

Prerequisite: Finance 323 with minimum grade of C.  
Management of financial institutions including savings and loan associations, mutual savings banks, credit unions, private pension plans, brokerage houses, investment companies, consumer credit institutions, federal credit agencies, and commercial banks. Emphasis on internal financial management of these institutions.

#### 327. Investments (3) I, II

Prerequisite: Finance 323 with minimum grade of C.  
Measures of risk and return. Methods of security analysis, valuation, and capital asset pricing model. Portfolio theory and management; stocks, bonds, options, and futures; hedging; mutual funds and partnerships; and investment taxation.

#### 329. International Business Finance (3) I, II

Prerequisite: Finance 323 with minimum grade of C.  
Foreign exchange markets and instruments; international financial institutions; trade and balance of payments; exchange rate behavior and currency-risk hedging; cross-border investment; applications to management of international business.

#### 331. Real Estate Essentials (3) I, II

Prerequisite: Completion of lower division course requirements in business major or minor.  
Fundamental operations of the real estate market; principles of real property valuation, financing, law, investment, brokerage, management, and development.

#### 333. Law of Real Property (3)

Prerequisite: Finance 331.  
Legal theory and practice of estates in land; landlord and tenant relationships; land transactions; mortgages and trust deeds; easements; land use; ownership rights in land; environmental law.

#### 335. Land Markets and Real Estate Analysis (3) I, II

Prerequisite: Finance 331.  
Theory and analysis of land utilization. Location analysis and determinants of land use patterns. Real estate market behavior and economic growth. Basic real estate investment analysis. Public controls and policies affecting land markets.

#### 340. Advanced Business Law (3)

Prerequisites: Finance 140, 323, and 335.  
Law of contracts, sales, commercial paper, secured transactions, bankruptcy, suretyship, agency, organizations, property, insurance, trusts and estates, securities regulations, and professional liability.

#### 342. Insurance and Corporate Risk Management (3) I, II

Prerequisite: Completion of lower division requirements for the major.

Nature and extent of business and social risk. Risk-handling techniques; insurance principles and practices; basic contracts analysis; insurance underwriting and rating; insurance problems and trends; business risk management. Not open to students with credit in Finance 542.

#### 421. Portfolio Management and Security Analysis (3)

Prerequisite: Finance 327.  
Market efficiency. Risk and utility analysis. Portfolio theory. Security analysis under modern investment theory. Advanced debt management and options techniques. Financial options and futures. Asset allocation and performance evaluation. Limited partnership investment analysis.

#### 423. Financial Analysis and Management (4) I, II

Prerequisite: Finance 325. Strongly recommended: Economics 490.  
Integration of various aspects of finance, application of financial theory. Financial decision making in the firm. Case study.

#### 425. Business Forecasting (3)

Prerequisites: Finance 323 with minimum grade of C and Information and Decision Systems 302.  
Business fluctuations; forecasting, and related problems confronting the business firm; forecasting techniques; specific forecasts. The use of forecasts in the firm.

#### 431. Real Estate Finance (3) I, II

Prerequisite: Finance 331.  
Methods of financing real estate; sources of funds; governmental financial agencies; feasibility analysis for various types of properties.

#### 433. Theory of Real Property Value (3) I, II

Prerequisite: Finance 335.  
Introduction to theories of real property value. Techniques of value determination. Data analysis techniques.

#### 435. Real Estate Investment Analysis (3) II

Prerequisites: Finance 323 with minimum grade of C and 433.  
Theories and methods of investment analysis applied to real estate. Integration of various aspects of real estate from the investors perspective. Use of computer models for investment decision making.

#### 445. Estate Planning (3)

Prerequisite: Finance 323.  
Fundamentals of estate planning, social and family implications of federal/state taxation of transfers of wealth by gift or at death. Study of trusts, conservatorships, guardianship and postmortem planning. How planning is affected by business assets, employee benefits, and insurance.

#### 496. Selected Topics in Finance (1-4)

Prerequisite: Consent of department chair.  
Selected areas of concern in finance. See Class Schedule for specific content. May be repeated with new content with consent of department chair. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

#### 498. Investigation and Report (1-3) I, II

Prerequisites: Senior standing and consent of instructor.  
A comprehensive and original study of a problem connected with finance under the direction of one or more members of the finance staff. May be repeated with new content. Maximum credit six units.

#### 499. Special Study (1-3)

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

#### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 521. Individual Insurance Management (3)

Prerequisites: Undergraduate: Completion of lower division requirements for the major. Graduate: Completion of prerequisite core.  
Economic and social aspects of individual insurance and nature of life and health insurance and annuities. Theory of probabilities, premiums, reserve and nonforfeiture values. Company and agency operations and management, including legal aspects and relationship to personal financial planning.

#### 525. Employee Benefits and Retirement Planning (3)

Prerequisite: Finance 323 with minimum grade of C.  
Nature, construction, administration, and evaluation of employee benefit plans. Disability plans. Use of retirement plans. Social security and its integration with employee plans. Tax treatment of retirement plans.

#### 589. Personal Financial Planning (3)

Prerequisites: Finance 327 and credit or concurrent registration in Accountancy 404.  
Financial planning process. Relationships with clients and other professionals. Plan formulation and implementation. Cash flow and debt considerations. Integration of investments, insurance, estate, tax, and retirement planning. Practice management, ethics, and regulation.

#### GRADUATE COURSES Refer to the Graduate Bulletin.



# French

In the College of Arts and Letters

OFFICE: Business Administration 304  
TELEPHONE: (619) 594-6491

## Faculty

Emeritus: Ghilbert, Jackson, Max, Messier, Nelson  
Chair: Benkov  
Professors: Branan, Cox, Edson, Glasgow, Schorr  
Associate Professors: Benkov, Cornwell-Giles, Palmer

## Offered by the Department of French and Italian Languages and Literatures

Master of Arts degree in French.  
Major in French with the B.A. degree in liberal arts and sciences.  
Teaching major in French for the single subject teaching credential in foreign languages.  
Minor in French.

## Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

## French Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 11021)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in French courses can apply to the degree.

Students majoring in French must complete a minor in another field to be approved by the departmental adviser in French.

**Preparation for the Major.** French 100A, 100B, 200A, either 200B or 200E, 200C, and 200D. (22 units)  
Recommended: History 105, 106.

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through coursework for preparation for the major.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units in French to include French 301, 302, 305A-305B, 401 or 411 or 560, and nine additional units of upper division courses in the language.

## French Major

For the Single Subject Teaching Credential in Foreign Languages With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 11021)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under Policy Studies or Teacher Education. For students completing the single subject teaching credential program, no more than 52 units in French courses can apply to the degree.

This major may be used by students in policy studies or teacher education as an undergraduate major for the B.A. degree in liberal arts and sciences. A minor in another field approved by the departmental adviser in French is required for the degree.

To be recommended for student teaching, students must demonstrate proficiency in French by passing the departmental written and oral tests.

**Preparation for the Major.** French 100A, 100B, 200A, either 200B or 200E, 200C, 200D. (22 units)

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through coursework for preparation for the major.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 30 upper division units in French to include French 301, 302, 305A-305B, 401, 421, 422, 560, 561, and 501 or 543 or 551.

## French Minor

The minor in French consists of a minimum of 15 units in French, six units of which must be in upper division courses completed at San Diego State University.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable.

## Foreign Language Requirement for the B.A. Degree in Liberal Arts and Sciences

Students electing the study of French to fulfill the foreign language requirement for the Bachelor of Arts degree in liberal arts and sciences must successfully complete French 200A or 200B or 200C or 200D or 200E or the equivalent level of achievement. The usual sequence of coursework is French 100A, 100B; 200A and 200B or 200E; and 200C, 200D. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

## High School Equivalents

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high school courses will not count as college credit toward graduation.

Secondary school language courses can be used as follows:

1. The first **two years** of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.
2. The first **three years** of high school level language count as the equivalent of the first two college semesters, although students with fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not receive credit for the first semester college course unless at least five years separate the last high school course and the first college course.
3. **Four years** of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

## Courses

### LOWER DIVISION COURSES

Native speakers of French will not receive credit for taking lower division courses except with advance approval from the department.

All lower division courses in French are taught in French.

No credit will be given when French 100A, 100B, the 200 series, 301, or 302 are taken concurrently or out of sequence.

#### 100A. Elementary (5) I, II

Pronunciation, speaking and writing, readings on French culture and civilization, essentials of grammar. Not open to students who have completed three years of high school French unless the third course was completed five or more years ago.

#### 100B. Elementary (5) I, II

Prerequisite: French 100A or two years of high school French.  
Continuation of French 100A. Not open to students who have completed four years of high school French unless the fourth course was completed five or more years ago.

#### 200A. French Grammar (3) I, II

Prerequisite: French 100B with a grade of C or better or three years of high school French.

French majors and minors should enroll concurrently in French 200B or 200E. International Business majors should enroll concurrently in French 200E.

Comprehensive survey of French grammar at the intermediate level. Analysis and use of typical French structures.

#### 200B. Reading French (3) I, II

Prerequisite: French 100B or three years of high school French.  
French majors and minors should enroll concurrently in French 200A. Not open to students with credit for more than 10 units of 200-level French.

Emphasis on reading: short stories, plays, cultural material, etc.

#### 200C. Writing French (3) I, II

Prerequisite: French 200A.  
French majors, minors, and International Business majors should enroll concurrently in French 200D. Not open to students with credit for more than 10 units of 200-level French.

Emphasis on written composition: study of a variety of prose models and practice in writing.

#### 200D. The Grammar of Spoken French (3) I, II

Prerequisite: French 200A.  
French majors, minors, and International Business majors should enroll concurrently in French 200C.  
Analysis of grammar and use of modern French through study of cultural materials, for proficiency in oral communication.

#### 200E. Readings in Commercial French (3)

Prerequisite: French 100B or three years of high school French.  
French majors, minors, and International Business majors should enroll concurrently in French 200A. Not open to students with credit for more than 10 units of 200-level French.  
Introduction to commercial institutions and socioeconomic aspects of contemporary France; development of a useful vocabulary in commercial French. Majors and minors should enroll concurrently in French 200A.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

All upper division courses in French are taught in French unless otherwise stated.

French 301 and French 302 are not open to students who hold a French *baccalauréat*.

#### 301. Advanced Grammar and Composition (3) I, II

Prerequisites: Twelve units of 200-level French, and completion of the General Education requirement in Foundations II.C., Humanities. General Education prerequisite not required for French majors.  
Advanced grammar and stylistics; intensive writing practice.

#### 302. Translation and Stylistics (3) I, II

Prerequisites: French 301, and completion of the General Education requirement in Foundations II.C., Humanities. General Education prerequisite not required for French majors.  
Comparative stylistics of French and English, taught through translation.

#### 305A. Survey of French Literature (3) I

Prerequisites: Twelve units of 200-level French, and completion of the General Education requirement in Foundations II.C., Humanities. General Education prerequisite not required for French majors.  
Important movements, authors, and works in French literature from the Middle Ages to the Enlightenment.

#### 305B. Survey of French Literature (3) II

Prerequisites: Twelve units of 200-level French, and completion of the General Education requirement in Foundations II.C., Humanities. General Education prerequisite not required for French majors.  
Continuation of French 305A from the Enlightenment to the present.

#### 401. French Phonetics and Diction (3)

Prerequisite: Twelve units of 200-level French.  
Study of the sound system of French as a means of improving pronunciation and diction. Phonetic transcription, classroom exercises and laboratory work.

#### 411. Explication de Textes (3)

Prerequisite: Twelve units of 200-level French.  
An introduction to the analytical approach to the detailed study of literature. Demonstrations by instructor and students.

#### 421. French Civilization (3) I

Prerequisites: Twelve units of 200-level French, and completion of the General Education requirement in Foundations II.C., Humanities. General Education prerequisite not required for French majors.  
French civilization from Middle Ages to present. Artistic, intellectual achievements and cultural movements. Not open to students with credit in Humanities 310.

#### 422. Contemporary France (3) II

Prerequisites: Twelve units of 200-level French, and completion of the General Education requirement in Foundations II.C., Humanities. General Education prerequisite not required for French majors.  
Contemporary France, emphasizing political, economic and social structures as well as artistic, intellectual, and cultural trends. Not open to students with credit in Humanities 311.

#### 423. Commercial French (3)

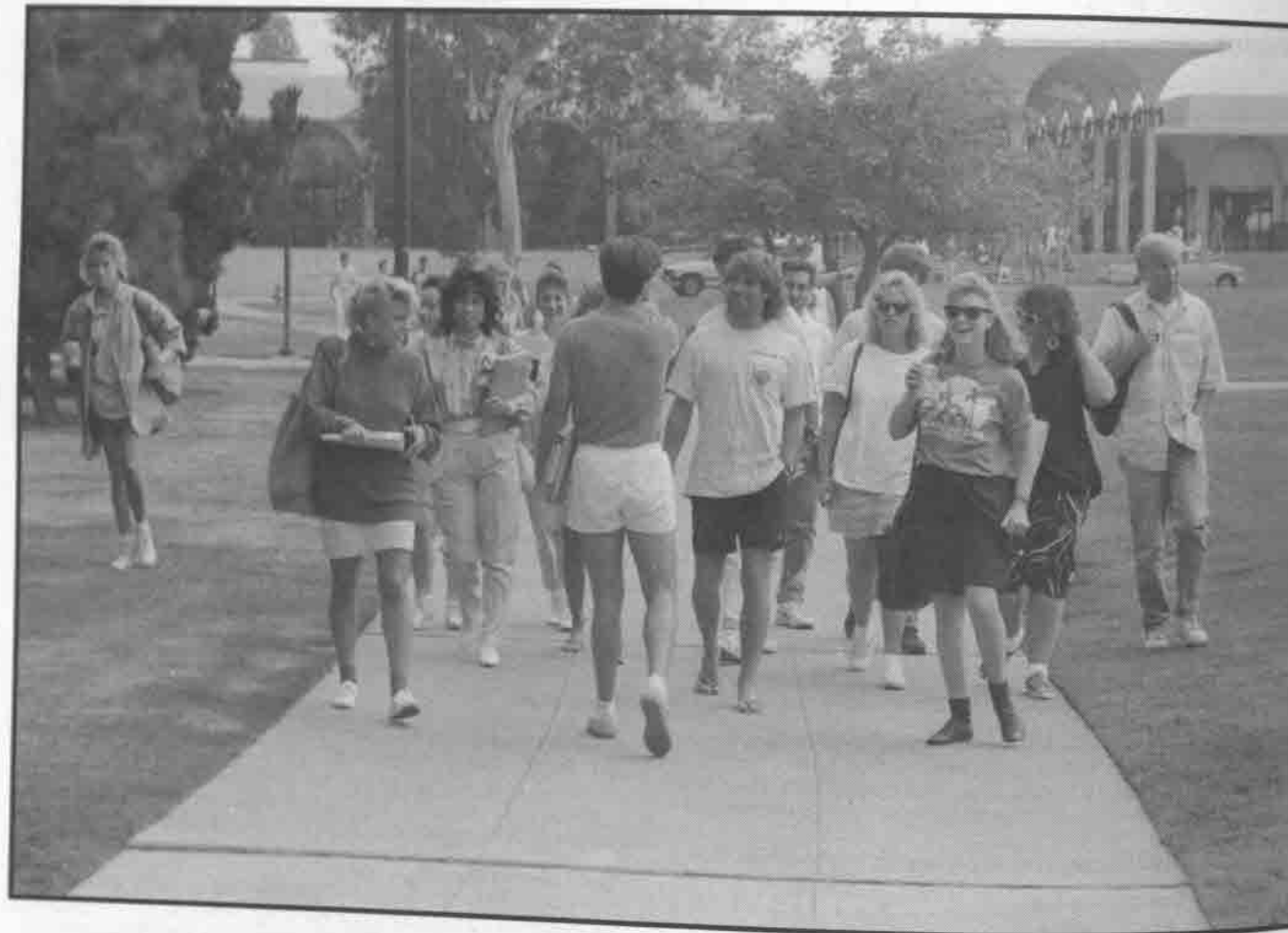
Prerequisite: French 301.  
French commercial practices and language, the enterprise, correspondence, advertising, telecommunications, banking, transportation, import-export, insurance, accounting, stock market, preparation for the *Certificat Pratique de Français Commercial et Economique* offered by the Paris Chamber of Commerce.

#### 496. Topics in French Studies (1-4)

Topics in French literature, culture and linguistics. May be repeated with new content. Maximum credit nine units. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. May be taught in English. See Class Schedule for specific content.

#### 499. Special Study (1-3) I, II

Prerequisites: French 302, 305A, 305B.  
Individual study. Maximum credit six units. This course is intended only for students who are currently enrolled in or who already have credit for all upper division courses in French available in any given semester.



### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

- 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 401.  
Phonemics, morphemics, syntax and semantics of present day French. Taught in English. (Formerly numbered French 431.)

- 561. Methods in Teaching French as a Second Language (3)**  
Prerequisite: French 560.  
Teaching of French as a second language; contemporary theory and methods. Not open to students with credit or concurrent enrollment in Spanish 561. Taught in English.

- 596. Topics in French Studies (1-4)**  
Prerequisite: French 302.  
Topics in French language, literature, and linguistics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 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 Refer to the Graduate Bulletin.

## General Studies

The University offers a number of courses which are not part of a regular departmental curriculum. They provide students with opportunities for achieving academic credit through interdisciplinary and nontraditional coursework.

### General Courses

#### LOWER DIVISION COURSES

- 200. Professional Experience and Community Service (1-3) Cr/NC**  
Prerequisites: Twelve units of college credit, minimum grade point average of 2.0, concurrent participation in professional or community service activity, and approval of course contract.  
Academic work designed with faculty approval to complement concurrent paid or unpaid professional or community service experience. Information and course contract forms available in Division of Undergraduate Studies. Applications must be submitted to the Division prior to the end of the first week of classes. May be used to satisfy major or minor requirements only upon written approval of department chair. No combination of General Studies 200 and 400 in excess of six units may be counted for credit toward a bachelor's degree.
- 275. Honors Special Study (1)**  
For further information contact the Division of Undergraduate Studies.  
Prerequisite: Admission to the University Honors Program.  
Special study associated with a lower division course offered as an honors section, and serving as an extension of the course.

#### UPPER DIVISION COURSES (Intended for Undergraduates)

- 300. Global Systems (3)**  
Prerequisite: Nine units in Foundations section of General Education to include a course from each of the three areas needed to receive General Education credit.  
Evolution and development of global systems, characteristics of contemporary global systems and formulation of criteria for projecting the future of the systems.
- 301. Conflict and Conflict Resolution (3)**  
Prerequisite: Nine units in Foundations section of General Education to include a course from each of the three areas needed to receive General Education credit.  
Conflict resolution as an emerging field; theories of conflict; methods and implications of conflict management including group, institutional, and international level analysis.
- 310. Our Global Future: Values for Survival (3)**  
For further information contact Dr. Eugene A. Troxell in the Department of Philosophy or Dr. Linda Holler in the Department of Religious Studies.  
Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences.  
Identifies resource and social crises toward which contemporary American values are leading; examines the nature of human action; contrasts other value systems with ours; considers origins of our values and the individual's potential for changing them. Interdisciplinary; team taught. (Formerly numbered General Studies 210.)

#### 320. Nuclear Arms Dilemma (3) I, II

Prerequisites: Upper division standing; nine units in Foundations section of General Education to include a course from each of the three areas in order to receive General Education credit.

Nuclear arms race from scientific, historical, economic, ethical, and sociopsychological perspectives. Effects of nuclear weapons, current strategies for their use, and proposals for reducing nuclear weapons.

#### 330. Plagues Through the Ages (3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences.

Political, economic, religious, and cultural effects of disease. Significant role epidemics and disease played in development of civilizations from beginning of recorded history to present.

#### 340. Confronting AIDS (3)

Prerequisite: Completion of the General Education requirement in Foundations II.A. Natural Sciences, II.B. Social and Behavioral Sciences, and II.C. Humanities.

Examines the AIDS epidemic from historical, epidemiological, biological, medical, psychological, political, legal, and ethical perspectives.

#### 400. Professional Experience and Community Service (1-3) Cr/NC

Prerequisites: Upper division standing, minimum grade point average of 2.0, concurrent participation in professional or community service activity and approval of course contract. Completion of prerequisites required.

Academic work designed with faculty approval to complement concurrent paid or unpaid professional or community service experience. Information and course forms available in Division of Undergraduate Studies. Applications must be submitted to the Division prior to the end of the first week of classes. May be used to satisfy major or minor requirements only upon written approval of department chair. No combination of General Studies 200 and 400 in excess of six units may be counted for credit toward a bachelor's degree.

#### 420. Disability and Society (3) I, II

Prerequisites: Psychology 101, Sociology 101, or Anthropology 101, and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences.

Range of human experience of handicapped individuals; attitudes toward handicapped individuals; interrelationship between societal institutions and needs of disabled people; historical response to these needs and contemporary issues with particular emphasis on normalization, integration, and community living.

### Interdisciplinary Courses

General Studies courses (250, 350, 550) are interdisciplinary selected topics courses.

Students interested in enrolling in General Studies 250, 350 or 550 should contact the faculty adviser of the department(s) offering the course for further details.

#### 250. Interdisciplinary Topics (1-4)

#### 350. Interdisciplinary Topics (1-4)

#### 550. Interdisciplinary Topics (1-4)



# Geography

In the College of Arts and Letters

OFFICE: Storm Hall 323  
TELEPHONE: (619) 594-5437

## Faculty

Emeritus: Blick, Colombo, Eidemiller, Keen, Kiewiet de Jonge, Richardson, Storm, Taylor, Yahr  
Chair: Griffin  
The Stephen and Mary Birch Foundation Chair in Geographical Studies: Rushton  
Professors: Ford, Fredrich, Getis, Greenwood, Griffin, Johnson, McArthur, O'Brien, Pryde, Quastler, Stow, Stutz, Wright  
Associate Professors: Aguado, Aitken, Hope, O'Leary  
Assistant Professors: Brewer, Franklin

## Offered by the Department

Doctor of Philosophy degree in geography.  
Master of Arts degree in geography.  
Major in geography with the B.A. degree in liberal arts and sciences.  
Minor in geography.  
Certificate in geographic information systems.

## 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. Gerard Rushton, internationally recognized for his expertise in theory and methodology of location/allocation decision making and spatial analysis using geographic information systems, is the first holder of the Chair.

## The Major

Geography is the study of spatial aspects of the physical environment, human activities and landscapes, and the nature of their interactions. Geographers draw upon theories from both the physical and social sciences. As physical scientists, they study the processes and resulting features of the earth's surface, such as vegetation, climate, soils, landforms, and resources. As social scientists, geographers explore such topics as the arrangement of societies on the earth's surface, land use patterns, urbanization, resource and energy usage, and environmental conservation.

The Department of Geography offers a broad range of fields from which to select a specialization. These include general geography – the study of both physical and cultural aspects of geography; physical geography – focusing on scientific explanations of the earth's physical features and processes; resource and environmental geography – concerned with human impacts on the earth; urban and transportation geography – dealing with the form of cities and the impacts of transportation systems; applied geography – providing a background in cartography, geographic information systems and remote sensing. The department also offers a Certificate in Geographic Information Systems. This program is for students interested in the use of satellite technology to study earth resources, mapping, computer graphics, surveying, and aerial photography.

A variety of career opportunities exist for geography majors. In recent years many graduates with bachelor degrees have entered the fields of urban and environmental planning, both in the public and private sectors. Employment is also available as geographic information systems specialists, cartographers, park naturalists, and remote

sensing specialists. The following represent some of the jobs held by recent graduates: environmental impact analyst, urban planner, cartographer, park ranger, transportation planner, travel agent, teacher, zoning investigator, terrain analyst. Some graduates have chosen to pursue opportunities in business where firms are interested in hiring college graduates with broad academic backgrounds.

## Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

## Geography Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 22061)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in geography courses can apply to the degree.

**Graduation with Distinction.** A student desiring to graduate with Distinction in Geography must meet the University requirements listed in the section of this catalog on "Graduation Requirements" and be recommended by the geography faculty.

## Specialization in General Geography

Students selecting this specialization must complete a minor in another department.

**Preparation for the Major.** Geography 101, 101L, 102, 103, 100, 100L (10 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 305W, 500W, 503W, 508W, 581W, or 584W, with a grade of C (2.0) or better.

**Major.** A minimum of 27 upper division units in geography to include three units selected from each of the following groups: (a) Geography 320-339; (b) 353-359, 554-560; (c) 370, 545, 569-577; (d) 380-381; (e) 382, 385, 484, 488, 581-589; six units selected from 378, 401, 504-511; and six units of electives.

## Specialization in Physical Geography

Students selecting this specialization are not required to complete a minor in another department.

**Preparation for the Major.** Geography 101, 101L, 102; Mathematics 121 or 150, or 155 or 156; Chemistry 200; Physics 180A, 182A (19-21 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 305W, 500W, 503W, 508W, 581W, or 584W, with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units in geography to include Geography 385; fifteen units selected from Geography 378, 401, 498, 504-511; six units selected from 382, 484, 488, 581-589; and three units selected from each of the following groups: (a) 380-381; (b) 320-339; (c) 353-370, 545, 554-577; and three units of electives.

\* Geography 595 may be used to satisfy three units in this group where appropriate and approved by the department.

## Specialization in Resource and Environmental Geography

Students selecting this specialization are not required to complete a minor in another department.

**Preparation for the Major.** Geography 101, 101L, 102, 103; Biology 100, 100L (14 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 305W, 500W, 503W, 508W, 581W, or 584W, with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units in geography to include Geography 370, 385; three units selected from each of the following groups: (a) 320-339, 545; (b) 353-359, 554-560; (c) 380-381; (d) 382, 484, 488, 581-589. Nine units from 498, 569-574, 576, either 575 or 577; six units from 378, 401, 504-511; and three units of electives.

\* Geography 595 may be used to satisfy three units in this group where appropriate and approved by the department.

## Specialization in Urban and Transportation Geography

Students selecting this specialization are not required to complete a minor in another department.

**Preparation for the Major.** Geography 101, 101L, 102; Computer Science 106; Economics 102. (13 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 305W, 500W, 503W, 508W, 581W, or 584W, with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units in geography to include Geography 385; fifteen units selected from 353-359, 498, 554-560; six units selected from 378, 401, 504-511; three units from each of the following groups: (a) 320-339; (b) 370, 545, 569-577; (c) 380-381; and three units of electives.

\* Geography 595 may be used to satisfy three units in this group where appropriate and approved by the department.

## Specialization in Applied Geography

Students selecting this specialization are not required to complete a minor in another department.

**Preparation for the Major.** Geography 101, 101L, 102; Computer Science 106; and a three-unit course in introductory statistics (13 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 305W, 500W, 503W, 508W, 581W, or 584W, with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units in geography to include Geography 385; eighteen units selected from Geography 380-382, 484, 488, 498, 581-589; three units selected from each of the following groups: (a) 320-339; (b) 353-370, 545, 554-577; six units selected from 378, 401, 504-511; and three units of upper division geography electives.

\* Geography 595 may be used to satisfy three units in this group where appropriate and approved by the department.

## Geography Minor

The minor in geography consists of a minimum of 18-19 units of geography to include Geography 101, 102 and one of the following areas:

**Physical:** nine units selected from Geography 378, 401 or 504-511, and three or four units selected from techniques courses Geography 380-385, 484, 488, 581-589.

**Cultural:** six units from Geography 312, 354, 554, 555, and six units selected from regional courses Geography 320-339.

**Urban/Transportation:** nine units selected from Geography 353-359, 554-560, and three or four units selected from either technique or regional courses Geography 320-339, 380-385, 484, 488, 581-589.

**Conservation:** nine units selected from Geography 370, 378, 545, 569-577, and three or four units selected from technique courses Geography 380-385, 484, 488, 581-589.

**Techniques:** nine units selected from Geography 380-385, 484, 488, 581-589, and three units selected from any other upper division course.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Geographic Information Systems Certificate\*

The purpose of the program is to prepare students to carry out mapping activities and cartographic analyses in public and private organizations.

Students must apply for admission to the program before the completion of 15 certificate units and must complete the required units with a 2.5 grade point average.

The certificate requires 24 units to include six units selected from Civil Engineering 218, Computer Science 106, 107, 108; and eighteen units selected from Geography 380, 381, 382, 484, 488, 581, 582, 584, 588, 589, 595. Courses with relevant content may be substituted for the courses listed above with the approval of the certificate adviser. Courses in the certificate may be counted toward the major in geography but may not be counted toward the minor.

\* Additional prerequisites required for this certificate.



## Courses

## LOWER DIVISION COURSES

- 101. Principles of Physical Geography (3) I, II (CAN GEOG 2)**  
Principles underlying the fundamental nature and dynamics of the physical world; the atmosphere, hydrosphere, biosphere, lithosphere, and their systematic spatial relationships.
- 101L. Physical Geography Laboratory (1) I, II**  
Three hours of laboratory.  
Prerequisite: Credit or concurrent registration in Geography 101.  
Practical exercise and observation in map analysis, weather elements, climatic regions, and the earth's landform features. Designed to supplement Geography 101.
- 102. Principles of Cultural Geography (3) I, II (CAN GEOG 4)**  
Introduction to cultural geography, covering the elements of culture, such as technology, language, religion, political organization, methods of livelihood, settlement patterns and population, and the regional distribution of these elements over the earth. Field trips may be arranged.
- 103. Principles of Meteorology (3) I, II**  
The composition, structure, and circulation of the atmosphere, including elementary theory of storms and other weather disturbances. May be followed by, or taken with, Geography 103L.
- 103L. Meteorology Laboratory (1) I, II**  
Three hours of laboratory.  
Prerequisite: Credit or concurrent registration in Geography 103.  
Theory of meteorological instruments and observations. Practical exercise in surface and upper air observations, weather codes, and elementary weather map analysis.

UPPER DIVISION COURSES  
(Intended for Undergraduates)

- 312. Culture Worlds (3) I, II**  
Prerequisites: Geography 101 and 102, and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences.  
The evolution, distinguishing cultural characteristics, and physical features of major cultural regions of the world. Role humans have played in the alteration of natural landscapes.
- 320. California (3)**  
Prerequisite recommended: Geography 101 or 102.  
Systematic and regional analysis of topography, climate, and natural vegetation as related to past and present activities of humans and their use of the land. Field trips may be arranged.
- 321. United States (3) I, II**  
Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors. Recommended: Geography 101 or 102.  
Systematic and regional analysis of physical and cultural landscapes of the United States.
- 323. Middle America (3) I, II**  
Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors. Recommended: Geography 101 or 102.  
The land and peoples of Mexico, Central America, and the islands of the Caribbean; a survey of the resources, economies, and trade of the region. Field trips may be arranged.
- 324. South America (3) I, II**  
Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors. Recommended: Geography 101 or 102.  
The physical regions and human geography of South America, including the history of colonization and the exploitation of resources.
- 336. Europe (3) I, II**  
Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors. Recommended: Geography 101 or 102.  
Systematic analysis of the geographic bases of modern European life. Regional investigation of countries of Europe except the Soviet Union.
- 337. Republics of the Former Soviet Union (3) I**  
Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors. Recommended: Geography 101 or 102.  
Ethnic composition, industrial and agricultural resources, demographics, and environmental management in this region, with an emphasis on the various cultural regions.
- 339. Australia, New Zealand, and the Pacific Islands (3)**  
Prerequisite recommended: Geography 101 or 102.  
Regional geography of Australia, New Zealand, and the Pacific Islands. Distribution of cultural groups, economic activities, and evolution of current land use patterns.
- 353. Location of Economic Activity (3)**  
Prerequisite recommended: Geography 101 or 102.  
Spatial arrangement and interrelationship of resources; production, exchange and consumption; principles and theory in industrial location; selecting favorable locations for capital investments, determining growth potential of service and market areas, meeting environmental impact requirements.
- 354. Geography of Cities (3) I, II**  
Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors. Recommended: Geography 101 or 102.  
Survey of the location, function and spread of cities; the spatial and functional arrangement of activities in cities, leading to an analysis of current urban problems: sprawl, city decline, metropolitan transportation. Field trips may be arranged.
- 358. Transportation Geography (3) I**  
Prerequisite recommended: Geography 101 or 102.  
The spatial distribution of transportation networks and commodity movement and their relationship to the distribution of economic activity.
- 359. Geography of Air Transportation (3)**  
Prerequisite recommended: Geography 101 or 102.  
Evolution, current status, with emphasis on the U.S. and future of commercial air transportation as influenced by government regulations, economic conditions, corporate strategies, and technological change.
- 370. Environmental and Natural Resource Conservation (3) I, II**  
Prerequisites: Geography 101 or 102; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.  
Quality of environmental and natural resources within changing human and natural systems: pollution problems; preservation of open space, habitats, and wilderness; and conservation of natural resources. Not open to students with credit in Geography 371.
- 378. Environmental Physiography (3)**  
Prerequisite: Geography 101.  
Introduction to environmental physiographic dynamics. Assessment of man's role in these dynamics and their effect on urban and rural land use, including such topics as induced erosion, landslides and flooding.
- 380. Map Investigation (3) I, II**  
Two lectures and three hours of laboratory.  
Prerequisite: Geography 101 or 102.  
Use of the map as an analytical tool in geography. History of developments in cartography.

- 381. Maps and Graphic Methods (3) I, II**  
Two lectures and three hours of laboratory.  
Prerequisite: Geography 101 or 102.  
The art and science of creating graphs and maps as media for describing and analyzing geographic phenomena. Laboratory instruction and practice in cartographic techniques with emphasis on presenting quantitative data.
- 382. Use and Interpretation of Aerial Photographs (3)**  
Two lectures and three hours of laboratory.  
Prerequisites: Geography 101 and consent of instructor.  
Stereoscopic interpretation and cartographic representation of landforms, vegetation, and land use. Emphasis on practical exercises.
- 385. Spatial Data Analysis (3) I, II**  
Prerequisites: Geography 101 or 102; Mathematics 250 or comparable course in statistics.  
Analysis of spatially distributed data including computer applications. Spatial sampling, descriptive statistics for areal data, inferential statistics, use of maps in data analysis.
- 401. Physiography (3)**  
Prerequisite: Geography 101.  
Morphology and genetic interpretation of the relief features of the earth's surface.
- 484. Geographic Information Systems (3)**  
Two lectures and three hours of laboratory.  
Prerequisite: Three units from Geography 380, 381, 382, 488, or from computer programming.  
Procedures for encoding, storage, management, and display of spatial data; theory of computer-assisted map analysis; examination of important geographic information systems. (Formerly numbered Geography 583.)
- 488. Remote Sensing of Environment (4) I**  
Three lectures and three hours of laboratory.  
Prerequisite: Geography 101. Recommended: Physics 180A-180B.  
Techniques for acquiring and interpreting remotely sensed data of environment. Electromagnetic radiation processes, aerial photographic systems, and human interpretation of aerial and satellite imagery. Geographic analysis of selected terrestrial, oceanographic, and atmospheric processes and resources.
- 496. Selected Studies in Geography (3)**  
Prerequisite: Six units in geography.  
Critical analysis of problems within a specific field of the discipline. 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 six units. Field trips may be arranged.
- 498. Senior Thesis (3)**  
Prerequisite: An overall grade point average of 3.0 and consent of department.  
A written thesis based on an individual research project. (Formerly numbered Geography 498B.)
- 499. Special Study (1-3) I, II**  
Individual study. Maximum credit six units.
- 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. Physical Climatology (3) I**  
Prerequisites: Geography 103; Mathematics 121 or 150, or 155 or 156.  
Physical processes of energy transfer to and from the atmosphere. Solar and thermal radiation, turbulent heat transfer, soil heat transfer, global distributions of energy balance components, and bioclimatology.
- 509. Regional Climatology (3) II**  
Prerequisite: Geography 103.  
The causes of climatic types as they occur throughout the world. Principles of several climatic classifications.
- 510. Advanced Meteorology (3) II**  
Prerequisites: Geography 103; Mathematics 121 or 150, or 155 or 156.  
Physical characteristics of the atmosphere including thermodynamics, moisture and condensation, atmospheric aerosol, and cloud processes.
- 511. Hydroclimatology (3)**  
Prerequisites: Geography 101 or 103; Mathematics 121 or 150, or 155 or 156, Physics 180A or 195.  
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.

UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)

- 504. Coastal and Submarine Physiography (3)**  
Prerequisite: Geography 378 or 401.  
Analysis of marine waves, of their modification in shallow waters, of coastal currents and tides. Interpretation of coastal and submarine relief in relation to environmental processes and their modification by man. Field trips may be arranged.



**558. Intermediate Transportation Geography (3)**

Prerequisite: Geography 358 or 559.  
Topics in the spatial analysis of transportation, e.g., spatial interaction patterns, diffusion process, models in spatial analysis. Field trips may be arranged.

**559. Urban Transportation Geography (3)**

Prerequisite: Three units of upper division urban or transportation coursework in geography or related field.  
Urban transportation networks and their effects, past, present and future, on the economy and physical structure of the urban region. Field trips may be arranged.

**560. Behavioral Geography (3)**

Prerequisites: Geography 102, Psychology 101, and Geography 385 or Psychology 270.  
Contemporary behavioral theories and methods in human geography. Environmental perception and spatial behavior. Problems of empirical research.

**569. Environmental Resource Conservation (3)**

Prerequisite: Geography 370.  
Management of environmental and natural resources. Effective programs and the institutional frameworks in which they occur.

**571. Energy Resources and the Environment (3)**

Prerequisite: Geography 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. (Formerly numbered Geography 570.)

**573. Geography as Human Ecology (3)**

Prerequisite: Geography 370.  
Human ecology related to resource geography. Field trips may be arranged.

**574. Water Resources (3) I**

Prerequisite: Geography 370.  
Occurrence and utilization of water resources and the problems of water resource development. Field trips may be arranged.

**575. Geography of Recreational Land Use (3) I, II**

Prerequisite: Geography 101 or 102.  
Importance of location and environment in the use, management, and quality of recreation areas. Field trips may be arranged.

**576. Geography of Marine Resources (3)**

Prerequisite: Geography 101 or 102.  
Spatial distribution, use, and management of marine resources. Field trips may be arranged.

**577. Geography of the National Parks (3)**

Prerequisite: Geography 370.  
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. Intermediate Cartography (3)**

Two lectures and three hours of laboratory.  
Prerequisite: A three-unit course on mapping.  
Advanced laboratory instruction and practice in cartographic techniques, including computer-mapping applications.

**582. Automated Cartography (3)**

Two lectures and three hours of laboratory.  
Prerequisite: Three units from Geography 380, 381, 382, 385, 488, 585, or in computer programming.  
Computerized methods of graphically presenting and analyzing spatial data; examination of existing automated mapping systems.

**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.

**588. Intermediate Remote Sensing of Environment (4) II**

Three lectures and three hours of laboratory.  
Prerequisites: Geography 488 and 585.  
Multispectral remote sensor systems and interpretation of imagery from nonphotographic systems. Computer-assisted image processing. Geographic analysis of selected terrestrial, oceanographic, and atmospheric processes.

**589. Field Geography (3) II**

Two lectures and three hours of laboratory.  
Prerequisites: Senior or graduate standing and the completion of at least 12 units in geography, including Geography 101 and 102, and consent of instructor.  
Field techniques for data acquisition: interviewing, landscape interpretation, environmental analysis, use of topographic maps, land use mapping, surveying, climatological instrumentation, landform analysis, soil and vegetation sampling.

**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 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**  
**Refer to the Graduate Bulletin.**

# Geological Sciences

In the College of Sciences

OFFICE: Chemistry/Geology 205  
TELEPHONE: (619) 594-5586

**Faculty**

Emeritus: Brooks, Krummenacher, McEuen, Roberts, Threet  
Chair: Walawender  
The Rollin and Caroline Eckis Chair in Seismology: Day  
Professors: Abbott, Berry, Bertine, Dorman, Gastil, Girty, Huntley, Jiracek, Kern, Marshall, Miller, Peterson, Rockwell, Walawender  
Associate Professors: Frost, Ptacek  
Assistant Professors: Kimbrough, Thorbjarnarson

**Offered by the Department**

Master of Science degree in geological sciences.  
Major in geological sciences with the B.S. degree in applied arts and sciences.  
Option in engineering geology.  
Option in geochemistry.  
Option in geology.  
Option in geophysics.  
Option in hydrogeology.  
Option in marine geology.  
Option in paleontology.  
Minor in geological sciences.  
Minor in oceanography.

## 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.

## The Major

Geology is the study of the earth, its composition, its history, and its constantly changing character.  
Geologists study the origin and evolution of our planet; the chemical and physical properties of minerals, rocks, and fuels; the structure of our mobile crust — its newly forming ocean floors and its ancient, drifting continents; the history of life; and the human adaptation to earthquakes, volcanic eruptions, landslides, and floods. The subject matter of geology ranges from dinosaurs to the prediction of earthquakes.  
Students who are curious about the planet on which we live, challenged by problems which involve the earth, and intrigued by the potential of a subject which combines the best of both the arts and sciences, should consider geological sciences as a major.  
The employment outlook is favorable, particularly with engineering and toxic waste disposal firms and energy companies, and as public school teachers.  
A geology graduate may be employed as one of the following professionals: hydrologist, geophysicist, geochemist, environmental scientist, oceanographer, teacher, research technician, geological surveyor, paleontologist, energy and resource explorer, and resource planner.  
Geologists are primarily employed by private corporations, including petroleum, mining, construction, and quarry companies; and

government agencies, such as the U.S. Geological Survey, the U.S. Bureau of Mines, the U.S. Bureau of Reclamation, the California Department of Conservation, and regional planning offices. Students with graduate degrees are sought for teaching positions in secondary schools, community colleges and universities.

## Geological Sciences Major

**With the B.S. Degree in Applied Arts and Sciences**  
**(Major Code: 19141)**

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." All required upper division courses must be taken for letter grades only, not credit/no credit.  
Courses to satisfy the requirement of 36 upper division units in the major may be selected from upper division geological sciences courses not explicitly excluded. Students may petition the department to include courses from other disciplines to complete the upper division major requirement.

### Option in Geology

**Preparation for the Major.** Geological Sciences 100, 101, 105, 221, 224, 230; Biology 100, 100L, or 101, 101L; Chemistry 200, 201; Mathematics 150 or 156, and 250; Physics 180A-180B and 182A-182B, or Physics 195, 195L, 196, 196L, 197, 197L (48-52 units)  
Recommended: Chemistry 410A-410B; Computer Science 107; Mathematics 151 or 157, and 252; Physics 195, 195L, 196, 196L, 197, 197L; a foreign language; and a course in mechanical drawing if not completed in high school.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units in approved courses to include Geological Sciences 305, 308, 498A-498B or 498A-498C, 506, 507, 508, 524, and either 525 or 530; at least one of the following: Geological Sciences 314, 502, 505, 520, 521, 526, 540, 550, 551; plus additional departmentally approved courses to complete a minimum of 36 upper division units for the major.

### Option in Engineering Geology

**Preparation for the Major.** Geological Sciences 100, 101, 105, 221, 224; Biology 100 or 101; Chemistry 200, 201; Engineering Mechanics 200; Engineering 140; Mathematics 150 and 151, or 156 and 157, and 252; Physics 195, 196, 197. (55 units)  
Recommended: Civil Engineering 218; Physics 195L, 196L, 197L; a foreign language; and a course in mechanical drawing if not completed in high school.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 39 upper division units in approved courses to include Geological Sciences 305, 308, 314, 330, 498A-498B or 498A-498C, 508, 526, 550, 551; Civil Engineering 301, 462, 463, and one of the following: Geological Sciences 505, 530, 530L, 548, or Civil Engineering 465.

Because of the preparation in mathematics, physics, and geology called for in this emphasis, the College of Engineering will not require majors in this option to take the prerequisites specified for Civil Engineering 301, 462, and 463.



**Option in Geochemistry**

**Preparation for the Major.** Geological Sciences 100, 101, 105, 221, 224; Biology 100 or 101; Chemistry 200, 201, and 251; Mathematics 150 and 151, or 156 and 157, and 252; Physics 195, 196, 197, 197L, (56 units)  
 Recommended: Computer Science 107; Physics 195L, 196L; a foreign language; and a course in mechanical drawing if not completed in high school.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 37 upper division units in approved courses to include Geological Sciences 305, 308, 498A-498B or 498A-498C, 508, 530, 530L; Chemistry 410A-410B; either Geological Sciences 506 and 526, or Geological Sciences 524 and 525; seven units of electives approved by the departmental adviser.

**Option in Geophysics**

**Preparation for the Major.** Geological Sciences 100, 101, 105, 221, 224; Biology 100 or 101; Chemistry 200, 201; Computer Science 107; Mathematics 150 and 151, or 156 and 157, and 252; Physics 195, 196, 196L, 197, Engineering 280 must be taken if students select Engineering 510 in the major. (54 units)

Recommended: Physics 195L, 197L; a foreign language; and a course in mechanical drawing if not completed in high school.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 43-47 upper division units in approved courses to include Geological Sciences 305, 308, 330, 498A-498B or 498A-498C, 533, and 560; Mathematics 342A and 342B, or Engineering 510; Physics 311, 350; Physics 400A or Electrical Engineering 340; plus six units of approved courses in geological sciences at the 500 level.

**Option in Marine Geology**

**Preparation for the Major.** Geological Sciences 100, 101, 105, 221, 224; Biology 100 or 101; Chemistry 200, 201; Mathematics 150 and 151, or 156 and 157, and 252; Physics 195, 195L, 196, 196L, 197, 197L (53 units)

Recommended: Computer Science 107; a foreign language; and a course in mechanical drawing if not completed in high school.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units in approved courses to include Geological Sciences 305, 308, 498A-498B or 498A-498C, 508 (optional), 530, 530L, 540, 545, and four of the following courses: Geological Sciences 506, 524, 525, 526, 548, Biology 517, Chemistry 501; plus additional departmentally approved courses to complete a minimum of 36 upper division units for the major. Recommended: Chemistry 410A-410B for students anticipating postgraduate studies.

**Option in Paleontology**

**Preparation for the Major.** Geological Sciences 100, 101, 105, 221, 224, Biology 201, 202, 215; Chemistry 200, 201; Mathematics 150 or 156, or 121 and 122 (alternative of 121 and 122 should not be selected by students planning academic work beyond the B.S. degree); Physics 180A-180B and 182A-182B (49-50 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units in approved courses to include Geological Sciences 305, 308, 498A-498B or 498A-498C, 506, 507, 508, 516, 526; two courses from the following: Biology 515, 517, 522; plus additional departmentally approved courses to complete a minimum of 36 upper division units for the major.

**Option in Hydrogeology**

**Preparation for the Major.** Geological Sciences 100, 101, 105, 221, 224; Biology 100 or 101; Chemistry 200, 201; Computer Science 107; Mathematics 150 and 151, or 156 and 157, and 252; Physics 195, 196, 197, Engineering 280 must be taken if students select Engineering 510 in the major. (53 units)

Recommended: Engineering 140; Civil Engineering 218; Physics 195L, 196L, 197L; a foreign language; and a course in mechanical drawing if not completed in high school.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 38 upper division units in approved courses to include Geological Sciences 305, 308, 314, 330, 498A-498B or 498A-498C, 505, 508, 526, 530, 530L, 551; Mathematics 342A and 342B, or 531 and 537, or Engineering 510; plus additional departmentally approved courses when needed to complete a minimum of 38 upper division units for the major.

**Geological Sciences Minor**

The minor in geological sciences consists of a minimum of 20 units in geological sciences, twelve of which must be in upper division courses, to include Geological Sciences 100, 101, 105; and twelve units selected from Geological Sciences 301, 302, 303, 305, 314, 502, 506. In addition, Geological Sciences 221, 224 and 230 are appropriate for geology minors.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

**Oceanography Minor**

For a listing of requirements refer to the section of this catalog of Oceanography.

**Courses****LOWER DIVISION COURSES****100. General Geology (3) I, II  
(100 + 101: CAN GEOL 2)**

Pursuit of understanding the earth as a whole and its past, present and future evolutionary processes. Unifying concepts such as plate tectonics and its implications, the magnitude of geologic time, uniformitarianism, and the ramifications of the fossil record will be explored. Open to all students except those with previous credit in geology.

**101. General Geology Laboratory (1) I, II  
(100 + 101: CAN GEOL 2)**

Three hours of laboratory.  
 Prerequisite: Credit or concurrent registration in Geological Sciences 100.

Recognition of common earth features and materials with experience in both field and map relationships. Designed to accompany and augment Geological Sciences 100. Not open to students with previous laboratory credit in geology.

**105. Historical Geology (4) I, II (CAN GEOL 4)**

Three lectures and three hours of laboratory. Arrangement for field study during the semester.  
 Prerequisites: Geological Sciences 100 and 101.  
 Theories of earth origin, and the evolutionary history of the earth as traced through rock and fossil records. Consideration of the paleontologic sequence.

**221. Mineralogy (4) I, II**

Three lectures and three hours of laboratory.

Prerequisites: Credit or concurrent registration in Geological Sciences 100 and 101; high school chemistry and trigonometry, or credit or concurrent registration in college chemistry and trigonometry.

Practice in the determination of the common minerals; their geologic environment, utilization and economic significance.

**224. Petrology (3) I, II**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 100, 101, and 221.

The origin, occurrence, identification, and classification of rocks in hand specimen.

**230. Introduction to Geophysics (3) I, II**

Prerequisites: Geological Sciences 100 and 101; a course in college physics.

Application of classical physics to gravitational, magnetic, seismic, earthquake, and thermal characteristics in defining the structure and dynamics of the earth. Not open to students with credit in Geological Sciences 510 or 512.

**296. Experimental Topics (1-4)**

Selected topics. 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.

**UPPER DIVISION COURSES  
(Intended for Undergraduates)****300. Computer Applications to Geology (3)**

Two lectures and two hours of laboratory.

Prerequisites: Geological Sciences 221 and 230; Mathematics 150 or 156, and 250.

Instruction in DOS personal computers and data manipulation using word processing, spreadsheets, and plotting. Supporting geological sciences theory presented with the solution of quantitative problems in geophysics, hydrology, sedimentology, and geomorphology.

**301. Geology of National Parks and Monuments (3) I, II**

Prerequisites: Geological Sciences 100, and completion of the General Education requirement in Foundations II.A., Natural Sciences.

Geology of a group of national parks and monuments, selected for their geological significance, scenic beauty, and visitor popularity. (Not acceptable for a major in geology but acceptable for a minor in geology.)

**302. Fossils: Life Through Time (3) I, II**

Prerequisite: Completion of the General Education requirement in Foundations II.A., Natural Sciences.

Traditional and recently discovered aspects of history of life on earth. Topics from the origin of life to extinctions.

**303. Natural Disasters (3) I, II**

Prerequisite: Geological Sciences 100 or completion of the General Education requirement in Foundations II.A., Natural Sciences.

Geologic processes that have dramatically affected the human race: earthquakes, volcanoes, landslides, and floods. Not acceptable for a major in geological sciences but acceptable for a minor in geological sciences.

**305. Structural Geology (3) I, II**

Two lectures and three hours of laboratory per week with occasional field trips.

Prerequisites: Geological Sciences 105 and trigonometry.

Structural features of the earth, both deformational and primary. Mechanical principles, causes of folding and faulting, graphic solutions and analyses.

**308. Introductory Field Geology (4) I, W**

One lecture and three hours of laboratory plus a minimum of 18 days in the field. Fieldwork will be pursued either on weekends during semester, or at a field camp during the month of January (intersession);

students should enroll in either the Fall or Winter session during the Fall semester.

Prerequisites: Geological Sciences 224 and 305.

Techniques of geologic observation, data collections, and interpretation; preparation of geologic maps, sections, and reports. Students are responsible for food and transportation.

**314. Geomorphology (3) I**

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 105.

Development and classification of landforms with emphasis on processes involved.

**330. Geophysical Prospecting (3) I**

Two lectures and three hours of laboratory. Occasional field trips.

Prerequisites: Geological Sciences 100 and 101, or 253; Mathematics 150 or 156; Physics 196.

Elementary theory and basic field practices, data reduction, and interpretation of gravity, magnetic, seismic, resistivity, and electromagnetic surveys in economic applications.

**496. Selected Topics in Geology (1-4) I, II**

Prerequisite: Consent of instructor.

Selected topics in geology and related earth sciences. 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 six units.

**498A. Senior Seminar (1) I, II Cr/NC**

Prerequisite: Senior standing in geological sciences.

Preparation of written and oral scientific reports and attendance at departmental seminars.

**498B. Senior Thesis (2) I, II**

Prerequisites: Geological Sciences 498A and consent of instructor. Individual research project, written thesis, and oral presentation. Must be completed by students desiring to graduate with distinction in the major.

**498C. Senior Presentation (2) I, II**

Prerequisite: Geological Sciences 498A.

Oral and written critiques of geological literature and seminar presentations.

**499. Special Study (1-3) I, II**

Prerequisites: Acceptable grade average in at least 12 upper division units within the major and consent of staff.

Individual study in field, library, laboratory, or museum work. Maximum credit four units.

**UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)****502. Geology of North America (3) I**

Prerequisite: Geological Sciences 105.

A regional analysis of North American geology, its structural, stratigraphic, and tectonic patterns and hypotheses concerning their origin and evolution.

**505. Photogeology (3) II**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 305 and 314.

Geologic interpretation of aerial photographs, elementary stereoscopy and stereometry applied to structural and stratigraphic problems, and compilation of geologic maps from annotated aerial photographs.

**506. Paleontology (3) I, II**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 105 and either Biology 100-100L or 101-101L.

Principles and methods, exemplified by a study of the morphology, classification, habit, and geologic significance of fossil invertebrates.

Vertebrate Paleontology, see Biology 526.



**507. Stratigraphy (3) II**

Two lectures and three hours of laboratory.  
Prerequisites: Geological Sciences 105 and 224.  
Stratigraphic principles and practices. Consideration of the North American stratigraphic record.

**508. Advanced Field Geology (4) II (4 or 6) S**

One lecture and three hours of laboratory plus 24 days in the field. For the summer option with six units: two additional weeks of field or laboratory work. Either Spring or 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.

**516. Micropaleontology (3) II**

Two lectures and three hours of laboratory.  
Prerequisite: Geological Sciences 506.  
The morphology, classification and geologic significance of the various microfossils.

**520. Ore Deposits (3) I**

Prerequisites: Credit or concurrent registration in Geological Sciences 224 and 305.

Geologic relations, origin, distribution, and economics of metallic and nonmetallic mineral deposits.

**521. Petroleum Geology (3) II**

Prerequisites: Geological Sciences 224 and 305.  
Geologic occurrence of petroleum and the application of geologic principles in exploration and production.

**524. Optical Mineralogy (3) I**

Two lectures and three hours of laboratory.  
Prerequisite: Geological Sciences 221.  
Theory and use of the polarizing microscope for determining optical properties of minerals as an aid to their identification.

**525. Petrography (3) II**

Two lectures and three hours of laboratory.  
Prerequisite: Geological Sciences 524.  
A study of rocks with the polarizing microscope; identification of mineral constituents; interpretation of textures; classification of rocks; problems of genesis.

**526. Sedimentology (3) I**

Two lectures and three hours of laboratory.  
Prerequisites: Geological Sciences 105 and 224.  
Origin, description, and interpretation of sedimentary rocks and structures.

**528. Seismic Stratigraphy (3) I**

Two lectures and three hours of laboratory.  
Prerequisites: Geological Sciences 230, 305, and 507.  
Principles involved in shooting, processing, and interpreting seismic reflection profiles. Laboratory exercises with stratigraphic interpretations from reflection data.

**530. Geochemistry (2) I, II**

Prerequisites: Geological Sciences 224; Chemistry 201; Mathematics 121 and 122, or 150, or 156.  
The relationship of basic chemical principles to geologic phenomena and environments, including applications to geologic exploration problems.

**530L. Geochemistry Laboratory (1) I, II**

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.

**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. Not open to students with credit in Geological Sciences 510 or 512.

**540. Marine Geology (3) I**

Prerequisites: Geological Sciences 105, and either Geological Sciences 224, 314, 502, or 506.

Plate tectonic origin and history of the ocean basins. Formation and distribution of sediments in response to biological, chemical, and geological processes.

**545. Descriptive Physical Oceanography (3) I**

Prerequisites: Mathematics 121 and 122, or 150, or 156; 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.

**548. Coastal and Estuarine Physical Oceanography (3) II**

Prerequisites: Mathematics 121 and 122, or 150, or 156; Physics 180A or 195.

Physical processes of marine coastal areas and estuaries. Includes longshore currents, rip currents, real waves in shallow water, wave refraction and diffraction, mechanics of sediment transport, forces and dynamics of estuarine circulations and tides.

**550. Engineering Geology (3) II**

Two lectures and three hours of laboratory.  
Prerequisite: Geological Sciences 305.  
Relationships between geologic processes and works of humans. Topics include rock and soil mechanics, ground water flow, slope 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 or 156.

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.

**560. Earthquake Seismology (3)**

Two lectures and three hours of laboratory.  
Prerequisites: 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**  
Refer to the Graduate Bulletin.

# German

In the College of Arts and Letters

**Faculty**

Emeritus: Boney, Dunkle, Lawson, Paulin, Wolf  
Chair: Wulbern  
Professors: Schaber, Skwara, Wulbern  
Assistant Professor: Wauchope

## Offered by the Department of German and Russian Languages and Literatures

Major in German with the B.A. degree in liberal arts and sciences.

Teaching major in German for the single subject teaching credential in foreign languages.

Minor in German.

**The Major**

The German language is widely spoken in many countries today. It is also a primary language of scholarship in such diverse fields as chemistry, medicine, military science, history, linguistics, art, physics, electronics, photography, and the natural sciences.

Students who major in German will gain proficiency in German language skills, and the department offers a broad variety of courses designed to prepare majors for a number of careers after graduation. A major in German is also a good preparatory curriculum for graduate programs in such areas as international trade, international law, librarianship, public administration, and journalism.

A knowledge of German is a valuable asset in finding positions as interpreters and translators employed by the federal government, the United Nations, international conferences, trade councils, and publishers, as well as with internationally oriented companies, government agencies, the press corps, and the tourism industry.

**Advising**

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

**German Major**

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 11031)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in German courses can apply to the degree.

Students majoring in German must complete a minor in another field to be approved by the departmental adviser in German.

**Preparation for the Major.** German 100A, 100B, 200A, 200B or 200C; and 211. (18 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through coursework for preparation for the major.

OFFICE: Library East 468B  
TELEPHONE: (619) 594-6313

**German Major**

For the Single Subject Teaching Credential in Foreign Languages With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 11031)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under Policy Studies or Teacher Education. For students completing the single subject teaching credential program, no more than 48 units in German courses can apply to the degree.

This major may be used by students in policy studies or teacher education as an undergraduate major for the B.A. degree in liberal arts and sciences. A minor in another field approved by the departmental adviser in German is required for the degree.

**Preparation for the Major.** German 100A, 100B, 200A, 200B or 200C; and 211. (18 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through coursework for preparation for the major.

**Major.** A minimum of 27 upper division units in German to include 301, 302, 310, 420, 505, 510, and nine upper division units in German which may include Comparative Literature 571 (content: *Faust*).

**Proficiency Examination:** Before taking a student teaching assignment in German, the candidate for the credential may be required to pass an oral and written proficiency examination in the language, administered by the Department of German and Russian Languages and Literatures. The candidate should consult the chair of the department.

**German Minor**

The minor in German consists of a minimum of 15 units in German, six units of which must be in upper division courses.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Foreign Language Requirement for the B.A. Degree in Liberal Arts and Sciences

Students electing the study of German to fulfill the foreign language requirement for the Bachelor of Arts degree in liberal arts and sciences must successfully complete German 200A or 200B or 200C or the equivalent level of achievement. The usual sequence of coursework is German 100A, 100B, and 200A or 200B or 200C. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.



## High School Equivalents

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high school courses will not count as college credit toward graduation.

Secondary school language courses can be used as follows:

1. The first **two years** of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.
2. The first **three years** of high school level language count as the equivalent of the first two college semesters, although students with fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not receive credit for the first semester college course unless at least five years separate the last high school course and the first college course.
3. **Four years** of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

## Courses

### LOWER DIVISION COURSES

Native speakers of German will not receive credit for taking lower division courses in German except with advance approval from the department.

**All lower division courses in German are taught in German.**

No credit will be given for German 100A, 100B, and 200A or 200B or 200C, and 301 taken out of sequence. German 302 may be taken before 301.

#### 100A. First Course in German (5) I, II

Pronunciation, oral practice, readings on German culture and civilization, minimum essentials of grammar. Not open to students who have completed three years of high school German unless the third course was completed five or more years ago.

#### 100B. Second Course in German (5) I, II

Prerequisite: German 100A or two years of high school German. Continuation of German 100A. Not open to students who have completed four years of high school German unless the fourth course was completed five or more years ago.

#### 200A. Grammar of Written German (3) I, II

Prerequisite: German 100B or three years of high school German. German grammar at the intermediate level with emphasis on writing.

#### 200B. Expository German for Reading Comprehension (3) I, II

Prerequisite: German 100B or three years of high school German. Reading in German with emphasis on comprehension. Works to include readings in history, science, philosophy, culture, and journalism.

#### 200C. Literary German for Reading Comprehension (3) I, II

Prerequisite: German 100B or three years of high school German. Reading in German with emphasis on comprehension including one complete major work. Majors and minors urged to take 200A and/or 211 concurrently.

#### 200D. German for Business Purposes (3)

Prerequisites: German 100A, 100B, or two semesters of elementary German.

Commercial language for students of German or students in business programs with an interest in Germany. Cultural differences in business philosophy.

#### 211. Conversation (2) I, II Cr/NC

Prerequisite: German 100B or three years of high school German. Practice in the spoken language with emphasis on the articulation of German sounds; practical vocabulary; conversation on everyday cultural topics.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

**All upper division courses in German are taught in German unless otherwise stated.**

#### 301. Grammar and Composition (3)

Prerequisites: German 200A; 200B or 200C; 211; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Grammar and stylistics; intensive writing practice; reports based on outside reading.

#### 302. Grammar and Composition (3)

Prerequisites: German 200A; 200B or 200C; 211; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Grammar and stylistics; intensive writing practice; reports based on outside reading.

#### 310. Introduction to German Literature (3)

Prerequisites: German 200A; 200B or 200C. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Introduction to literary study in German, with selected readings representative of different periods and genres.

#### 420. German Civilization (3) I, II

Prerequisite: Twelve units of German language at the 200-level or higher. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Culture of past and present with emphasis on creative achievements of German people in visual arts, music, philosophy, and letters. Taught in German.

#### 496. Experimental Topics (1-4)

Prerequisites: German 310 (for literary topics) or 301 and 302 (for linguistics topics).

Selected topics. 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.

#### 499. Special Study (1-3) I, II

Prerequisites: Fifteen upper division units in the major with an average of B (3.0) or better and consent of instructor. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 501. Translation Workshop (3)

Prerequisites: German 301, 302, and 310. Workshop in translation of literary texts from German to English and English to German.

#### 505. Applied German Linguistics (3)

Prerequisites: German 301 and 302. Linguistic study of modern German; integration of modern linguistic theory with the language classroom.

#### 510. German Phonetics (3)

Prerequisites: German 200A; 200B or 200C; 211. Sounds and intonation of German.

#### 545. German Literature of the Eighteenth Century (3)

Prerequisite: German 310. Reading and discussion of representative works of significant authors and movements of the eighteenth century.

#### 555. German Literature of the Nineteenth Century (3)

Prerequisite: German 310. Reading and discussion of representative works of significant authors and movements of the nineteenth century.

#### 561. German Literature of the Twentieth Century (3)

Prerequisite: German 310. Reading and discussion of representative works of significant authors and movements of the twentieth century.

#### 596. Topics in German Studies (3)

Prerequisite: German 310 (for literary topics) or 505 (for linguistic topics). **Proof of completion of prerequisite required:** Grade report or 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 Refer to the Graduate Bulletin.





# Gerontology

In the College of Health and Human Services

## Faculty

Gerontology is a multidisciplinary program administered through the University Center on Aging. Faculty assigned to teach courses in gerontology are drawn from the Departments of Anthropology, Psychology, Recreation, Parks and Tourism, and Sociology; the School of Social Work; and the Colleges of Arts and Letters, Education, Health and Human Services, and Professional Studies and Fine Arts.

Director: Stanford  
Professor: Stanford  
Lecturer: DuBois

## Offered by Gerontology

Major in gerontology with the B.A. degree in liberal arts and sciences.

Minor in gerontology.

Certificate in applied gerontology (offered only in Extension).

## The Major

Gerontology concerns itself with the study and application of knowledge about the physical, social, and economic conditions of older people. Since the process of aging touches all aspects of human activity, gerontology is multidisciplinary in nature. Gerontology is becoming a major area of research in the biological, behavioral, and social sciences.

Every day there is a net increase of 1,000 Americans 65 years of age and over. This is an increase of more than 3,500,000 elderly persons per year. With this striking increase has come a growing need for more trained professionals to apply new knowledge about the elderly. Such knowledge is needed for planning and developing programs and services which improve the quality of life for older Americans.

Gerontological training and research is an important link in meeting the social, physical, and psychological needs of the elderly. Students of gerontology benefit through the personal understanding of their own aging process. Those wishing to pursue careers in aging will find many exciting opportunities for serving the elderly in a variety of settings.

One of the primary goals of the gerontology program is to provide students with a broad base for comprehensive understanding of the impact of society's changing demographics on every aspect of their social and work lives. It is through research, teaching, and community involvement that faculty members from numerous disciplines provide for the intellectual development of students, the enhancement of community programs, and the assurance of a better quality of life for older people in the community, the state, and the nation.

## Advising

All College of Health and Human Services majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

## Gerontology Major

With the B.A. Degree in Liberal Arts and Sciences  
Major Code: 21043

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in gerontology courses can apply to the degree.

OFFICE: Hepner Hall 203  
TELEPHONE: (619) 594-6989

**Preparation for the Major.** Gerontology 101, 250; Biology 100; Family Studies and Consumer Sciences 135; Health Science 101; Psychology 101; and Social Work 110. (21 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to the section of the catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units to include Gerontology 350, 360, 370, 400A, 400B, 520; Psychology 335; Recreation 580; Social Work 420\*; Sociology 527; and six units selected with approval of the adviser from Anthropology 509; Biology 480; Communicative Disorders 580; Family Studies and Consumer Sciences 335; Gerontology 496 (when appropriate); Health Science 573; and Physical Education 433.

\* Prerequisites waived.

## Gerontology Minor

The minor in gerontology consists of a minimum of 18 units to include Health Science 573, Psychology 335, Sociology 527; and nine units selected from Gerontology 101, 350, 360, 370, 400A, 400B; Anthropology 509; Biology 480; Communicative Disorders 580; Family Studies and Consumer Sciences 496\*; Physical Education 433; Recreation 580; Social Work 120, 420; Sociology 528, 496\*; and Women's Studies 521.

Additional prerequisites may be required for the courses in the minor.

Courses in the minor may not be counted toward the major or the certificate, but may be used to satisfy preparation for the major or general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

\* When relevant.

## Certificate in Applied Gerontology (Offered only in Extension)

This program is designed for persons working in the field of aging as well as those interested in obtaining employment in the aging field. Completion of the certificate program will enable participants to assume greater responsibility by broadening their knowledge of and skill in this specialty area. More specifically, the program is designed to provide the following:

1. A broad knowledge base in the bio-psycho-social aspects of aging.
2. Practical knowledge and skills in the application of this information towards services for older people.
3. Knowledge of government programs and program planning and evaluation techniques.
4. Knowledge of programs and services operating in local areas as well as gaps which exist in local programming.
5. Knowledge and skills needed to function in an advocacy capacity to improve services to the elderly.

### Certificate Requirements:

1. Complete 21 semester units of coursework with a grade point average of 2.0 or better.

2. Complete coursework within four years after admission to the program.

3. Petition the University Center on Aging for the certificate upon completion of 21 semester units.

To be admitted to the program, students are expected to show by previous coursework and/or experience some evidence of potential for completing the academic program. Previous courses in gerontology taken at SDSU or at other universities will be considered for credit toward certification on an individual basis, but not to exceed nine units.

The center is responsible for the coordination of the certificate program in conjunction with the College of Extended Studies. Admission applications may be obtained from the University Center on Aging. Applications may be submitted prior to entering the program or before the completion of nine semester units of coursework.

Students are required to submit an Open University Registration Form each semester to the College of Extended Studies.

Students accepted into the program will be assigned an adviser by the University Center on Aging.

## Required Courses for the Certificate Program

A minimum of three semester units must be selected from each of the following five areas (total of 15 units).

### I. Introduction to Gerontology

Gerontology 101. Introduction to Human Aging (3)

### II. Biological and Health Aspects of Aging

Anthropology 509. Culture and Biological Aging (3)

Biology 480. Biology of Aging (3)

### III. Psychological Aspects of Aging

Psychology 335. Psychology of Adult Development and Aging (3)

### IV. Sociological Aspects of Aging

Gerontology 350. Social Policy and Aging (3)

Sociology 527. Aging and Society (3)

### V. Practicum

Gerontology 400A. Practicum in Gerontology (3)

### Elective Courses

A minimum of six semester units selected from the following:

Gerontology 360. Minority and Ethnic Aging (3)

Gerontology 370. Images of Aging in Contemporary Society (3)

Gerontology 496. The Aging Network (3)

Gerontology 520. An Inside Look at Aging Programs—Program Analysis (3)

Gerontology 596. Advanced Special Topics in Gerontology (1-4)

Health Science 573. Health in Later Maturity (3)

Recreation 580. Leisure and the Aging Process (3)

Women's Studies 521. Life Cycles of Women (3)

## Courses

### LOWER DIVISION COURSES

#### 101. Introduction to Human Aging (3) I, II

Overview of the field of gerontology, including demographic trends, basic theories, concepts and philosophic ideas, social policies, planning issues, and services available to meet the needs and problems of the aged.

#### 250. Intergenerational Issues and the Elderly (3)

Controversial issues surrounding interpersonal relations between the aged and other age groups.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 350. Social Policy and Aging (3) II

Prerequisite: Gerontology 101.

Philosophical and practical gerontological knowledge for the operation of health and human service organizations. Multiprofessional perspective of policies, services, and administrative techniques.

#### 360. Minority and Ethnic Aging (3) I

Prerequisite: Gerontology 101.

Attitudes and cultural values related to aging members of ethnic minorities. Major social and psychological theories on aging as they relate to ethnic minority elderly. Impact of class, economic resources, and health in aging process.

#### 370. Images of Aging in Contemporary Society (3) II

Prerequisite: Gerontology 101.

Images of older persons in our society. Influence of films, newspapers, radio, television, books and magazines, and a wide range of advertising mechanisms.

#### 400A-400B. Practicum in Gerontology (3-3) I, II Cr/NC

Twelve hours of laboratory.

Prerequisites: Gerontology 350, 360, 370, Psychology 335 with a minimum GPA of 2.0.

Integration of theoretical background and practical experience in providing services to elderly. Fieldwork and observation in settings providing services to the elderly. Direct experience in aging projects relevant to their field of interest.

#### 496. Experimental Topics (1-4)

Selected topics. 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.

#### 499. Special Study (1-3)

Prerequisite: Consent of department chair.

Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 520. Analysis of Programs for the Aging (3)

Prerequisite: One upper division course in gerontology.

Major programs in aging that support daily functioning of elderly. Effectiveness of programs in serving today's elderly with attention to ethnic and cross-cultural variations.

#### 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. Maximum credit of six units for any combination of 496, 499, 596 applicable to a bachelor's degree.

# Health Science

In the College of Health and Human Services

## Faculty

Emeritus: Barnes, Fellers, Harper, Kessler, Kitzinger, Sorochan  
Chair: Senn  
Professors: Bender, Burgess, McTaggart, Sleet  
Associate Professors: Atkins-Kaplan, Boskin, Noto, Senn  
Lecturers: Graf, Kreisworth

## Offered by the Department

Major in health science with the B.S. degree in applied arts and sciences.  
Emphasis in community health education.  
Teaching major in health science for the single subject teaching credential in health science.  
Minor in health science.  
Certificate in family life education.

## The Major

Health education is becoming increasingly accepted as the most humane and economical means to good health. Despite the vast array of preventive, therapeutic, and rehabilitative facilities developed by medical science, human health continues to depend largely on translating knowledge into individual behaviors and lifestyles. Education designed to encourage appropriate health behaviors can effectively prevent much suffering and disability. The major purpose of the health science profession is to initiate educational programs which will develop health-positive behaviors in individuals and families.

The health science major is designed to contribute to the personal health and growth of students and to prepare them for entry level positions in health agencies. An emphasis in community health education is available. Preparatory coursework for this interdisciplinary major includes courses in health science, family studies and consumer sciences, psychology, sociology, speech communication, zoology, chemistry, microbiology, and mathematics. The upper division curriculum requires 48 units from health science, biology, educational technology, and social work.

Although career opportunities in health science are variable from year to year and place to place, the long-range predictions of demand for health education professionals are favorable. Types of positions available to health science graduates include positions in governmental agencies, voluntary health agencies, hospitals, and schools.

Health professionals in any of these settings might be involved in such projects as educating the community about current health issues and the latest advances in the medical field.

International health work opportunities are available in the Peace Corps, Project Concern, and other humanitarian organizations.

Positions might also be available with various health related organizations as public information officers.

Career opportunities in the health science profession are particularly good for minority, bilingual, and bicultural persons.

## Health Science Major

With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 12011)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

OFFICE: Hepner Hall 136  
TELEPHONE: (619) 594-5528

## Emphasis in Community Health Education

**Preparation for the Major.** Health Science 101, 190, 290, 292; Biology 120, 120L, 150; Chemistry 100 (or Chemistry 130 for students with previous work in chemistry); Family Studies and Consumer Sciences 107; Psychology 101, 270; Sociology 101; Speech Communication 103. (39 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 305W or 503W with a grade of C (2.0) or better.

**Major.** A minimum of 39 upper division units to include Health Science 401, 402, 406, 490, 497 (six units), 560; Biology 336; Educational Technology 532; and twelve units of electives in health science (Social Work 350 may be substituted for one of the electives).

## Health Science Major

For the Single Subject Teaching Credential  
With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 12011)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under Policy Studies of Teacher Education.

This major may be used by students in policy studies or teacher education as an undergraduate major for the B.S. degree in applied arts and sciences.

**Preparation for the Major.** Health Science 290, 292; Biology 150; Chemistry 100; Family Studies and Consumer Sciences 107; Psychology 101, 270; Sociology 101; Speech Communication 103. (29 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 305W or 503W with a grade of C (2.0) or better.

**Major.** A minimum of 38 upper division units to include Health Science 301, 321, 331, 345, 350, 355, 470, 475, 574, 575; Biology 336; and six units of electives in health science.

## Health Science Minor

The minor in health science consists of a minimum of 15 to 18 units in health science selected from one of two areas:

**Community Health Education:** Health Science 101, 290, 401\*, 470, 561.

**School Health:** Health Science 101, 320 or 321, 331, 475, 574, 575. Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

\* Additional prerequisites required.

## Family Life Education Certificate

The purpose of this certificate program is to prepare students for careers in family life education. The program is designed for individuals working on degrees in child development, health science, and home economics. It also provides a self-improvement opportunity for people seeking employment, promotion, or upward mobility on the job who are not enrolled in degree programs.

Awarding of the certificate requires completion of an approved pattern of five courses (15 units) with a grade of "C" or better in each of the courses to include Family Studies and Consumer Sciences 135, 270\* or 371\*, or Psychology 330\*, Health Science 475, 575; and Biology 307. The course offerings under this program meet the criteria for training and standards of the American Association of Sex Educators and Counselors.

Family Studies and Consumer Sciences 135, 270 or 371 (six units) are applicable to the child development or home economics majors. Health Science 475 and 575 (six units) are applicable to the health science major. Courses in the certificate may not be counted toward the minor.

For further information regarding the Family Life Education Certificate program, consult Lois P. Kessler, Department of Health Science, or Francine Deutsch, School of Family Studies and Consumer Sciences.

\* Indicates course with prerequisites not included in requirements listed above.

## Courses

### LOWER DIVISION COURSES

#### 101. Health and Life Style (3) I, II

Major variables in human health experience with attention to personal health assessment and application of health knowledge to health behavior.

#### 190. Computer Assisted Health Education (3) I, II

Two lectures and three hours of laboratory.  
Prerequisite: Health Science 101.

Health-related applications of the microcomputer. Educational strategies, behavioral changes and administrative applications for the field of health education.

#### 290. Health Education as a Profession (3) I, II

Prerequisite: Health Science 101 or 301.

Health education and its role in the health system. For students with professional interests in health education.

#### 292. Community Health (3) I, II

Community health problems; role of the citizen, the public, and community health agencies in promoting and protecting the health of the community.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 301. Concepts of Health Science (3)

Development and application of concepts in individual, family, and community health. Involvement in health project work. Not open to students with credit in Health Science 101.

#### 320. Health Education for Elementary Teachers (3) I, II, S

The teacher's function in the different aspects of the elementary school health program, with emphasis on the planning and presentation of instructional materials and community resources and relationships.

#### 321. Health Education for Secondary Teachers (2) I, II, S

The teacher's function in the secondary school health program.

#### 331. Crisis Management (3) I, II

Physical and psychological crisis situations, various procedures and techniques in immediate management and follow-up referrals.

#### 345. Safety and Accident Prevention (3) II

Prerequisites: Health Science 292; First Aid and CPR certification required for school health majors and those seeking a single subject teaching credential.

Causes and incidence of accidents with emphasis on role of education, prevention, and injury control.

#### 350. Environmental Health Education (3) II

Environmental hazards of living and working in this modern technological world, including air, noise, land, food, and water pollution.

#### 351. Occupational and Environmental Hazards (3) I

Recognition and prevention of morbidity and mortality in occupational and environmental settings.

#### 353. Sexually Transmitted Diseases (3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences.

Evolution and occurrence of sexually transmitted diseases worldwide, focusing on biological, medical, psychological, sociocultural, and political factors.





**355. Consumer Health (3) I**

Hazards of consumer products from the viewpoint of design and use.

**362. International Health (3) I, II**

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences.

Population dynamics, vital statistics, global disease patterns, and analysis of variations among nations and cultures with respect to health problems and health care services.

**401. Change Process in the Community (3) I, II**

Prerequisites: Health Science 290, Psychology 101, Sociology 101, and declared health science majors or minors.

Attitude formation, behavior change, decision making, perception, motivation, group behavior, etc., and their relationship to the practice of health and human services.

**402. Communications in Health Education (3) I, II**

Prerequisites: Health Science 290, Speech Communication 103.

Development and production of health presentations for group and individual levels; including written, oral, and graphic methods.

**406. Health Education Methodology (3) I, II**

Prerequisite: Health Science 401.

Strategies, techniques, and materials for planning and conducting health education. Applications of learning theory in the development and use of educational methodologies in health education.

**470. Communicable and Noncommunicable Diseases (3) I, II**

Causes, prevention and control of communicable, degenerative and chronic health disorders.

**471. Death Education (3)**

Cultural, psychological, physical and personal aspects of death with emphasis on educational approaches.

**475. Human Sexuality (3) I, II**

Examination of the development of sexual values, attitudes, and behavior from infancy to old age.

**490. Measurement and Evaluation in Health Science (3) I, II**

Prerequisites: Health Science 190; Psychology 270; satisfaction of the Entry-Level Mathematics requirement and the SDSU Mathematics Competency requirement. **Proof of completion of prerequisites required:** Copy of ELM or placement scores or verification of exemption; proof of Cr in Academic Skills 90A or 90B or notification from Academic Skills; grade report or copy of transcript.

Measurement in health science; data gathering techniques; organization; presentation and interpretation of data; computer utilization; basic principles of evaluation of student achievement.

**496. Experimental Topics (1-4)**

Selected topics. 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.

**497. Supervised Field Experience (1-6) I, II Cr/NC**

Prerequisites: Senior standing in Community Health Education emphasis; Health Science 401, 402, and 406.

Supervised practical experience in local health agencies and/or schools. Maximum credit six units.

**499. Special Study (1-3) I, II, S**

Prerequisite: Consent of special study adviser. Individual study. Maximum credit six units.

**UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)**

**521. Health Education for School Nurses (3)**

Prerequisite: Nursing 504.

School nurse's function in different aspects of school health program; emphasis on planning and presentation of health instruction material, community resources and relationships, and disease prevention and health promotion.

**560. Introduction to Public Health (3)**

Prerequisite: Health Science 290.

Philosophy, development, organization, administration, and legal aspects of public health in the United States. Disease prevention and control, health education, and the other functions and activities of official health departments, voluntary agencies, private physicians and others engaged in professional health work.

**561. Health and Medical Care (3) I, II**

Prerequisite: Senior or graduate standing with a major or minor in health education or a closely related area.

Health values, concepts, and attitudes; health products and facilities; hospital care and hospitalization plans; governmental health controls; economic and cultural influences on health and medical care; professional contributions, relationships, and careers; national and international health programs.

**573. Health in Later Maturity (3) I**

An approach to the conservation of human resources, with emphasis on understandings, attitudes, and practices related to health in later maturity. Designed for those with a personal or professional interest in the field.

**574. Habit-Forming Substances (3) I, II**

Tobacco, alcohol, and other drugs; their use, misuse and abuse.

**575. Sex Education (3) II**

Prerequisite: Health Science 475.

Philosophy, current procedures, and materials needed for development of healthy attitudes and scientific knowledge appropriate for the understanding of human sexuality.

**596. Workshop in Health Science (1-3)**

Selected problems in health science are used as a basis for workshop experiences. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596; maximum credit of three units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**GRADUATE COURSES  
Refer to the Graduate Bulletin.**

# Hebrew

In the College of Arts and Letters

**Faculty**

Chair: Webb  
Professor: Bar-Lev

**Offered by the Department of Linguistics and Oriental Languages**

Courses in Hebrew.

Major or minor work in Hebrew is not offered.

**Foreign Language Requirement for the  
B.A. Degree in Liberal Arts and Sciences**

Students electing the study of Hebrew to fulfill the foreign language requirement for the Bachelor of Arts degree in liberal arts and sciences must successfully complete Hebrew 201 or the equivalent level of achievement. The usual sequence of coursework is Hebrew 101, 102, and 201. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

**High School Equivalents**

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high school courses will not count as college credit toward graduation.

Secondary school language courses can be used as follows:

1. The first **two years** of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.
2. The first **three years** of high school level language count as the equivalent of the first two college semesters, although students with fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not receive credit for the first semester college course unless at least five years separate the last high school course and the first college course.
3. **Four years** of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

**Courses**

**LOWER DIVISION COURSES**

All lower division courses in Hebrew are taught in Hebrew.

No credit will be given for Hebrew 101, 102, 201 taken out of sequence.

**100. Hebrew Alphabet (1)**

Prerequisite: Consent of instructor.

Hebrew alphabet: letters, names and pronunciations, the "points"; practice with whole-word reading, as well as pronouncing printed words. Intended for students of Hebrew 101 who have not previously studied the alphabet.

OFFICE: Business Administration 327  
TELEPHONE: (619) 594-5268

**101. Elementary (4) I**

Four lectures and one hour of laboratory.

Beginning reading, writing, and conversational skills. Essentials of grammar. Not open to students who have completed three years of high school Hebrew unless the third course was completed five or more years ago.

**102. Elementary (4) II**

Four lectures and one hour of laboratory.

Prerequisite: Hebrew 101.

Continuation of Hebrew 101. Not open to students who have completed four years of high school Hebrew unless the fourth course was completed five or more years ago.

**201. Intermediate (4) I**

Four lectures and one hour of laboratory.

Prerequisite: Hebrew 102.

Continuation of Hebrew 102. Applications of grammar and reading skills. Additional practice in conversation.

**296. Experimental Topics (1-4)**

Selected topics. 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.

**UPPER DIVISION COURSES  
(Intended for Undergraduates)**

All upper division courses in Hebrew are taught in Hebrew unless otherwise stated.

**304. Hebrew-English Translation (3)**

Prerequisite: Hebrew 201.

Study and practice of intensive reading and translation (Hebrew-English and English-Hebrew), using various Hebrew texts.

**421. Hebrew in the Modern World (3)**

Prerequisite: Hebrew 201.

Reading and discussion of unadapted texts in Hebrew representing various fields of modern professional and intellectual life in Israel; spoken and written communication on a business or professional level.

**450. Advanced Hebrew Grammar (3)**

Prerequisite: Hebrew 201.

Systematic study of Hebrew phonology, orthography, morphology, syntax, lexicon, and history of the language, with discussion of Hebrew language teaching.

**496. Topics in Hebraic Studies (1-4)**

Topics in Hebraic language, literature, culture, 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 eight units.

**499. Special Study (1-3) I, II**

Prerequisite: Consent of instructor.

Individual study. Maximum credit six units.

# History

In the College of Arts and Letters

## Faculty

Emeritus: Hanchett, Munter, Norman, Pincett, Rader, Rohlfleisch, Rueffen, Strong, Webb  
Chair: DuFault

The Nasatir Professor of Modern Jewish History: Baron  
The Dwight E. Stanford Chair in American Foreign Relations: Heinrichs

Professors: Berge, Cheek, Chu, Coox, Cox, Cuniff, Davies, Dunn, Hamilton, Heyman, Hoidal, Kushner, McDean, O'Brien, Peterson, Schatz, Smith, C., Smith, R., Starr, Steele, Stites, Stoddart, Vanderwood, Vartanian

Associate Professors: Bartholomew, Colston, DuFault, Ferraro, Filner, Fiemion, Kornfeld, Oades

Assistant Professors: Colwill, Kittell, Roberts

## Offered by the Department

Master of Arts degrees in history, and a Master of Arts degree for teaching service with a concentration in history.

Major in history with the B.A. degree in liberal arts and sciences.  
Teaching major in history for the single subject teaching credential.

Minor in 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 countries, especially with those in Asia.

## The Major

History is the study of humanity's recorded past. It encompasses almost all aspects of human activity and behavior. The arts and sciences, technology and economics, ideology and social attitudes are all as much a part of history as politics and war.

History is the most universal of the humanities. It is not merely a body of facts to be learned, but is a series of arguments and points of view to be debated. Study of the ideas, attitudes, and actions of peoples in the past helps to sharpen a person's own sense of values, offering moral lessons in the search for a global future of creative achievement and international peace. It also helps to cultivate a more tolerant and compassionate spirit toward peoples whose way of life may be different from one's own.

The excellent training in basic skills and the broad range of information students receive in history courses prepare history majors for

a wide variety of careers in law, government, politics, journalism, publishing, and public history. Teaching at the high school, community college, or university level offers increasing opportunities for history majors in the future.

## Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

## History Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 22051)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in history courses can apply to the degree.

A minor is not required with this major.

**Preparation for the Major.** Twelve units: selected from two of the following sequences: History 100-101; 105-106; 110A-110B; 115A-115B; or 120-121.

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** History 430W with a grade of C (2.0) or better.

**Major.** A minimum of 30 upper division units in history to include History 430W and a minimum of six units in each of three of the following fields: (a) Ancient, Medieval and Early Modern Europe; (b) Modern Europe; (c) United States; (d) Latin America; (e) South, Southeast, and East Asia; (f) Africa and the Middle East; (g) Topical Subjects; plus nine units of electives. It is the student's obligation to determine which courses fulfill his/her field requirements.

## History Major

For the Single Subject Teaching Credential  
With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 22051)

All candidates for a teaching credential must complete all requirements outlined in this section of the catalog under Policy Studies or Teacher Education. For students completing the single subject teaching credential program, no more than 48 units in history courses can apply to the degree.

This major may be used by students in policy studies or teacher education as an undergraduate major for the B.A. degree in liberal arts and sciences.

**Preparation for the Major.** History 100 and 101, or 105 and 106; (6 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** History 430W with a grade of C (2.0) or better.

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**Major.** A minimum of 39 upper division units in history to include History 430W with the remaining units distributed in the following pattern:

**United States:** Twelve units to include History 410A-410B and six units (preferably in sequence) selected from History 537A-537B, 541A-541B (unless used to fulfill California requirement below), 544A-544B, 545A-545B, 546A-546B, 547A-547B, 548A-548B;

**California:** Three units selected from History 541A or 541B;

**Europe:** Twelve units to include History 407A-407B and six units selected from History 500A-500B, 503A-503B, 506, 507, 509, 510A-510B, 511A, 511B, 512A, 512B, 514A, 514B, 517A-517B, 518A-518B, 523A-523B;

**Africa, Asia, Latin America and the Middle East:** Six units selected from History 415A-415B, 420, 421, 473A-473B, 475A-475B, 574;

**Elective:** Three units.

History 490 may be substituted for any one of the courses listed above except History 407A-407B, 410A-410B, 430W, and 541A-541B. Consent of the undergraduate adviser in the History Department is required.

## History Minor

The minor in history consists of a minimum of 18 units in history to include six sequential units in the lower division. Twelve units must be in upper division history, distributed in no more than two of the fields listed under the history major.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## History Honors Thesis

The department offers undergraduates of superior achievement the opportunity to write a history honors thesis leading to special recognition upon graduation. History 490, Senior Honors Thesis, is open to students who rank in the top twenty percent of senior history majors and who have successfully completed History 430W. Interested students should consult the undergraduate adviser in the History Department.

## Courses

### LOWER DIVISION COURSES

#### 100. World History (3)

The growth of civilizations and the interrelationships of peoples of Europe, Asia, Africa, and America to 1650.

#### 101. World History (3)

Modern history from a global perspective, 1650 to the present.

#### 105. Western Civilization (3) (CAN HIST 2)

Development of European culture, thought and institutions from ancient times through the seventeenth century. Not open to students with credit in History 305A.

#### 106. Western Civilization (3) (CAN HIST 4)

Development of modern societies and states to the present day. Not open to students with credit in History 305B.

#### 110A-110B. American Civilization (3-3) (110A: CAN HIST 8; 110B: CAN HIST 10)

Political and social development of the United States, with emphasis on American civilization and ideals. History 110A: From colonial period to 1877. History 110B: Since 1877. Primarily for lower division students. Meets graduation requirement in American Institutions.

#### 115A-115B. Comparative History of the Americas (3-3)

Western hemisphere from ancient times to present, with focus on interactions among European, American Indian, and African-American cultures, institutions, and traditions. History 115A: Ancient American civilizations, European colonial systems, creation of new nations. History 115B: Nations and cultures of the Americas since independence. Meets graduation requirement in American Institutions.

#### 120. Introduction to Asian Civilizations (3)

Development of distinctive cultures, thought, and institutions in Asia.

#### 121. Asian Civilizations in Modern Times (3)

The rise of Asian nations and nationalism with emphasis on the nineteenth and twentieth centuries.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 305A-305B. Sources of Western Civilization (3-3)

Prerequisites: Open only to upper division students, and completion of the General Education requirement in Foundations II.C., Humanities.

Important ideas and attitudes which have shaped Western civilization since ancient times. Emphasis on cultural themes rather than a political continuum. History 305A: Origins of Western civilization through the seventeenth century. History 305B: Western civilization from the seventeenth century to the present. Not open to students with credit in History 105 and 106. May not be used to satisfy requirements for the major or minor.

#### 308. History of Britain (3) II

Prerequisite: Upper division standing.

Survey of British history from its origins to the contemporary age. Emphasis on political institutions, religion, society, economy, the arts. Not open to students with credit in History 408A or 408B; cannot satisfy requirements for the major or minor; offered only in London Semester program.

#### 310A-310B. United States History (3-3)

Survey of American history. History 310A: From colonial period to 1877. History 310B: Since 1877. Designed primarily for students seeking upper division elective or graduation requirement in American Institutions. Not open to students with credit in History 110A or 110B. May not be used to satisfy requirements for the major or minor.

#### 430W. The Writing of History (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; grade report or copy of transcript.

Historical method and research in some aspect of history. (Formerly numbered History 430.)

#### 490. Senior Honors Thesis (3) I, II

Prerequisite: History 430W; open to history majors with senior standing and permission of the honors thesis adviser.

Directed research on a historical topic chosen in consultation with the honors adviser, and completion of a senior honors thesis. Required of students wishing to graduate with a certificate of recognition in history.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of department chair and instructor. Individual study. Maximum credit six units.



### Field (a). Ancient, Medieval, and Early Modern Europe

#### UPPER DIVISION COURSE (Intended for Undergraduates)

##### 496. Issues in History (1-4)

Refer to Field (g). Topical Subjects.

#### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

##### 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 (Intended for Undergraduates)

##### 407A-407B. Modern Europe (3-3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

History of Europe from the Renaissance to the present. Social, economic, and intellectual trends, the development of the nation-state, and the reasons for continental conflict. Semester I: The Renaissance to 1789. Semester II: The French Revolution to contemporary times. Required for the teaching credential in history.

##### 408A-408B. England (3-3)

Political and social history of England from the earliest times to the present day, stressing the origins of American institutions and social patterns. Recommended for majors in English.

##### 496. Issues in History (1-4)

Refer to Field (g). Topical Subjects.

#### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

##### 509. Europe in the Seventeenth Century (3)

Continental Europe from 1600 to the death of Louis XIV. Shift of power from southern and central Europe to northern Atlantic countries; the growth of the state, and the expansion of commerce.

##### 510A-510B. Europe's Age of Enlightenment (3-3)

Semester I: Monarchies and monarchs at peace and war, economic and social transformations; the Baroque and the growth of the Enlightenment from 1690 to 1760. Semester II: Despots, dreamers and enlightened reformers in the last generations of Europe's "Old Regime," 1760-1789.

##### 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.

##### 523A-523B. Modern Britain (3-3)

Semester I: The development of constitutional and social patterns from the Glorious Revolution to the French Revolution, emphasizing the immediate background to the American Revolution. Semester II: From the nineteenth century to the present, including the rise of Parliamentary democracy, imperialism and the Victorian age, and political thought from the Utilitarians to the Fabians.

##### 524. History of Ireland (3) I, II

Social and cultural history of Ireland from earliest historical times to the present, including formation of a national character, literature from the Saga Cycles to the modern literary renaissance, and various movements to achieve independence from Cromwell through World War I.

##### 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 (Intended for Undergraduates)

##### 410A-410B. United States History for Teachers (3-3)

Prerequisite: History 410A is prerequisite to History 410B.

United States history with emphasis on historiography, bibliography, and relationship between philosophy of history and teaching. History 410A: From colonial period to 1877. History 410B: Since 1877. Intended primarily for students in teacher preparation programs. Meets graduation requirement in American Institutions. Not open to students with credit in History 310A-310B.

##### 442A-442B. People Out of Our Past (3-3)

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

A biographical approach to American history. Semester I: Through 1865; John Winthrop, Benjamin Franklin, Thomas Jefferson, P.T. Barnum, Lucy Stone, Frederick Douglass, John Brown, Abraham Lincoln. Semester II: 1865 to present; Mark Twain, Jane Addams, Emma Goldman, Woodrow Wilson, Henry Ford, Eleanor Roosevelt, Martin Luther King, Jr., Bob Dylan, Richard Nixon.

##### 496. Issues in History (1-4)

Refer to Field (g). Topical Subjects.

#### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

##### 530. Colonial America (3)

Settlement and development of the English colonies in North America through the mid-eighteenth century. Contact of cultures, social structure, labor systems, religion, popular values, problems of imperial control, and political culture.

##### 531. The American Revolution (3)

Explores how "revolutionary" the American Revolution was. Causes, dynamics, and results of the American Revolution, from imperial reform and colonial resistance after 1760 through ratification of the Federal Constitution of 1787. Meets the requirements in United States Constitution.

##### 533A. The Jacksonian Era (3)

Territorial expansion, democratic politics, revivalism, and the slavery controversy.

##### 533B. Civil War and Reconstruction (3)

The Civil War and Reconstruction, emphasizing political affairs and the role of Lincoln.

##### 534. The Rise of Modern America, 1868-1900 (3)

Economic, social, political, and intellectual developments from the end of the Civil War to the close of the 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 meets the graduation requirement in American history, institutions and ideals.

##### 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. (Formerly numbered History 538A-538B.)

##### 540. Environmental History of the United States (3)

The relationship of Americans to their environment from colonial times to the present with emphasis on how attitudes and values have affected personal behavior and public policy toward the land.

##### 541A-541B. California (3-3)

Political institutions; social, cultural, economic and intellectual development; international background. Semester I: To 1850; Spanish and Mexican heritage. Semester II: 1850 to the present. History 541B will fulfill the requirement in California state and local government.

##### 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. Meets graduation requirement in American Institutions.

##### 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. Meets graduation requirement in American Institutions.

##### 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. Meets 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 (Intended for Undergraduates)

##### 415A-415B. Latin America (3-3)

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Semester I: Colonial Period to approximately 1825. Semester II: Republican Latin America.

##### 496. Issues in History (1-4)

Refer to Field (g). Topical Subjects.



**UPPER DIVISION COURSES**  
(Also Acceptable for Advanced Degrees)

- 551A-551B. Mexico (3-3)**  
Prerequisite: History 115A-115B or 415A-415B.  
Semester I: Colonial and modern Mexico. Semester II: Emphasis on the twentieth century.
- 552. Brazil (3)**  
Survey of history of Brazil from Portuguese backgrounds to present. Brazil as a tropical society. Recommended for students minoring in Portuguese.
- 553. Caribbean Island Nations (3)**  
History of island nations of Caribbean with emphasis on Cuba, Haiti, and Dominican Republic in the nineteenth and twentieth centuries.
- 554. The Andean Republics of South America (3)**  
The historical development of Chile, Bolivia, Peru and Ecuador with emphasis on race relations and social revolutions in the twentieth century.
- 555. Modernization and Urbanization in Latin America (3)**  
Historical treatment of the phenomena of urbanization and modernization in Latin America with attention to pre-Columbian and Iberian traditions and influence of education, church, military, and foreign investment.
- 556. Guerrilla Movements in Latin America (3)**  
History of sociopolitical conditions which culminated in guerrilla movements in twentieth century Latin America. Use of guerrilla writings and accounts as well as recent Latin American films and U.S. Defense Department counterinsurgency training films.
- 557. History of Latin American Popular Culture and Social Thought (3)**  
Examination of the ways Latin Americans have historically viewed their cultures and 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**  
(Intended for Undergraduates)

- 420. Asia's Dynamic Traditions (3)**  
Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
Emergence and continuing vitality of historic traditions in India, China, and Japan. Topical, comparative survey emphasizing Confucian, Buddhist, and Hindu ideas and the interaction with institutions of family and village. Not open to students with credit in History 120.
- 421. Asia's Emerging Nations (3)**  
Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
Historic changes which have contributed to the rise of modern Japan, India, and China. Topical, comparative approach emphasizing

ways Asian societies have responded to challenges of imperialism, nationalism, revolution, war, and modernization. Not open to students with credit in History 121.

- 422. Southeast Asian and Filipino Experience in America (3)**  
Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors. Prerequisite recommended: Upper division standing.  
History of Filipinos and other Southeast Asians in America from 1898 to present. Topics include changing Southeast Asian-U.S. relations, cultural roots, immigration, comparative community institution and development, racism, discrimination, labor movements, politics, achievements, and contemporary issues.

- 496. Issues in History (1-4)**  
Refer to Field (g). Topical Subjects.

**UPPER DIVISION COURSES**  
(Also Acceptable for Advanced Degrees)

- 561A-561B. Asia and the West (3-3)**  
History of Asian-Western relations with emphasis on China and Japan. Semester I: Through the nineteenth century. Semester II: The twentieth century.
- 562. Civilization of India: The Great Traditions (3)**  
From earliest times to the eighteenth century including Hindu, Buddhist, and Muslim contribution to Indian society, changing political ideas and institutions, and historic trends in art and literature.
- 563. Modern India and Its Neighbors (3)**  
British conquest and colonial policy, Hindu and Muslim nationalism, Gandhi's significance, and the emergence of independent India, Pakistan, and Bangladesh.
- 564A-564B. Southeast Asia (3-3)**  
Semester I: Cultural traditions of Southeast Asian peoples. Indigenous institutions and the influence of China, India, and Islam. Semester II: Southeast Asia in the modern world. Patterns of foreign stimulus and local response among the peoples of the area.

- 565. Revolution and Social Change in Asia (3)**  
Comparative study of contemporary problems in Asia emphasizing how indigenous peoples responded to the challenges of nationalism, reform, revolution, modernization, and 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.

- 568. Communist Party and the Chinese Revolution (3)**  
Mao and the evolution of Chinese Communist Party since 1920, including Red Army, rural soviets, socialist economic and cultural systems, and foreign policy.

- 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**  
(Intended for Undergraduates)

- 473A-473B. Middle Eastern History from the Rise of Islam to the Present (3-3)**  
Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
Semester I: Islamic civilization in the imperial ages, A.D. 600 to A.D. 1600. Semester II: Colonialism and nationalism in the modern Middle East, A.D. 1600 to present.

- 475A-475B. Africa (3-3)**  
Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
Semester I: Civilization of precolonial Africa both north and south of the Sahara from the advent of Islam to 1880. Semester II: Colonial and postcolonial Africa.

- 496. Issues in History (1-4)**  
Refer to Field (g). Topical Subjects.

**UPPER DIVISION COURSE**  
(Also Acceptable for Advanced Degrees)

- 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**  
(Intended for Undergraduates)

- 435. History Through Film (3)**  
Critical analysis of selected historical problems, eras, and events, using film as the principal historical document. Maximum credit six units.

- 440. The Holocaust and Western Civilization (3) I**  
Prerequisites: Upper division standing, and completion of the General Education requirement in Foundations II.C., Humanities.  
German campaign to eliminate Jews during World War II. Anti-Semitic background, both Christian and racial; rise of Adolf Hitler and implementation of "the final solution"; responses by Jews and non-Jews in the Western world.

- 441. Environmental Problems in Historical Perspective (3)**  
Prerequisites: Upper division standing, and completion of the General Education requirement in Foundations II.C., Humanities.  
A comparative study of the role of religious beliefs, social values, economic practices, and political systems in shaping past attitudes, policies, and behavior toward the environment. International in scope. (Formerly numbered History 340.)

- 480. History of Corporations in the Modern World (3) I, II**  
Prerequisites: Upper division standing, and completion of the General Education requirement in Foundations II.C., Humanities.  
Comparative study of the rise and success of the modern corporation in the United States, Japan, Europe, and developing nations.

- 482A-482B. War and Civilization (3-3)**  
The political and social implications of warfare, of the development of military technologies, and of changing concepts of military organization. Semester I: Through the eighteenth century. Semester II: Napoleonic Wars to the present.

- 483. The Quest for Peace (3)**  
Prerequisite: Six units in history.  
Historical analysis of man's efforts to control violence from the Greeks to the present. (Formerly numbered History 483B.)

- 484. The Rise of Modern Science (3)**  
Historical development of scientific ideas from Ancient Greece to the Scientific Revolution of the seventeenth century, concentrating on interaction between science and other aspects of society such as politics, economics, religion, and technology.

- 485. Science and the Modern World (3)**  
From Newton to Einstein, from Darwin to DNA: modern development of interaction between science and other aspects of society such as politics, economics, philosophy, religion, and technology.

- 486. World War II (3)**  
Causes of World War II, its course, and its legacy for today's world.

- 487. Early Jewish History (3) I**  
Prerequisite: Upper division standing.  
From Babylonian exile through Golden Age in Medieval Spain. Social organization and attempts to achieve independent governance; development of ideological structures to enhance survival as a separate group; tensions with outside world and eruption of Messianic movements.

- 488. Modern Jewish History (3) II**  
Prerequisites: Upper division standing, and completion of the General Education requirement in Foundations II.C., Humanities.  
Social, religious, and intellectual life of European Jewry from Middle Ages to present; political struggle for emancipation; anti-Semitism; the Holocaust, and establishment of state of Israel.

- 496. Issues in History (1-4)**  
Examination of selected problems and current issues in history. May be repeated with change of content. Maximum credit six units with change of content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Refer to Class Schedule for specific content.

- |                                               |                                    |
|-----------------------------------------------|------------------------------------|
| A. Ancient, Medieval, and Early Modern Europe | E. South, Southeast, and East Asia |
| B. Modern Europe                              | F. Africa and Middle East          |
| C. United States                              | G. Topical Subjects                |
| D. Latin America                              |                                    |

- 499. Special Study (1-3) I, II**  
Prerequisite: Consent of department chair and instructor.  
Individual study. Maximum credit six units.

**UPPER DIVISION COURSES**  
(Also Acceptable for Advanced Degrees)

- 580. Great Historians and Historical Literature (3) I, II**  
Prerequisite: History 100, 105, or 120.  
History of historical writing and works of major historians. Recommended for history and social science majors.

- 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**  
Refer to the Graduate Bulletin.



# Humanities

In the College of Arts and Letters

OFFICE: Adams Humanities 4231  
TELEPHONE: (619) 594-5186

## Faculty

Chair: Genovese  
Professors: Genovese, Rosenstein, Schaber  
European Studies Chair: Rosenstein

## Offered by the Department of Classics and Humanities

Major in European studies with the B.A. degree in liberal arts and sciences.

Major in humanities with the B.A. degree in liberal arts and sciences.

Minor in European studies.  
Minor in humanities.

## The Majors

**European Studies.** The European studies major approaches Europe as a unique cultural and historical heritage of values, traditions, problems, and resources. This interdisciplinary curriculum draws on faculty from history, foreign languages, philosophy, literature, political science, art, music, economics, and geography.

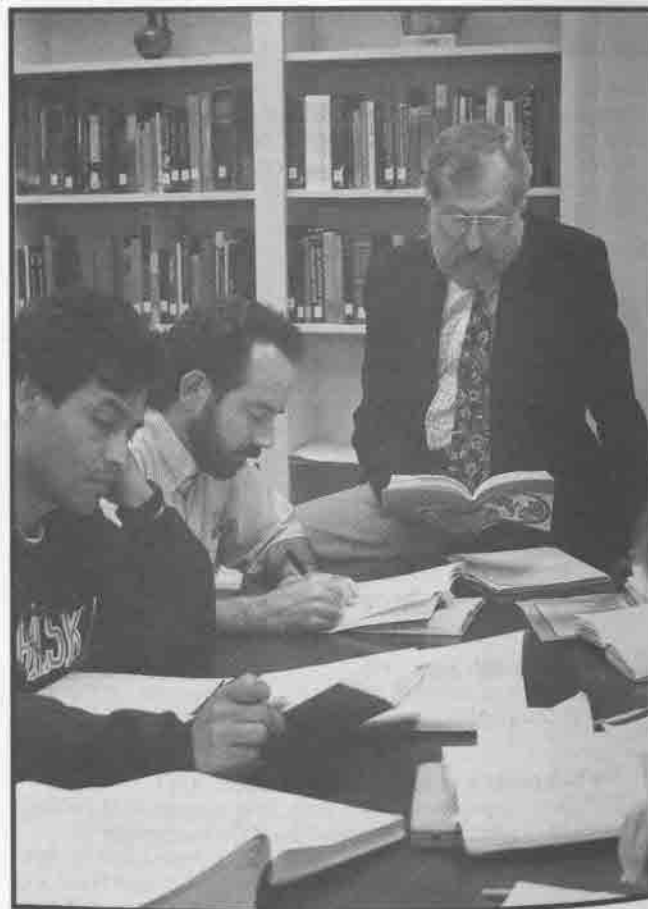
Every major is required to take Humanities 401, 402, 403, and 404. Each course is concerned with a period of European achievements in the visual arts, music, literature, and philosophy. This course sequence should develop critical abilities and provide an integrated understanding of European culture.

European studies is a broadening, humanizing discipline for the nonspecialist. Students may enhance or focus their studies with optional courses within the major or by taking additional courses in other departments. For example, for a career in art sales in Europe, courses in art history, economics, and international business would be appropriate. For a career in the press corps, supplementary courses in expository writing and political science should be taken. Depending upon the focus a major may find a career in international marketing; art, music, or theater criticism; travel, museum and gallery work; fashion; librarianship; international legal or financial consulting; writing, teaching, or research.

**Humanities.** Men and women of all civilizations express themselves in acts and works. Some of these expressions are achievements that will become models for appreciation and study. Whether a symphony or a statue, a temple or a treatise, a work may be interpreted and evaluated according to the criteria and methods of humanistic disciplines such as literature, history, philosophy, art history.

The goal of the humanities major is a holistic and interdisciplinary understanding of the humanity of peoples and their times by studying the accomplishments that portray and articulate best what they value most. In short, humanities shows us what being civilized amounts to. It directs us to the meaning and value of life and helps us create and enjoy a life of our own.

With a background in analysis and communication, with an appreciation of the fine arts, with an awareness of history, ideas, and letters, humanities majors are well prepared for various careers. Particular career opportunities might be found in international press or diplomacy, trade, or finance. Or one might become a cultural consultant in government or the private sector; an editor or writer; an art, music, or theater critic; a travel consultant or a museum curator. Finally, a carefully chosen array of courses will prepare a humanities major for graduate studies and an academic career.



## Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

## European Studies Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 03101)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

**During their last semester, all seniors majoring in European Studies shall submit to the department a portfolio of their scholarly work.**

A minor is not required with this major.

**Preparation for the Major.** History 105, 106; Classics 140; six units from Art 258 or 259, Comparative Literature 210, Economics 101 or 102, English 220, Geography 102, Political Science 101 or 103, (15 units)

**Foreign Language Requirement.** Twelve units in any one of the following languages: French, German, Italian, Latin, Russian, Spanish.

**Upper Division Writing Requirement.** Passing the University Writing Examination or History 430W, English 500W, or English 508W with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units to include Humanities 401, 402, 403, 404; six units in one of the foreign languages listed above; six units selected from Art 371\*, 557\*, 558\*, 573A\*, 573B\*, 574\*, 575\*, Music 351A, 351B, 351C; six units selected from Geography 336, Political Science 301A, 301B, 302; and six units from Anthropology 440\*, History 503A, 503B, 506, 509, 510A, 510B, 511A, 511B, 512A, 512B, Comparative Literature 510, 511, 512, 513, 514, Philosophy 412\*, 413\*, 414\*, 506\*. Majors in European studies must have their program for each semester approved in advance by the adviser.

## Humanities Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 15991)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

**During their last semester, all seniors majoring in Humanities shall submit to the department a portfolio of their scholarly work.**

A minor is not required with this major.

**Preparation for the Major.** History 105 and 106; six units selected from Humanities 101, 130, 140, Classics 140, Women's Studies 205; and six units selected from Comparative Literature 270A, 270B, Philosophy 101, 102, 103; Religious Studies 101. (18 units)

**Foreign Language Requirement.** Twelve units in any one of the following languages: Chinese, French, German, Greek, Hebrew, Italian, Japanese, Latin, Portuguese, Russian, Spanish.

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 500W or 508W with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units to include:

**Classical and European Civilization:** Humanities 401, 402, 403, 404, Classics 340\*.

**Non-Western Civilization:** Six units selected from Humanities 450, 460, Asian Studies 458.

**Genre and Systematic Studies:** Twelve units selected from at least three of the following areas: Art 371, 557, 558, 560, 561, 562, 568, 575, 576, 577; Comparative Literature 470, 490, 561, 562, 563, 571; Drama 460A, 460B; English 493; Music 351A, 351B, 351C, 351D, 351E, 351F; Philosophy 305, 310, 329, 334, 508, 512, 523, 525, 528, 531, 532, 535, 542.

**Interdisciplinary Synthesis:** Three units selected from Humanities 400, 496, 596, 599, Comparative Literature 595, Music 592, Philosophy 541, Religious Studies 360.

## European Studies Minor

The minor in European studies consists of a minimum of 15 units to include Humanities 401, 402, 403, 404, and either Anthropology 440\*, Geography 336 or Political Science 356. Students are urged to take History 105 and 106 to meet their general education requirement.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

\* Indicates course with prerequisites not included in requirements listed above.

## Humanities Minor

The minor in humanities consists of a minimum of 21 units, 12 of which must be upper division, to include Humanities 404\*.

**History of Western Civilization:** Three units selected from Humanities 401, 402, 403, Classics 140, 340.

**Non-Western Civilization:** Three units selected from Humanities 450, 460, Asian Studies 458.

**Genre and Systematic Studies:** Twelve units selected from four of the following areas: Humanities 130, 140, 310, 320, 330, 331, 350, 400, 496, 596, 599; Art 258, 259, 263, 365, 371, 557, 558, 559, 561, 562, 567, 568, 569, 572, 573A, 573B, 574, 575, 576, 577; Classics 310, 320, 330; Comparative Literature 470, 490, 560, 561, 562, 563, 596; Drama 105, 120, 460A, 460B; English 250A, 250B, 260A, 260B, 493, 507; History 105, 106, 305A, 305B, 407A, 407B, 415B, 420, 421, 473A, 473B, 500A, 500B, 503A, 503B, 506, 507; Music 151, 351A, 351B, 351C, 351D, 351E, 351F, 592; Philosophy 411, 412, 413, 414, 506, 507, 541; Religious Studies 300, 301, 305, 340, 360, 506; Spanish 441; Women's Studies 205.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

\* Additional prerequisite required.

## Courses

### LOWER DIVISION COURSES

All classes are conducted in English.

#### 101. Introduction to Humanities (3)

Preliminary investigation: How values and ideals are expressed in literary, artistic, and intellectual achievements of individuals and civilizations throughout the world.

#### 130. The Jewish Heritage (3)

Hebraic and Jewish influences on the arts, literature, philosophy, and religion of Western civilization. Not open to students with credit in Humanities 131.

#### 140. Mythology (3) I, II

Comparative themes and figures from various mythologies of the world. Interpretation of myths, their influence on art, culture, and history.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 310. French Civilization (3) I

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

French civilization from Middle Ages to present. Artistic, intellectual achievements and cultural movements. Not open to students with credit in Humanities 311 or French 421.

#### 320. German Civilization (3) I

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

German civilization of medieval, Renaissance-Reformation, and modern periods. Artistic, intellectual achievements and cultural movements. Not open to students with credit in Humanities 321 or German 420.



**330. Russian Civilization (3) I**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

The major currents and characteristics of Russian culture, as expressed through the centuries in literature, art, philosophy and music from the beginnings to early nineteenth century.

**331. Russian Civilization (3) II**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Modern Russia's cultural development from early nineteenth century (The Golden Age) to the present.

**340. Italian Civilization (3)**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Italian civilization of medieval, Renaissance, Baroque, and modern periods. Artistic, intellectual achievements and cultural movements.

**350. Spanish Civilization (3)**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Spanish civilization of medieval, Renaissance, Baroque, and modern periods. Artistic, intellectual achievements and cultural movements. Not open to students with credit in Spanish 440.

**370. The Humanities and the Modern World (1)  
Irregular Cr/NC**

Lectures open to the public.  
Weekly lectures on literature, language, philosophy and cultural history. Reading and reports required of students enrolled for credit. Maximum credit three units.

**375. Moral Issues of War and Peace (3) II**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Exposition and analysis in an interdisciplinary context of moral questions relevant to pursuing war and maintaining peace.

**400. Civilization Through Travel-Study (1-3)**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Civilization through supervised foreign travel-study tour. Requires lecture attendance, examinations, and written reports. May be repeated with new content. Maximum credit six units.

**401. The Medieval Heritage (3) I**

Prerequisites: History 105 or 305A, and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

European civilization of the Middle Ages. Artistic and intellectual achievements and cultural movements of the Romanesque and Gothic periods. (Formerly numbered Humanities 401A.)

**402. The Renaissance (3) II**

Prerequisites: History 105 or 305A, and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

European civilization of the humanistic Renaissance. Artistic and intellectual achievements and cultural movements from the early Renaissance through the Reformation and Mannerism. (Formerly numbered Humanities 401B.)

**403. The Baroque and the Enlightenment (3) I**

Prerequisites: History 106 or 305B, and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

European civilization of the seventeenth and eighteenth centuries. Artistic and intellectual achievements and cultural movements: Baroque and Rococo, Enlightenment and Neoclassicism. (Formerly numbered Humanities 402A.)

**404. The Modern European Heritage (3) II**

Prerequisites: History 106 or 305B, and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Modern European civilization. Artistic and intellectual achievements and cultural movements: Romanticism, Realism, Naturalism, Impressionism, Symbolism, Surrealism, Expressionism, Existentialism. (Formerly numbered Humanities 402B.)

**450. Arab-Islamic Civilization (3)**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Interdisciplinary survey of Islamic civilization, emphasizing Muslim religion, philosophy, literature, and the arts from Muhammad to the present. (Formerly numbered Humanities 157 and 457.)

**460. African Civilizations (3)**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Interdisciplinary survey of sub-Saharan African civilizations, emphasizing religion, literature, and the arts from ancient times to the present. (Formerly numbered Humanities 158 and 458.)

**496. Topics in Humanities (3)**

Selected topics in literature and the arts. Comparative themes and critical approaches. 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 six units.

**UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)**

**596. Topics in Humanities (1-3)**

Prerequisite: Upper division standing and consent of instructor.

Special topics on selected aspects of civilization from an 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 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.

**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.

# Industrial Technology

In the College of Professional Studies and Fine Arts

OFFICE: Engineering 208  
TELEPHONE: (619) 594-6813

**Faculty**

Emeritus: Anderson, Irgang, McLoney, McMullen, Rasmussen, Thiel

Chair: Bailey, G.D.

Professors: Bailey, G.D., Dirksen, Guentzler, Hammer

Associate Professors: Bailey, G.W., Marsters, McEwen

Lecturer: Hutchinson

**Offered by the Department**

Major in industrial technology with the B.S. degree in applied arts and sciences.

Teaching major in industrial technology for the single subject teaching credential in industrial and technology education.

Minor in industrial technology.

**The Major**

The primary objective of the industrial technology major is to offer a program designed to provide: 1) academic preparation in technical and theoretical foundations of technology; 2) an understanding of industrial systems, and 3) the technical skills required for potential careers in industrial supervision or management. A secondary objective of the program is to prepare students for the single subject teaching credential in industrial and technology education.

Students choosing professional careers in this major are typically involved with 1) the application of significant theories, concepts and principles found in the humanities, social and behavioral sciences (including communications), physical sciences, and mathematics; and 2) the application of concepts and skills derived from a variety of technical disciplines such as materials and production processes, industrial management and human relations, communications, electronics, graphics, computer assisted drafting, polymers, energy, and transportation.

The major offers professional preparation for challenging and self-fulfilling careers in a variety of settings and capacities. Opportunities for rewarding positions are available for women as well as men. Students can broaden their career possibilities by complementing their major with carefully selected electives and a minor in a discipline relevant to their specific interests. In addition, invaluable experience can be gained from internships, cooperative education programs and work experience.

Individuals seeking careers in industry may choose from a wide variety of technical and managerial positions in such areas as computer, electronic or polymer technology or manufacturing production and management. Upon completion of the program, students are prepared for positions as an operations analyst, associate engineer, product assurance engineer, quality control engineer, purchasing manager, director of facilities, planner/estimator, plant engineer, OSHA coordinator, project manager, manufacturing engineer, production design engineer, industrial sales, production supervisor, process engineer, applications engineer, inspection coordinator, operations planning coordinator, systems engineer, tool and production planner, and engineering supervisor.

**Industrial Technology Major**

With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 08394)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

**Specialization in General Industrial Technology**

**Preparation for the Major.** Industrial Technology 121, 161, 200, to be taken at the beginning of the major; six units selected from Industrial Technology 115, 131, 140, 151, 171, 181; Accountancy 201; Chemistry 100 or higher; Economics 101, 102; Information and Decision Systems 180; Mathematics 119, 120, 140; and Physics 107 or higher. (44 units)

**Upper Division Writing Requirement.** Passing Industrial Technology 396W with a grade of C (2.0) or better.

**Major.** A minimum of 46 upper division units to include Industrial Technology 320, 361, 396W, 498A, 498B; Information and Decision Systems 302, 360; Management 350; and 18 upper division units in industrial technology selected from two of the following technical areas: plastics, drafting, metals, photography, woodworking, electronics, power, or graphic arts. Six units of electives will be from the technical areas listed and may include up to six units of Industrial Technology 496 or 499. After approval by the major adviser, the student must file a curriculum plan with the Evaluations Office.

**Specialization in Visual Communications**

**Preparation for the Major.** Industrial Technology 121, 140, 161, 181, 200; Accountancy 201; Chemistry 100 or higher; Economics 101, 102; Information and Decision Systems 180; Mathematics 119, 120, 140; and Physics 107. (44 units)

**Upper Division Writing Requirement.** Passing Industrial Technology 396W with a grade of C (2.0) or better.

**Major.** A minimum of 46 upper division units to include Industrial Technology 320, 341, 381, 396W, 444, 482, 498A, 498B, 542, 583; Information and Decision Systems 302, 360; Management 350. Six units of electives from the following technical areas: plastics, drafting, metals, woodworking, electronics, or power; may include Industrial Technology 496 and/or 499. After approval by the major adviser, the student must file a curriculum plan with the Evaluations Office.

**Industrial Technology Major**

For the Single Subject Teaching Credential  
With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 08394)

All candidates for a teaching credential in industrial and technology education must complete all requirements as outlined in this section of the catalog under Policy Studies or Teacher Education.

This major may be used by students in policy studies or teacher education as an undergraduate major for the B.S. degree in applied arts and sciences.



**Preparation for the Major.** Industrial Technology 121, 161, 200, to be taken at the beginning of the major; six units selected from Industrial Technology 115, 131, 140, 151, 171, 181; Accountancy 201; Chemistry 100 or higher; Economics 101, 102; Mathematics 119, 120, 140; and Physics 107 or higher. (41 units)

**Upper Division Writing Requirement.** Passing Industrial Technology 396W with a grade of C (2.0) or better.

**Major.** A minimum of 46 upper division units to include Industrial Technology 320, 361, 396W, 492; 27 upper division units in industrial technology selected from three of the following technical areas: plastics, drafting, metals, photography, woodworking, electronics, power, or graphic arts; and seven additional units selected from Industrial Technology (may include 496, 498A, 498B, 499), Health Science 321, Teacher Education 454. After approval by the major adviser, the student must file a curriculum plan with the Evaluations Office.

### Industrial Technology Minor

The minor in industrial technology consists of 24 units in industrial technology to include Industrial Technology 121, 200; six units selected from Industrial Technology 115, 131, 140, 151, 161, 171, 181; and 12 upper division units to include six units in each of two of the following fields: industrial drawing, metalworking, plastics, woodworking, electronics, power technology, graphic arts, and photography.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

### Certificate

#### Vocational Rehabilitation Therapy

Students may complete the academic and clinical requirements leading to the Vocational Rehabilitation Therapy certificate issued by the Veterans Administration of the United States Government. This certification requires the completion of a bachelor's degree with an industrial technology major and 280 hours of clinical training in a veterans hospital. Consult an adviser in the Department of Industrial Studies for more detailed information.

### Courses

#### LOWER DIVISION COURSES

##### 115. Industrial Plastics (3) I, II

Six hours of laboratory.  
Production methods, mechanical and physical properties; composition of plastics. The basic processes: molding, casting, thermoforming, reinforcing and foaming. (Formerly numbered Industrial Arts 115.)

##### 121. Principles of Industrial Drawing (3) I, II

Six hours of laboratory.  
Parallel and perspective projection; emphasis on sketching technique for engineering, science, and technology. Orthographic and axonometric projection, conventions, and standards. (Formerly numbered Industrial Arts 121.)

##### 131. Industrial Metalworking (3) I, II

Six hours of laboratory.  
Exploration of basic materials and methods employed by industry to produce metal products. The attainment of knowledge and skills involved in the primary fabrication techniques of sheet metal, bench metal, art metal, foundry, forging, machining, and welding. (Formerly numbered Industrial Arts 131.)

##### 140. Introduction to Photography (3) I, II

Six hours of laboratory.  
Photographic optics and chemistry; nature of light and image formation; photographic emulsions, exposure and development; composition and lighting. Provides fundamentals for advanced courses in

technical, commercial, creative and other areas of photography. Not open to students with credit in Journalism 350. (Formerly numbered Industrial Arts 140.)

##### 151. Industrial Woodworking (3) I, II

Six hours of laboratory.  
Introduction to wood technology and ecology; safe practices: fasteners; adhesives; abrasives; science of working with wood. (Formerly numbered Industrial Arts 151.)

##### 161. DC and AC Circuit Analysis (3) I, II

Six hours of laboratory.  
Prerequisite: Mathematics 140 or two years of high school algebra. Planning, designing, constructing, and experimenting to develop skills and acquire knowledge in the electronics field. Basic principles, their application to modern electronic equipment, and correct use of test equipment. (Formerly numbered Industrial Arts 161.)

##### 171. Power Mechanics (3) I, II

Six hours of laboratory.  
Introduction to various forms of power transmission. Emphasis on small internal combustion engines, alternative fuel, consumer product research, and automotive preventive maintenance. (Formerly numbered Industrial Arts 171.)

##### 181. Introduction to Graphic Communications (3)

Six hours of laboratory.  
Visual communications, design technology, theory of color development, papermaking and typography, and photographic reproduction. (Formerly numbered Industrial Arts 181.)

##### 200. Introduction to Contemporary Industry and Technology (3) I, II

Development of modern industry and technology with emphasis on historical and recent industrial changes, and the problems resulting from our technological society. (Formerly numbered Industrial Arts 200.)

#### UPPER DIVISION COURSES (Intended for Undergraduates)

##### 303. Manufacturing Materials and Processes (3)

Prerequisites: Industrial Technology 115, 121, 131.  
Fundamentals of manufacturing materials and processes with emphasis on economical production.

##### 305. Hydraulics and Pneumatics for Manufacturing (3) I

Prerequisites: Chemistry 100 or higher, Physics 107.  
Basic hydraulics and pneumatic principles, circuit design, and application for manufacturing processes.

##### 306. Application of Manufacturing Control Systems (3) I

Prerequisites: Industrial Technology 121 and 161.  
Control of automated processes and associated electro-mechanical hardware components.

##### 315. Plastics Product Design and Development (3) I

Six hours of laboratory.  
Prerequisite: Industrial Technology 115.  
Production systems for plastics manufacturing based on properties of thermoplastics, thermosetting plastics, and composite materials; use of models, master models and prototypes in product design and development. (Formerly numbered Industrial Arts 315.)

##### 320. Computer Assisted Drafting (3) I, II

Six hours of laboratory.  
Prerequisite: Industrial Technology 121 or Mechanical Engineering 190.  
Capabilities of CAD software for the personal computer. Micro- and macroframe units compared. Emphasis on software systems such as VERSA CAD, AUTO CAD, CAD-PACK. (Formerly numbered Industrial Arts 320.)

##### 321. Technical Drawing for Industry (3) I, II

Six hours of laboratory.  
Prerequisite: Industrial Technology 121.  
Technical drawing skills, including board and CAD, used in industry. Planning and layout of working drawings using ANSI standards with emphasis on dimensioning and geometric tolerancing. (Formerly numbered Industrial Arts 321.)

##### 331. Machine Tool Processes (3) II

Six hours of laboratory.  
Prerequisite: Industrial Technology 131.  
Study of machine tools as a manufacturing medium emphasizing precision measurement, standards, tolerance and inspection methods. (Formerly numbered Industrial Arts 331.)

##### 341. Photographic Sensitometry (3) II

Six hours of laboratory.  
Prerequisite: Industrial Technology 140.  
Technical aspects of photography: sensitometry, the densitometer, advanced exposure and development theory, the zone system, specialized development and printing techniques, application of quality control in the photographic process. (Formerly numbered Industrial Arts 341.)

##### 351. Machine Woodworking (3)

Six hours of laboratory.  
Prerequisite: Industrial Technology 151.  
Experience in the use of selected woodworking machines which offer opportunities for the development of construction activities in wood. Emphasis on creative design and sound safety practices. (Formerly numbered Industrial Arts 351.)

##### 361. Transistor Circuits and Applications (3) I, II

Six hours of laboratory.  
Prerequisite: Industrial Technology 161 or Physics 196.  
Solid state circuits through design and experimentation. Application of solid state principles for use in control, communication, and computing circuits. (Formerly numbered Industrial Arts 361.)

##### 371. Power Systems (3) I

Six hours of laboratory.  
Prerequisite: Industrial Technology 171.  
Sources of power, power transmission and utilization. Emphasis on internal combustion engine design to include theory of operation, system design, and mathematical principles. (Formerly numbered Industrial Arts 371.)

##### 381. Image Development and Assembly (3)

Six hours of laboratory.  
Prerequisite: Industrial Technology 181.  
Advanced elements of visual design, theory of computerized typesetting and desktop publishing, theory of line and halftone photography, color separation and scanning, and multicolor image assembly. (Formerly numbered Industrial Arts 381.)

##### 396W. Industrial Reporting and Documentation (3) I, II

Prerequisite: Satisfies University Upper Division Writing requirement for students who have completed 60 units, fulfilled the Writing Competency requirement, and completed the General Education requirement in Written Communication. **Proof of completion of prerequisites required:** Grade report or copy of transcript.  
Technical writing specifically designed for the discourse skills of the industrial community. Included are ECOs, operational manuals, equipment specifications, observation reports, and QA traceability.

##### 416. Thermoplastics (3) II

Six hours of laboratory.  
Prerequisites: Industrial Technology 115 and Chemistry 100 or higher.  
Composition and selection of materials; evaluation of physical and

mechanical properties of various thermoplastics; special techniques for processing and production of thermoplastics. (Formerly numbered Industrial Arts 416.)

##### 422. Architectural Drafting (3) I

Six hours of laboratory.  
Prerequisite: Industrial Technology 121.  
Development of architectural drawing skills and understanding of contemporary residential design. (Formerly numbered Industrial Arts 422.)

##### 432. Welding Processes and Procedures (3) II

Six hours of laboratory.  
Prerequisite: Industrial Technology 131.  
A study of the basic welding processes with emphasis on physical principles and properties, inspection methods and equipment operations. (Formerly numbered Industrial Arts 432.)

##### 443. Problems in Photography (3) II

Six hours of laboratory.  
Prerequisite: Industrial Technology 341.  
Research in technical and practical areas of photographic materials and processing as they relate to commercial, creative, and other areas of photography. (Formerly numbered Industrial Arts 443.)

##### 444. Color Photography (3) I

Six hours of laboratory.  
Prerequisite: Industrial Technology 341.  
Theory and practical applications of color photographic materials and processes. Techniques of exposure, composition, and lighting of illustrative industrial and commercial subjects. (Formerly numbered Industrial Arts 444.)

##### 452. Wood Manufacturing Applications (3)

Six hours of laboratory.  
Prerequisite: Industrial Technology 351.  
Course designed to increase professional skills, craftsmanship, advanced technical skills in equipment maintenance, patternmaking, design analysis, and upholstery. (Formerly numbered Industrial Arts 452.)

##### 462. Fabrication of Electronic Equipment (3) II

Six hours of laboratory.  
Prerequisite: Industrial Technology 161.  
Fabrication techniques for manufacturing electronic equipment. Includes printed circuit layout, chemical milling, thermal considerations, schematic documentation, safety, and exterior finishing. (Formerly numbered Industrial Arts 462.)

##### 464. Basic Digital Computers (3) I

Six hours of laboratory.  
Prerequisite: Industrial Technology 361.  
Functions of circuitry as applied to switching, timing and pulse circuits. Basics of computer digital logic. Machine programming. (Formerly numbered Industrial Arts 464.)

##### 472. Power System Diagnosis (3) II

Six hours of laboratory.  
Prerequisite: Industrial Technology 371.  
Theory and application of various types of diagnostic testing equipment, emphasis on computer controlled engines, and power system analysis. (Formerly numbered Industrial Arts 472.)

##### 482. Graphics Reproduction and Packaging (3)

Six hours of laboratory.  
Prerequisite: Industrial Technology 181.  
Advanced graphics communication technologies affecting print imagery, reproduction technology, consumer product development, print finishing and packaging. (Formerly numbered Industrial Arts 482.)



**492. Teaching Methods in Industrial and Technology Education (3) II**

Study of methodology needed to teach industrial subjects. It is recommended that this course be taken prior to student teaching. (Formerly numbered Industrial Arts 492.)

**496. Experimental Topics (1-4)**

Selected topics. 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. (Formerly numbered Industrial Arts 496.)

**498A-498B. Senior Project (2-2) I, II**

Prerequisite: Consent of instructor.  
A prearranged and supervised investigation of a research project selected from topics in the major. A single project will be completed in this two-course sequence. Results will be presented in an oral and written report. (Formerly numbered Industrial Arts 498A-498B.)

**499. Special Study (1-3) I, II**

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units. (Formerly numbered Industrial Arts 499.)

**UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)**

**505. Facilities Planning (3) II**

Prerequisites: Industrial Technology 121, 200, 320.  
Space considerations, flow of materials, materials handling, specifying process equipment, and overall planning of industrial facilities with regard to theoretical principles of CIM, FMA, and JIT.

**517. Thermosetting Polymers and Composites (3) II**

Six hours of laboratory.  
Prerequisites: Industrial Technology 115 and Chemistry 100 or higher.  
Composition and selection of materials; evaluation of physical and mechanical properties; and product development and manufacturing. (Formerly numbered Industrial Arts 517.)

**523. Technical Presentations (3) II**

Six hours of laboratory.  
Prerequisite: Industrial Technology 320.  
Projection theory and analysis of presentation drawings for engineering and illustration. Includes application of axonometric and perspective projections, rendering, and shading techniques in product design. (Formerly numbered Industrial Arts 523.)

**533. Applied Metal Forming Operations (3) I**

Six hours of laboratory.  
Prerequisite: Industrial Technology 131.  
Theory of conventional and high energy industrial forming processes augmented with laboratory forming experiences. (Formerly numbered Industrial Arts 533.)

**542. Commercial/Industrial Photography (3) I**

Six hours of laboratory.  
Prerequisites: Industrial Technology 140 and upper division standing.  
Theory and laboratory techniques, composition and lighting with emphasis on large format photography. Industrial applications, architecture, illustrative, advertising, portraiture, and commercial photography. (Formerly numbered Industrial Arts 542.)

**553. Residential Building Construction (3)**

Six hours of laboratory.  
Prerequisite: Industrial Technology 351.  
Residential building construction principles encompassing the study of state and national building codes, foundation systems, framing techniques, and waterproofing applications. Estimating labor and material costs. (Formerly numbered Industrial Arts 553.)

**563. Industrial Control Circuits (3) II**

Six hours of laboratory.  
Prerequisites: Industrial Technology 464 and Information and Decision Systems 180.  
Analysis, theory, and application of electronic circuits used to interface digital computers to automated manufacturing equipment. Includes methods of feedback; ADAC; DAC; and sampling techniques. (Formerly numbered Industrial Arts 563.)

**573. Power Systems Technology (3) II**

Six hours of laboratory.  
Prerequisite: Credit or concurrent registration in Industrial Technology 371.  
Power systems and technological innovations in education and power related industries. Emphasis on product development, testing, and reporting. (Formerly numbered Industrial Arts 573.)

**583. Graphics Management and Marketing (3)**

Six hours of laboratory.  
Prerequisite recommended: Industrial Technology 381.  
Printing business practices, publication, and brokerage guidelines, graphics management and organizational theory, computer based bidding and estimating, and introduction to consumer packaging and development. (Formerly numbered Industrial Arts 583.)

**596. Experimental Topics in Industrial Technology (1 or 2)**

Prerequisite: Consent of instructor.  
Individual laboratory work on complex projects on an experimental basis. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree. (Formerly numbered Industrial Arts 596.)

**GRADUATE COURSES  
Refer to the Graduate Bulletin.**

# Information and Decision Systems

In the College of Business Administration

OFFICE: Student Services 3375  
TELEPHONE: (619) 594-5316

A Member of the American Assembly of  
Collegiate Schools of Business.

**Faculty**

Emeritus: Archer, Crawford, Gibson, Langenbach, LeBarron, Spaulding, Straub  
Chair: Lackritz  
Professors: Beatty, Chen, Flatley, Galbraith, Hatch, Koster, Lackritz, Penrose, Raafat, Sherrard, Sondak, Vik  
Associate Professors: Feeney, Lyons-Lawrence, Norman, Schlesinger  
Assistant Professors: Addo, Easton, A., Easton, G., Yang  
Lecturer: Fisher

**Offered by the Department**

Master of Science degree in business administration.  
Master of Business Administration.  
Major in decision systems with the B.S. degree in business administration.  
Major in information systems with the B.S. degree in business administration.  
Major in production and operations management with the B.S. degree in business administration.  
Teaching major in business for the single subject teaching credential.  
Minor in decision systems.  
Minor in information systems.  
Minor in production and operations management.

**Admission to the Major**

The undergraduate business administration program at San Diego State University is structured such that students desiring a business administration major are first admitted to the prebusiness administration major for their first two years of university work. During these first two years students should complete general education courses and a common core of nine lower division preparation for the business major courses — Accountancy 201, Financial Accounting Fundamentals; 202, Managerial Accounting Fundamentals; Finance 140, Business Law; Economics 101, Principles of Economics (Macro); Economics 102, Principles of Economics (Micro); Information and Decision Systems 180, Principles of Information Systems; Information and Decision Systems 290, Business Communication (not required for accounting majors); Mathematics 119, Elementary Statistics for Business; and Mathematics 120, Calculus for Business Analysis. These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C. All students must achieve a passing score on a quantitative competency examination. Students must have completed 56 college units.

**Supplemental admissions criteria must be met before students may declare an upper division major and be eligible for upper division courses.** For current information concerning admissions criteria and procedures, contact the Undergraduate Business Advising Office in the College of Business Administration.

Also, before enrolling in upper division courses offered by the College of Business Administration, students must be competent in the operation of personal computers, including word processing and spreadsheets. These skills are required in upper division business courses.

Business administration majors may not complete a minor in the College of Business Administration.

**Retention Policy**

The College of Business Administration is concerned that each individual upper division student makes reasonable academic progress toward earning a degree. To this end, the College will counsel students who have earned less than a "C" (2.0) average each semester. Further, such students will be warned that continued poor performance may result in their removal from any business major.

**Transfer Credit**

**Lower Division:** Courses clearly equivalent in scope and content to San Diego State University courses required for minors or as preparation for all business majors will be accepted from regionally accredited United States institutions and from foreign institutions recognized by San Diego State University and the College of Business Administration.

**Upper Division:** It is the policy of the San Diego State University College of Business Administration to accept **upper division transfer credits** where (a) the course content, requirements, and level are equivalent to San Diego State University courses and (b) where the course was taught in an American Assembly of Collegiate Schools of Business accredited program. Exceptions require thorough documentation evidencing the above standards.

**The Majors**

Good business decisions require good information. The purpose of an information system is to provide management with the information that is essential to decision making and to assist in interpreting that information.

**Decision Systems.** Decision systems, which has often been referred to as management science, quantitative methods, or operations research, continues to occupy an important role in many types of organizations. Most large organizations employ specialists with analytic skills beneficial to the decision-making process, and well-trained decision scientists are increasingly in demand. Decision scientists have backgrounds in decision systems, quality and productivity, quantitative methods related to business research, research design, statistical modeling, regression analysis, and hypothesis testing.

Students graduating with a major in decision systems can be expected to occupy jobs in both the public and private sectors; in major industries such as aerospace, computers, electronics, and other highly technical fields; in government; and in research settings.

**Information Systems.** Students interested in using computers to solve business problems and in devising new and more efficient solutions, should consider a major in information systems. The major is intended to prepare students for their first job in information systems, which is normally as a systems analyst. The systems analyst studies problems, designs solutions, and implements those solutions using computer hardware and software. The major will also prepare students for continued growth as a manager in information systems.

The employment outlook for information systems specialists is currently very good. Positive projections continue into the future. Many graduates who major in information systems assume the following positions: systems analysts plan the activities necessary to solve a business problem by structuring the problem in logical form, identifying the data needed, and specifying the procedures to be followed in programming the data processing; information systems specialists represent various departments of a business in assuring that each



department's information processing needs are provided for effectively and efficiently; programmers and analysts plan and write computer programs to process business information; computer center managers direct the work of information processing in a company; and technical marketing specialists sell and coordinate the installation of computer systems.

Typical places of employment for information systems graduates include large businesses, government agencies, computer manufacturers, universities, and independent computer service organizations.

**Production and Operations Management.** Production and operations management majors develop the technical knowledge and skills necessary for professionals in production, production management, and operations management. Most organizations of any significant size have a departmental unit which performs this specialized function. Demand for well-trained production managers has steadily increased due to the need for more technical expertise in our changing sociotechnical world. Production and operations management specialists must have a background in material requirements planning, forecasting, aggregate planning, facility layout, scheduling, inventory control, quality control, and computer operations and capabilities.

Students graduating with a major in production and operations management would typically find employment in positions such as production manager, production specialist, operations manager, distributions specialist, operations specialist, or other related positions. Work settings include major manufacturing, financial service, and service industries.

## Decision Systems Major

With the B.S. Degree in Business Administration  
(Major Code: 05072)

**Preparation for the Major.** Information and Decision Systems 180, 290; Accountancy 201, 202; Economics 101, 102; Finance 140; Mathematics 119 or Economics 201; Mathematics 120, or 150, or 155 and 156. (27-29 units)

These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C. **Additional progress requirements must be met before a student is admitted to an upper division major.**

**Upper Division Writing Requirement.** Information and Decision Systems 396W with a grade of C (2.0) or better.

**Major.** Forty-five upper division units consisting of Information and Decision Systems 301, 302, 306, 366, 385, 396W, 407, 463, 464, 465; Finance 323; Management 350, 405; Marketing 370; and three units selected from Information and Decision Systems 360, 406, 408, 461, 462, 480; Economics 307; Finance 321, 425; Management 452, 458; Mathematics 362; and Psychology 470.

A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of economics and business administration. A maximum of six lower division units of accountancy courses may be used to satisfy degree requirements.

Students must complete all upper division courses in the major within seven years prior to graduation. Students who will have completed any of those courses more than seven years before the projected date of graduation must contact the department chair for information about ways to certify knowledge of current course content. Of the 128 units required for the degree, at least 60 units must be at the upper division level. A "C" average is required in the courses stipulated here for the major.

## Information Systems Major

With the B.S. Degree in Business Administration  
(Major Code: 07021)

**Preparation for the Major.** Information and Decision Systems 180, 280, 290; Accountancy 201, 202; Finance 140; Economics 101 and 102; Mathematics 120 or 150; and Economics 201 or Mathematics 119. (30-32 units)

These prerequisite courses, except for Information and Decision Systems 280, may not be taken Cr/NC; the minimum grade in each

class is C, except for Information and Decision Systems 280. **Additional progress requirements must be met before a student is admitted to an upper division major.**

**Upper Division Writing Requirement.** Information and Decision Systems 396W with a grade of C (2.0) or better.

**Major.** Forty-eight upper division units consisting of Information and Decision Systems 301, 302, 306, 383 or 384, 385, 396W, 406, 480, 492; Finance 323; Management 350, 405; Marketing 370; six units selected from Information and Decision Systems 407, 408, 483, 491, and three units selected from Information and Decision Systems 360, 383, 384, 391, 407, 408, 463, 465, 482, 483, 491.

A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of business administration and economics. A maximum of six lower division units of accountancy courses may be used to satisfy degree requirements.

Students must complete all upper division courses in the major within seven years prior to graduation. Students who will have completed any of those courses more than seven years before the projected date of graduation must contact the department chair for information about ways to certify knowledge of current course content. Of the 128 units required, at least 60 units must be at the upper division level. A "C" average is required in the courses stipulated here for the major.

## Production and Operations Management Major

With the B.S. Degree in Business Administration  
(Major Code: 05064)

**Preparation for the Major.** Information and Decision Systems 180, 290; Accountancy 201, 202; Economics 101, 102; Finance 140; Mathematics 119 or Economics 201; Mathematics 120. (27 units)

These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C. **Additional progress requirements must be met before a student is admitted to an upper division major.**

**Upper Division Writing Requirement.** Information and Decision Systems 396W with a grade of C (2.0) or better.

**Major.** Thirty-six to thirty-seven upper division units consisting of Information and Decision Systems 301, 302, 360, 385, 461, 462, Finance 323; Management 350, 405; Marketing 370; and six to seven units selected from Information and Decision Systems 306, 366, 388, 407, 463, 464, 465, Accountancy 302; Management 452, 453; Mechanical Engineering 546\*.

A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of economics and business administration. A maximum of six lower division units of accountancy courses may be used to satisfy degree requirements.

Students must complete all upper division courses in the major within seven years prior to graduation. Students who will have completed any of those courses more than seven years before the projected date of graduation must contact the department chair for information about ways to certify knowledge of current course content. Of the 128 units required for the degree, at least 60 units must be at the upper division level. A "C" average is required in the courses stipulated here for the major.

\* Additional prerequisites required.

## Business Major

For the Single Subject Teaching Credential  
With the B.S. Degree in Business Administration

All candidates for the single subject teaching credential in business must complete all requirements for the applicable specialization as outlined in this section of the catalog under Policy Studies or a Teacher Education. Students must complete the requirements of a major in one of the five departments within the College of Business Administration. In consultation with the single subject credential

adviser in the College of Business Administration, undergraduate students must develop programs which fulfill the State credential requirements. All undergraduate majors must demonstrate office skills proficiency. Finance 589, Personal Financial Planning, is required of all teaching credential majors. Of the 128 units required for the degree, at least 60 units must be at the upper division level.

Student program must be approved in advance by the College of Business Administration single subject credential adviser.

## Decision Systems Minor

The minor in decision systems consists of a minimum of 21 units to include Information and Decision Systems 301, 302; Mathematics 119, 120; and nine units selected from Information and Decision Systems 180, 366, 463, 464, 465.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Additional requirements must be met before the student may obtain permission to declare a business minor from the business minor adviser in the college of the student's major.

## Information Systems Minor

The minor in information systems consists of a minimum of 21 units to include Information and Decision Systems 180, 280, 306, 385, 480; and six units selected from Information and Decision Systems 383, 384, 388, 391, 396W, 406, 407, 463, 482, 483, 491, 492.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Additional requirements must be met before the student may obtain permission to declare a business minor from the business minor adviser in the college of the student's major.

## Production and Operations Management Minor

The minor in production and operations management consists of a minimum of 21 units to include Accountancy 201; Economics 101, 102; Information and Decision Systems 301 or 302, 360; Management 350; and three units selected from Information and Decision Systems 461, 462, 464. Prerequisites to the minor include Economics 201 or Mathematics 119, and Mathematics 120.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Additional requirements must be met before the student may obtain permission to declare a business minor from the business minor adviser in the college of the student's major.

## Courses

### LOWER DIVISION COURSES

#### 180. Principles of Information Systems (3) I, II

Applications of computerized systems in business organizations. Basic concepts of computer organization, data processing systems, decision support systems and systems analysis. Solving business problems through use of spreadsheet software.

#### 280. COBOL Programming (3) I, II

Prerequisite: Information and Decision Systems 180.  
Introduction to COBOL programming. Emphasis on coding techniques, file organization, and report preparation.

#### 290. Business Communication (3) I, II

Effective communication applied to business letters, memos, and long reports. Includes the organization, writing, and presentation of business documents using word processing software. Incorporates basic principles of speaking effectively for business.

### UPPER DIVISION COURSES (Intended for Undergraduates)

(Information and Decision Systems courses previously listed under the rubric of Information Systems)

#### 301. Statistical Analysis for Business (3) I, II

Prerequisites: Mathematics 120; Economics 201 or Mathematics 119. Approved upper division business major, business minor, or another major approved by the College of Business Administration. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Statistical methods applied to business decision making.

#### 302. Introduction to Production and Operations Management (3) I, II, S

Prerequisites: Mathematics 120; Economics 201 or Mathematics 119. Approved upper division business major, business minor, or another major approved by the College of Business Administration. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Production and operations management. Master scheduling, material requirements planning, inventory management, capacity planning, production activity control, location analysis, automation, computerized systems, layout planning, linear programming, decision making, queuing, simulation, quality control, project planning.

#### 306. Information Systems Analysis (3) I, II, S

Prerequisite: Information and Decision Systems 280. **Proof of completion of prerequisite required:** Grade report or copy of transcript. Systems development life cycle concept, with emphasis on analysis of requirements using structured methodology. Feasibility study, needs assessment, prototyping, application design alternatives.

#### 360. Project Management (3)

Prerequisite: Credit or concurrent registration in Information and Decision Systems 302.

Management of small and large projects. Work breakdown structure milestones, project cost estimating and reporting, and single and multiple resource allocation/leveling. Computerized project management software.

#### 366. Statistical Methodology for Business Research (3)

Prerequisite: Information and Decision Systems 301.  
Design and application of quantitative methods related to business research, with an applied emphasis on factorial analysis of variance, covariance, experimental design, multiple regression, research reporting, and analysis of methodology appearing in business literature.

#### 383. Advanced COBOL Programming (3)

Prerequisite: Information and Decision Systems 280.  
Advanced application program development in COBOL emphasizing structured programming, table handling, and file access methods.

#### 384. Comparative Programming Languages (3) I, II

Prerequisite: Information and Decision Systems 280.  
Basic principles of programming language syntax and semantics. Background for learning new programming languages; understanding of specific environments into which programming languages fit.



**385. Information Systems Software and Hardware Organization (3) I, II**

Prerequisite: Information and Decision Systems 280. **Proof of completion of prerequisite required:** Grade report or copy of transcript. Functional characteristics and organization of hardware components; assembly language programming concepts; principles and functions of operating systems; system software and control of applications program environment. Not open to students with credit in Information Systems 485.

**388. End-User Computing (3)**

Prerequisite: Credit or concurrent registration in Information and Decision Systems 385.

End-user computing including systems and tools used for manipulating data and applications. Communication, training, behavioral theories ethics, microcomputer software selection and use, data capture and output, project implementation and management, security and disaster planning, and current computing issues.

**391. System Documentation (3)**

Prerequisites: Information and Decision Systems 306 and 396W. Structured approach to system documentation, documentation standards and control, on-line and automatic documentation, user interfacing in software documentation, electronic and nontraditional documentation techniques.

**396W. Reporting Techniques for Business Professionals (3) I, II**

Prerequisite: Information and Decision Systems 290. 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:** Grade report or copy of transcript. Must be admitted to the upper division major in business.

Advanced preparation of oral and written reports used in business and other organizations. Individualized study of reports in student's career field. (Formerly numbered Business Administration 390.)

**404. Small Business Administration (3)**

Prerequisites: Finance 323; Information and Decision Systems 301 or 302; Management 350; Marketing 370; and consent of instructor.

Counseling of existing small businesses in conjunction with the Small Business Administration. Application of principles from all fields of business administration. Maximum credit six units. (Formerly numbered Business Administration 404.)

**406. Information Systems Design (3) I, II**

Prerequisites: Information and Decision Systems 306 and 385, and credit or concurrent registration in Information and Decision Systems 480. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Business information systems design, installation, and implementation as part of the systems development life cycle, with emphasis on structured design methodology.

**407. Artificial Intelligence Applications in Business (3)**

Prerequisite: Information and Decision Systems 385. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Basic artificial intelligence concepts, knowledge acquisition and representation, automated problem-solving and goal-seeking techniques, applications of artificial intelligence in business, expert systems, differences between data processing and artificial intelligence methodologies.

**408. Computer Graphics in Business (3)**

Prerequisite: Information and Decision Systems 385. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Application of computer graphics to business, graphics in business reporting, graphics equipment and technology, graphics software, algorithmic manipulation of images, picture processing, principles of graphics interfaces. Case studies.

**461. Operations Management (3)**

Prerequisite: Information and Decision Systems 302.

Use of tools for effective utilization of resources in manufacturing and service activities. Includes industrial engineering, project management, linear programming, waiting line models, learning curves, inventory models, and logistics.

**462. Operation Scheduling and Control Systems (3)**

Prerequisite: Information and Decision Systems 302.

Materials management to include forecast error analysis, distribution requirements planning, capacity planning and control, cumulative charting, and shop floor control.

**463. Management Science and Decision Systems (3)**

Prerequisite: Information and Decision Systems 301 or 302.

Application of management science techniques in design of computerized decision support systems. Cases and examples from industry.

**464. Quality and Productivity (3)**

Prerequisite: Information and Decision Systems 301 or 302.

Applications of operations management techniques to improvement of quality and productivity. Total quality control and just-in-time systems. Cases from American and Japanese companies.

**465. Simulation and Stochastic Modeling in Business (3)**

Prerequisite: Credit or concurrent registration in Information and Decision Systems 302.

Applications of computer simulation and stochastic modeling techniques in business. Emphasis on queuing systems, inventory simulation, corporate planning, and other stochastic modeling techniques. Cases and examples from industrial applications.

**480. Data Management Systems (3) I, II**

Prerequisite: Information and Decision Systems 385.

Methodology for applying data base management systems in design of information systems. Analysis of data base applications from perspectives of system users and systems analysts.

**482. Information and Decision Systems Practicum (3)**

Prerequisite: Completion of at least eighteen units of upper division information and decision systems courses.

Information system design or development project applying knowledge gained in previous coursework done under joint supervision of course instructor and an information systems manager.

**483. Data Communications (3) I, II**

Prerequisite: Information and Decision Systems 385.

Data communication system components; common carrier services and local area networks; economic, legal and technical issues in distributed information processing; analysis and design of data communication network applications; management and control of distributed data processing environment.

**490W. Reporting Techniques for Accountants (3) I, II**

Prerequisite: Twelve upper division units in accounting. 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:** Grade report or copy of transcript.

Advanced preparation of written and oral reports with application to professional needs of accountants.

**491. Advanced Data Management Systems (3)**

Prerequisite: Information and Decision Systems 480.

Database management concepts; logical database design and entity/relationship model. Relational databases: data normalization; user's view implementation; evolution of commercial DBMS products. CODASYL databases: efficiency and complexity. Issues in database administration, concurrency control, recovery from failure, functions of database administrator.

**492. Management of Information Systems (3) I, II**

Prerequisite: Information and Decision Systems 480. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Role of information systems in organizations from management perspective: information systems administration, quality assurance, risk management, countermeasure components, security, and control.

**496. Selected Topics in Information Systems (1-4) I, II**

Prerequisite: Consent of department chair.

Selected areas of concern in information systems. See Class Schedule for specific content. May be repeated with new content with consent of department chair. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

**498. Investigation and Report (1-3) I, II**

Prerequisites: Senior standing and consent of instructor.

May be repeated with new content. Maximum credit six units.

A comprehensive and original study of a problem connected with information systems under the direction of one or more members of the information systems staff.

**499. Special Study (1-3) I, II**

Prerequisite: Consent of instructor.

Individual study. Maximum credit six units.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.





# Interdisciplinary Programs

## Interdisciplinary Majors and Minors Offered

Major in Russian and East European studies with the B.A. degree in liberal arts and sciences.  
 Major in urban studies with the B.A. degree in liberal arts and sciences.  
 Minor in African studies.  
 Minor in energy studies.  
 Minor in environment and society.  
 Minor in Middle East studies.

For information on additional interdisciplinary programs, refer to this section of the catalog under the headings of American Studies, Asian Studies, Family Studies and Consumer Sciences (Child Development), Gerontology, Humanities (European Studies), International Business, Judaic Studies, Latin American Studies, Liberal Studies, and Social Science.

## Russian and East European Studies

### In the College of Arts and Letters

Office: Business Administration/Mathematics 424  
 Telephone: (619) 594-4236

### Faculty

Chair and Undergraduate Adviser: Fetzer (Russian)

### Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

### The Major.

The goals of the Russian and East European studies major are to promote the study of the Soviet Union and Eastern Europe within an integrated framework, and to build better understanding of the societies and cultures of this part of the world through the exchange of students, faculty and publications.

Recent revolutionary advances in transportation and communications produced by science and technology are effectively "shrinking" the world. At the present time the United States and the Soviet Union are in the process of expanding their commercial and cultural ties, opening unprecedented opportunities in government service, journalism, library work, and international business.

For those who continue graduate work after completing the bachelor's degree, Russian and East European studies is a good preparatory curriculum for graduate professional programs in international

trade, international law, librarianship, education, public administration, and journalism.

## Russian and East European Studies Major

With the B.A. Degree in Liberal Arts and Sciences  
 (Major Code: 03071)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

**Preparation for the Major.** Russian 100A, 100B, 200A, 200B, (20 units)

Lower division prerequisites for the upper division courses to be taken in the major. (3-9 units)

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through coursework for preparation for the major.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 30 upper division units to include nine units from at least two departments in the humanities selected from History 518A-518B, Humanities 330, 331; nine units from at least two departments in the social sciences selected from Economics 330, Geography 337, Political Science 359; six units in Russian selected from upper division courses in the Russian language and literature program; and six units of electives selected with the approval of the adviser.

## Urban Studies

### In the College of Arts and Letters and the College of Professional Studies and Fine Arts

Office: Professional Studies and Fine Arts 105  
 Telephone: (619) 594-6224

### Faculty

Urban studies is administered by the Urban Studies Committee. The program draws upon courses offered by faculty in the Departments of Anthropology, Economics, Geography, Political Science, Public Administration and Urban Studies, and Sociology.

**Chair and Undergraduate Adviser:** Caves (Public Administration and Urban Studies)

**Committee:** Weeks (Sociology), Ford (Geography), Kartman (Economics), Pendleton (Anthropology), Schultze (Political Science)

### Advising

All urban studies majors must meet at least once each semester with the urban studies program coordinator for advice on meeting general program requirements and for assignment to an urban studies adviser within the department of concentration.

## The Major

The major in urban studies is designed to prepare students for career opportunities in the urban milieu by providing an interdisciplinary major focused on the urban community, its environment and problems. The major combines the study of broad issues and theoretical concerns with specialized training in urban analytical research methodologies.

## Urban Studies Major

With the B.A. Degree in Liberal Arts and Sciences  
 (Major Code: 22141)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements in the section of this catalog on "Graduation Requirements." Students are cautioned that several of the required and elective courses have prerequisites.

A minor is not required with this major.

**Preparation for the Major.** Anthropology 102; Economics 101, 102; Geography 102; Political Science 101 or 102; Sociology 101; and Mathematics 250 or Economics 201 or Political Science 201 or Sociology 201. (Students who specialize in economics must take Economics 201 or Mathematics 250.) (21 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to the section of this catalog on "Graduation Requirements."

## Interdisciplinary Minors

### African Studies Minor

Dr. Issa J. Khalil, Department of Religious Studies, is adviser for this minor.

The minor in African Studies consists of a minimum of 15 units, 12 of which must be upper division, to include History 475A and 475B, Humanities 460; and six units from the following courses in any two departments: Anthropology 449\*, Political Science 364; and Religious Studies 340\*.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

### Energy Studies Minor

Dr. Alan R. Sweedler, Department of Physics, and Dr. Philip R. Pryde, Department of Geography, are co-advisers for this minor.

The interdisciplinary minor in energy studies\* consists of a minimum of 18 units to include 12 units selected from Economics 452, Mechanical Engineering 352, Geography 571, Physics 301; plus six units selected from Art 247 or 347; Economics 453, Electrical Engineering 380, 580, Mechanical Engineering 582, 586, Geography 370, Geological Sciences 521, Industrial Technology 171, Natural Science 351, Political Science 334, or three units of 499 with the approval of the adviser.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Courses in the major department or required for the major may not be used to satisfy requirements for the minor.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 30 upper division units to include 12 units selected from the following: Anthropology 529; Economics 458; Geography 354; Political Science 522; Public Administration 310; Sociology 557; and 18 units in an area of specialization (may include up to three units outside the specialization).

**Anthropology.** Required: Anthropology 520 or 580; and 12 units selected from 430, 444, 520, 531, 580, 582, 583.

**Economics.** Required: Economics 341; and 12 units selected from 307, 320, 321, 341, 370, 401, 477, 489, 565.

**Geography.** Required: Geography 385 or 585; and 12 units selected from 353, 358, 381, 385, 488, 554, 555, 556, 558, 559, 560, 572, 582, 585, 586.

**Political Science.** Required: Political Science 515A; and 12 units selected from 321, 325, 334, 335, 531, 537.

**Public Administration and Urban Studies.** Nine units selected from Public Administration 350, 420, 510, 512, 520; and six units selected from one of the following groups: (a) 450, 460, 512, 520; (b) 320, 525.

**Sociology.** Required: Sociology 406 or 407; and 12 units selected from 350, 355, 406 or 407 (if not taken as a required course), 443, 455, 456, 457, 505, 527; 537, 543, 555.

### Environment and Society Minor

Dr. Philip R. Pryde, Department of Geography, is adviser for this minor.

The minor in environment and society\* consists of a minimum of 15 units to include nine units selected from Biology 454, Economics 452, 453, and Geography 370 or 378; and six units selected from Biology 315, 454, Economics 452, 453, 454, 458, 489, Geography 370, 569, 572, 574, 575, 576, 577, History 441, 540, Political Science 334, 335, Sociology 350. Recommended: Geological Sciences 303, Physics 301.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

### Middle East Studies Minor

Dr. Issa J. Khalil, Department of Religious Studies, is adviser for this minor.

The minor in Middle East studies consists of a minimum of 15 units, 12 of which must be upper division, to include Humanities 450, 453, and Geography 370 or 378; six units from History 473A, 473B and 574; Religious Studies 340\*; six units from Anthropology 474\*, Political Science 363.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

\* Additional prerequisites are required for these courses.



# International Business

In the College of Arts and Letters and  
the College of Business Administration

A Member of the American Assembly of  
Collegiate Schools of Business.

## Faculty

International Business is administered by the International Business Program Committee. The program draws on courses offered by faculty in the following departments and programs: Accountancy, Asian Studies, Chinese, East European Studies, European Studies, Finance, French, German, Information and Decision Systems, Italian, Japanese, Latin American Studies, Management, Marketing, Russian, Spanish.

**Chair and Undergraduate Adviser:** Branan (French and Italian Languages and Literatures)

**Committee:** Butler (Management), Davies (History), Doyle (Spanish and Portuguese Languages and Literatures), Hageman (Economics), Hergert (Management), Higurashi (Linguistics and Oriental Languages), Salehizadeh (Finance), Teagarden (Management).

## Offered by International Business

Major in international business with the B.A. degree in liberal arts and sciences.

## The Major

International business is an interdisciplinary major which culminates in a Bachelor of Arts degree offered jointly by the College of Arts and Letters and the College of Business Administration, a member of the American Assembly of Collegiate Schools of Business. This program integrates coursework in business administration, foreign language, and regional and culture studies.

Students select one of four regional studies: Asia, Eastern Europe, Latin America, and Western Europe; and one of seven foreign languages. Students also complete the necessary business courses to meet accreditation standards of the American Assembly of Collegiate Schools of Business (AACSB) for a major in business administration.

The international business program is also the locus of several of the activities sponsored by the SDSU Center for International Business Education and Research (CIBER). This Center is partially funded by the U.S. Department of Education and administered by SDSU's Colleges of Arts and Letters and Business Administration in order to promote international business education in the region.

High school students who are planning to select this major are strongly advised to complete the following courses prior to admission to the University: four years of one foreign language; four years of mathematics; and courses in accounting, computer programming, economics, and world history.

Depending on the focus chosen, an international business major may enhance a career in the following areas: airlines, banking and finance, consulting, customs brokerage, education and training, entrepreneur, foreign service, freight forwarding, government, hotel management, human resources, import and export administration, insurance, international law, interpretation and translation, manufacturing, purchasing and buying, sales and marketing, teaching, tourism, trade associations, travel agency, and U.S. customs.

OFFICE: Business Administration/Mathematics 311  
TELEPHONE: (619) 594-3008

## Language Certification

The Chambers of Commerce and Industry of Paris and Madrid have authorized SDSU to administer tests locally which, if completed successfully, result in governmental certification of the student's business knowledge and linguistic capacity.

## Study Abroad Programs

The International business program currently has direct exchange agreements with outstanding business schools in Europe: *Ecole Supérieure des Praticiens de Commerce International* (Groupe ESSEC), Cergy Pontoise, France; and *Real Colegio Universitario Maria Cristina* (Universidad Complutense de Madrid), Spain. These programs provide International Business majors the opportunity for study abroad while making normal progress toward the degree.

## Internships

Each semester International Business majors may complete internships in "international" firms and organizations in the U.S. and abroad by enrolling in IB 495: International Business Internship.

## Advising

All students admitted to the University with a declared major in international business are required to meet with the undergraduate adviser during their first semester on campus.

## International Business Major

With the B.A. Degree in Liberal Arts and Sciences  
(Premajor Code: 80000U) (Major Code: 05130)

Applications from new students will be accepted only during the months of August for the following spring semester and November for the following fall semester. Change of major and declaration of major will be accepted from continuing students only during September for the spring semester and March for the fall semester.

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major. International Business majors may not complete a minor in the College of Business Administration or in the foreign language or regional study used to satisfy major requirements.

Supplemental admissions criteria must be met before students may declare an upper division International Business major and be eligible for upper division business courses. For current information concerning admission criteria and procedures, contact the adviser of the International Business program.

**Preparation for the Major.** (Complete I, II, and III: 38-51 units)

**I. Business** (All preparation for the major in the business and foreign language portions of this major must be completed before enrolling in any upper division courses in Business Administration): Accountancy 201, 202; Economics 101, 102; Economics 201 or Mathematics 119; Finance 140; and Information and Decision Systems 180. (21 units)

## II. Foreign Language

(choose one language):  
Chinese 101, 102, 201, 202. (20 units)  
French 100A, 100B, 200A, 200C, 200D, 200E. (22 units)  
German 100A, 100B, 200A, 200B, 200D, 211. (21 units)  
Italian 100A, 100B, 200A, 200B. (16 units)  
Japanese 111, 112, 211, 212. (24 units)  
Russian 100A, 100B, 200A, 200B, 211, 212. (24 units)  
Spanish 100A, 100B, 100C, 202, 211, 212. (22 units)

## III. Regional Studies

(choose one region):  
**Asia:** Six units selected from Asian Studies 105, 106, 107 (recommended); History 120, 121 (recommended).

**Eastern Europe:** Six units selected from Classics 140; History 105, 106 (recommended).

**Latin America:** Six units selected from History 115A, 115B (recommended); Latin American Studies 101 (recommended).

**Western Europe:** Six units selected from Classics 140; History 105, 106 (recommended).

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through coursework for preparation for the major.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** (Complete I, II, and III below: 43 units) A minimum grade point average of 2.0 is required in each of the three areas.

**I. Business** (All preparation for the major in the business and foreign language portions of this major must be completed before enrolling in any upper division courses in Business Administration):

A minimum of 22 units to include Finance 323, 329; Information and Decision Systems 302; Management 350, 466; Marketing 370, 376.

## II. Foreign Language

(choose one language):  
Chinese 301, 302 or 331 or 334; and 423. (9 units)  
French 301, 302 or 422; and 423. (9 units)  
German 301, 302, 420. (9 units)  
Italian 301, 305A, 305B. (9 units)  
Japanese 301, 302, 401. (9 units)  
Russian 301, 302; and 501 or 580 or 581. (9 units)  
Spanish 301A, 301B or 307; and 497. (9 units)

## III. Regional Studies

(choose one region):  
**Asia:** A minimum of 12 units (with no more than six units from one department) selected from International Business 495+; Anthropology 450, 452, 582+; Asian Studies 458, 459, 560; Comparative Literature 455, 460; Economics 330, 360+, 365, 465; History 480, 561A, 561B, 562, 563, 564A, 564B, 566, 567, 568, 569, 570; Japanese 402, 496+; Philosophy 351, 575+; Political Science 362, 393, 575; Religious Studies 401\*, 403\*, 506\*.

**Eastern Europe:** A minimum of 12 units with six units selected from the following courses taught in English: International Business 495+; Economics 330; Geography 337; Political Science 393; Russian 305A-305B; and six units selected from Russian 430, 501\*, 555, 561, 563, 580\*, 581\*.

**Latin America:** A minimum of 12 units (with no more than six units from one department) selected from International Business 495+; Anthropology 442, 443, 582+; Art 561, 562; Comparative Literature 445; Economics 360+, 365, 464, 565; Geography

323, 324; History 415A, 415B, 480, 538, 551A, 551B; Latin American Studies 498, 560, 580; Mexican American Studies 306, 310, 350A, 355, 375, 376; Political Science 393, 482, 566, 567, 568; Portuguese 535; Public Administration 580\*\*; Sociology 558\*\*; Spanish 306A, 306B, 441, 442, 515A, 515B, 520, 522, 524, 570, 571, 572; Women's Studies 310.

**Western Europe:** A minimum of 12 units (with no more than six units from one department) selected from International Business 495+; Anthropology 440, 582+; Comparative Literature 511, 512, 513, 514; Economics 330, 360+, 483; Geography 336; History 407A, 407B, 480; Humanities 310, 320, 330, 331, 340, 350, 400+, 401, 402, 403, 404; Philosophy 411, 412, 413, 414; Political Science 356, 393; Women's Studies 340.

A maximum of six units of courses numbered 496 and 596 may be applied to the major with the approval of the International Business adviser.

\* Indicates courses with prerequisites not included in requirements listed above.

+ These courses may be included in the major only with the written approval of the undergraduate adviser for international business.

\*\* Indicates courses that may be used to satisfy the major requirement in regional studies when not used to satisfy the major requirement in foreign language.

## Certificat pratique de français commercial et économique

The Center for International Business Education and Research (CIBER) administers the *Chambre de Commerce et d'Industrie de Paris Certificat pratique de français commercial et économique* examination each spring at SDSU. Students who satisfy the French language requirement in International Business (31 units): French 101, 102, 200A, 200C, 200D, 200E, 301, 302 or 422, and 423 (with a minimum grade of B) or equivalent are eligible to sit for this examination.

## Certificado de Español Comercial

The Center for International Business Education and Research (CIBER) administers the *Cámara de Comercio e Industria de Madrid Certificado de Español Comercial* examination each spring at SDSU. Students who satisfy the Spanish language requirement in International Business (31 units): Spanish 100A, 100B, 100C, 202, 211, 212, 301A, 301B or 307, and 497 (with a minimum grade of B) or equivalent are eligible to sit for this examination.

## Course

### UPPER DIVISION COURSE (Intended for Undergraduates)

#### 495. International Business Internship (3) I, II

Prerequisites: Consent of instructor; completion of all preparation for the international business major.

Internships with international business firms, in U.S. and abroad, nonprofit organizations, and government agencies. Work done under joint direction of activity sponsor and instructor. Project report and internship conferences required.



**302. Third Year Japanese II (3) I, II**

Three lectures and one hour of laboratory.  
Prerequisites: Japanese 301, and completion of the General Education requirement in Foundations II.C., Humanities.  
Continuation of Japanese 301. Strengthening communication skills in Japanese; various literary styles; additional kyoku kanji. Cultural values shaping modern Japanese society; intercultural communication. Preparation for Japanese 401.

**401. Fourth Year Japanese I (3) I, II**

Prerequisite: Japanese 302.  
Continuation of Japanese 302. Strengthening communication skills in Japanese; various literary styles; additional kyoku kanji. Cultural values shaping modern Japanese society; intercultural communication. Preparation for Japanese 402.

**402. Fourth Year Japanese II (3) II**

Prerequisite: Japanese 401.  
Continuation of Japanese 401. Further strengthening communication skills in Japanese; various literary styles; introduction of chugaku kanji. Social and economic issues in Japan and the U.S.; cultural values shaping modern Japanese society; intercultural communication.

**496. Topics in Japanese Studies (1-4)**

Topics in Japanese language, literature, culture 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 eight units.

**499. Special Study (1-3) I, II**

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.



# Journalism

In the College of Professional Studies and Fine Arts

OFFICE: Professional Studies and Fine Arts 325  
TELEPHONE: (619) 594-6635

Accredited by the Accrediting Council on Education for Journalism and Mass Communication.

**Faculty**

Emeritus: Holowach, Sorensen, Whitney, Wimer  
Chair: Broom  
Professors: Broom, Brown, Buckalew, Dozier, Hartung, Odendahl, Willemeier  
Associate Professor: Mueller  
Assistant Professors: Davis, Lauzen, Spevak  
Lecturer: Center

**Offered by the Department**

Master of Science degree in mass communication (in cooperation with other departments).  
Major in journalism with the B.A. degree in liberal arts and sciences.  
Emphasis in advertising.  
Emphasis in news-editorial.  
Emphasis in public relations.  
Emphasis in radio-TV news.  
Teaching major in journalism for the single subject teaching credential in English/journalism.  
Minor in journalism.

**The Major**

Journalism education emphasizes the training of writers, reporters, and editors for mass media. It also seeks to prepare and guide students interested in pursuing careers in a wide range of informational, interpretative, and promotional mass communication fields. The courses offered by the Department of Journalism are designed to give students a working knowledge of the skills, concepts, and values needed to succeed as competent professional communicators. They focus on the basic elements of factual and persuasive writing, editing, communications law and theory, history, and responsibility of mass communication. Career opportunities for journalism graduates are diverse and in competitive fields, including advertising, book editing and publishing, freelance writing, industrial journalism, magazines, mass communication research, news agencies, newspapers, public relations, radio, television, and teaching.

**Journalism Major**

With the B.A. Degree in Liberal Arts and Sciences  
(Premajor Code: 06020) (Major Code: 06021)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."  
Journalism majors must complete 33 units in journalism, 27 of which must be upper division units. Majors may exceed 33 units only upon petition to the Department of Journalism, but the maximum number of journalism units that will be credited toward the degree for graduation is 34. A maximum of six lower division units in journalism may be applied to the total of 33 units.  
A minimum of 90 units of coursework applicable to the bachelor's degree must be completed outside the areas of journalism, film, broadcasting, television, photography, and mass communication.

A minor is required; however, to preserve an appropriate balance between journalism/mass communication courses and courses in liberal arts and sciences, journalism majors may not minor in telecommunications and film. Journalism students planning to minor in any College of Business Administration discipline should contact the department office for pre-minor requirements.

Students are required to achieve a passing score on the Department of Journalism grammar, spelling, and punctuation test before enrolling in most journalism courses.

Lower division activity/production courses in newspaper, magazine, or broadcasting may not be applied toward the B.A. in journalism.

**IMPACTED PROGRAM.** The journalism major is designated as an impacted program and specific regulations related to admissions are imposed. Consult the department for regulations and admissions criteria.

**Emphasis in Advertising**

**Preparation for the Major.** Journalism 200 and 220. (6 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Departmental screening in Journalism 310 with a grade of C (2.0) or better, or passing the University Writing Examination, or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units in journalism to include Journalism 310, 460, 463, 465, and 466; nine units of upper division electives.

**Emphasis in News-Editorial**

**Preparation for the Major.** Journalism 200 and 220. (6 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Departmental screening in Journalism 310 with a grade of C (2.0) or better, or passing the University Writing Examination, or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units in journalism to include Journalism 310, 326; either 320 and 529 or 441 and 443, 502; nine units of upper division electives.

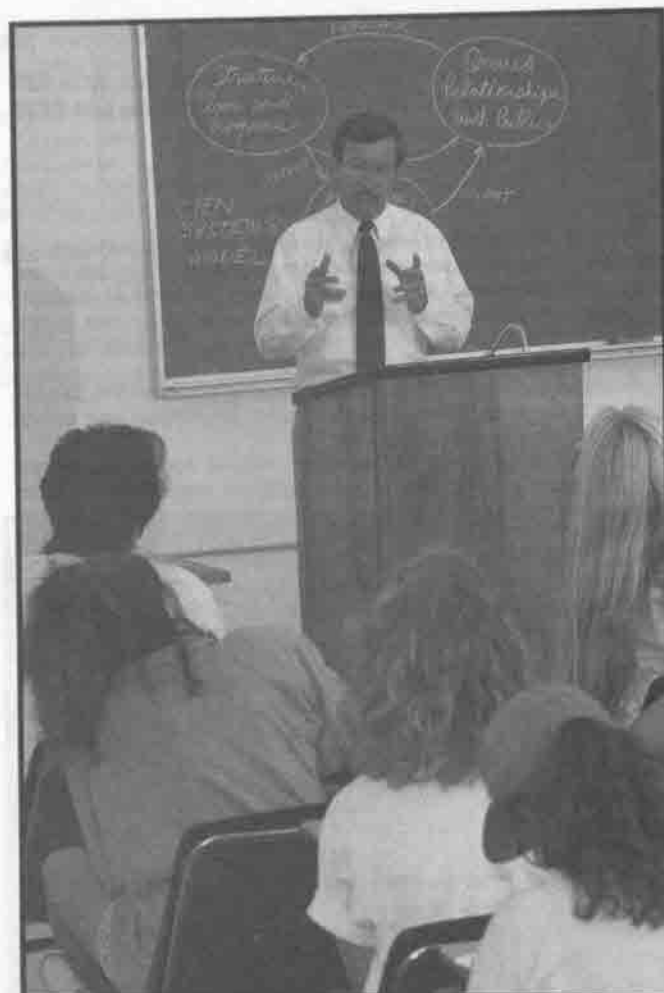
**Emphasis in Public Relations**

**Preparation for the Major.** Journalism 200 and 220. (6 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Departmental screening in Journalism 310 with a grade of C (2.0) or better, or passing the University Writing Examination, or completing one of the approved writing courses with a grade of C (2.0) or better.





**Major.** A minimum of 24 upper division units in journalism to include Journalism 310, 480, 481, 509, and 585; nine units of upper division electives.

#### Emphasis in Radio-TV News

**Preparation for the Major.** Journalism 200 and 220. (6 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Departmental screening in Journalism 310 with a grade of C (2.0) or better, or passing the University Writing Examination, or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units in journalism to include Journalism 310, 470, 474, 475, and 502; nine units of upper division electives.

### Journalism Major

**For the Single Subject Teaching Credential in English/Journalism With the B.A. Degree in Liberal Arts and Sciences (Premajor Code: 06020) (Major Code: 06021)**

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under Policy Studies or Teacher Education. No more than 33 units in journalism courses can apply to the degree. A minimum of 90 units of coursework applicable

to the bachelor's degree in journalism must be completed outside the areas of journalism, film, broadcasting, television, photography, and mass communication.

A major in journalism selected from any one of the emphases in journalism may be used by students in policy studies or teacher education as an undergraduate major for the B.A. degree in liberal arts and sciences.

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Departmental screening in Journalism 310 with a grade of C (2.0) or better, or passing the University Writing Examination, or completing one of the approved writing courses with a grade of C (2.0) or better.

**Credential Requirements.** A minimum of 45 units selected from four content areas. Some courses are required.

**Literature:** Twelve units to include either English 250A or 250B; either English 260A or 260B; either English 533, Comparative Literature 561, 562, or 563; three units selected from English 525, 526, Comparative Literature 270A, 270B.

**Composition:** Fifteen units to include English 100 and 500W; either English 200 or 280; six units selected from English 200, 280, 584W, Journalism 220, 320, 441.

**Linguistics:** Three units selected from Linguistics 101, 410, 420.

**Journalism:** Fifteen units selected from Journalism 200, 310, 326, 350, 443, 450, 451, 460, 463, 466, 470, 474, 475, 480, 481, 490, 502, 529, 585.

### Journalism Minor

The minor in journalism consists of 15-18 units in one of the following areas:

**Advertising:** Journalism 220, 310, 460, 463, 465 and 466. (18 units.)

**News-Editorial:** Journalism 220, 310, 320, 326, and one of the following: 441, 502 or 529. (15 units.)

**Public Relations:** Journalism 220, 310, 480, 481, and 585. (15 units.)

**Radio-TV News:** Journalism 220, 310, 470, 474 or 475, and 502. (15 units.)

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

### Courses

#### LOWER DIVISION COURSES

**200. Introduction to Mass Communication (3) (CAN JOUR 4)**  
Mass media and their interrelationships. The media and the consumer. Value and function of the mass media, particularly news media, in contemporary society. Problems and responsibilities.

**220. Writing for the Media (3) (CAN JOUR 2)**

One lecture and four hours of activity.  
Prerequisites: Sophomore standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test. **Proof of completion of prerequisites required:** GSP test score and/or grade report or copy of transcript.

Introduction to writing techniques for the mass media. Laboratory practice in informational and persuasive writing, evaluation, judgment, emphasis on newspaper journalism.

#### UPPER DIVISION COURSES (Intended for Undergraduates)

**NOTE:** PROOF OF COMPLETION of prerequisites required for all upper division courses: GSP test score as applicable and grade report or copy of transcript.

**310. Information Gathering and Reporting (3)**

Prerequisites: Journalism 220 with minimum grade of C; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test. Satisfies the 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.

Methods of interviewing and information gathering. Journalistic attitudes, ethics and skills. Questioning and listening. Press conferences. Nature of inference, supposition, skepticism and the adversary system. Quantification in reporting. Research resources. Field experience.

**320. Public Affairs News Reporting (3)**

One lecture and four hours of activity.  
Prerequisites: Journalism 310 with minimum grade of C; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.

Field and laboratory practice in news gathering and writing, covering news beats including courts; local governments and other news sources. Emphasis on accuracy, clarity, comprehensiveness and interpretation.

**326. News Editing (3)**

One lecture and four hours of activity.  
Prerequisites: Journalism 310 with minimum grade of C; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.

Copy editing, headline writing, photo cropping and sizing, page layout and editorial judgment. Practice with wire and other copy. Attention to electronic editing.

**350. News and Feature Photography (3)**

One lecture and four hours of activity.  
Prerequisites: Journalism 220 with minimum grade of C; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.

Principles and practice of photojournalism, including fundamentals of camera operation, composition, developing and printing of black and white photographs for publication. News values in photography. Not open for credit to students with credit in Industrial Arts 140.

**408. Mass Communication and Society (3)**

Prerequisites: Upper division standing, and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences.

Social factors underlying nature, functions of mass media. Theories, models, research in media as culture carriers, opinion shapers; other societal interrelationships.

**425. Editorial and Critical Writing (3)**

Prerequisites: Journalism 320; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

Principles and practices in editorial and critical writing. Editorials, columns and commentary. Analysis and interpretation.

**441. Magazine Article Writing (3)**

Prerequisites: Journalism 310 with minimum grade of C; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

Planning, gathering material, writing and marketing articles for specialized and general publications. Production of expository articles and marketing of at least one.

**443. Magazine Editing and Production (3)**

Two lectures and three hours of activity.  
Prerequisites: Journalism 310 and 441 with minimum grade of C; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

Editing and mechanics in the production of magazines. Selection and preparation of editorial materials. Graphics and photo selection, cropping, captioning. Graphic production processes. Layout, preparation of dummies for magazines, booklets, brochures.

**450. Advanced News and Feature Photography (3)**

One lecture and four hours of activity.  
Prerequisites: Journalism 310 and 350; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

Role of photography in mass communication. Emphasis on photographic essay and innovation in photojournalism. Field and laboratory practice in telling stories with photographs. Information gathering for captions; accuracy, completeness.

**451. Photojournalism (3)**

One lecture and four hours of activity.  
Prerequisites: Journalism 310 and 350; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

Advanced techniques of photography and darkroom. Documentary journalism. Experimentation with photo derivation and color photography. Field and laboratory practice in covering news events with still cameras.

**460. Principles of Advertising (3)**

Prerequisite: Upper division standing.  
Principles of advertising, including copywriting, layout, typography, production, social responsibility, consumer and market surveys, and advertising readership studies.

**463. Advertising Copy, Layout and Design (3)**

One lecture and four hours of activity.  
Prerequisites: Journalism 310 with minimum grade of C and 460; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.

Preparation of copy, layout, planning and production. Graphics, typography, and visual literacy. Copy writing.

**465. Advertising Research and Analysis (3)**

Prerequisites: Journalism 310 with minimum grade of C and 460; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.

Evaluation and use of data collecting and measurement for advertising media. Cases, practices and problems. Quantitative and qualitative characteristics of advertising.

**466. Advertising Campaigns (3)**

Prerequisites: Journalism 463, and Journalism 465 or Telecommunications and Film 540; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

Cases, practices and problems with advertising campaigns, including political campaigns. Decision making in copy themes, art work, media imagery. Advertising campaign targets. Evaluating results.

**470. Radio-Television News Writing (3)**

One lecture and four hours of activity.

Prerequisites: Journalism 220 with minimum grade of C or Telecommunications and Film 110; credit or concurrent registration in communications and Film 540; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

Application of radio and television news writing principles and techniques. Emphasis on news scriptwriting using audio and video. (Not open to students with credit in Telecommunications and Film 310.)



**474. Broadcast News Reporting and Editing (3)**

One lecture and six hours of activity.  
Prerequisites: Journalism 310 with minimum grade of C and 470 or Telecommunications and Film 310; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.

Advanced practices in radio and television news writing and script editing. Field experience investigating, writing and reporting broadcast news and feature stories. Field and laboratory practice.

**475. Radio and Television News Production (3)**

One lecture and six hours of activity.  
Prerequisites: Journalism 474 with minimum grade of C; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

Radio and television news production principles and techniques. Audio recording and editing for radio news. Videography and editing for television news. Field and laboratory practice.

**480. Principles of Public Relations (3)**

Prerequisite: Upper division standing.  
Principles, theories, methods and objectives in public relations. Survey of public relations problems and practices.

**481. Public Relations Techniques and Media Usage (3)**

One lecture and four hours of activity.  
Prerequisites: Journalism 310 with minimum grade of C and 480; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.

Practical applications of public relations techniques with emphasis on writing and media usage. News releases, publications and printed materials, audio-visual techniques, speeches and special events. Field and laboratory practice.

**490. Internship in Journalism (1-3) Cr/NC**

Prerequisites: Upper division standing; consent of instructor; satisfactory score on departmental grammar, spelling, and punctuation test; Advertising - Journalism 463; News-Editorial (Magazine) - Journalism 441 or 443; News-Editorial (Newspaper) - Journalism 320; Public Relations - Journalism 481; Radio-TV News - Journalism 474.  
Supervised work with area media under the combined direction of practitioners and professors. Maximum credit three units.

**496. Experimental Topics (1-3)**

Prerequisites: Upper division standing and consent of instructor.  
Selected topics. 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. No more than three units in Journalism 496 may apply to the degree in journalism.

**499. Special Study (1-3)**

Prerequisites: Upper division standing; consent of instructor; and satisfactory score on departmental grammar, spelling, and punctuation test.

Individual study or project, normally in a research area selected by the student. Maximum credit three units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

**500. Current Problems in Mass Communication (3)**

Prerequisites: Journalism 200 or Telecommunications and Film 100 or Economics 100 or Political Science 101 or Sociology 101, and upper division standing.

Forces affecting American mass communication today: government restrictions, economics, pressure groups, censorship, mechanical developments, interrelationships of the media and society, professional ethics.

**502. Law of Mass Communication (3)**

Prerequisites: Journalism 200 or Political Science 102 or Telecommunications and Film 100, and upper division standing.

Libel, invasion of privacy, censorship, contempt of court, pornography. Constitutional guarantees affecting print and broadcast media. Government restrictions.

**503. History of Mass Communication (3)**

Prerequisites: Journalism 200 or History 110A or 110B or Telecommunications and Film 100, 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.

**509. Research Methods in Mass Communication (3)**

Prerequisites: Journalism 320 or 450 or 460 or 470 or 480 or graduate standing and concurrent enrollment in SPSS class.

Exploratory and evaluation methods for mass media research programs; depth interviews, experimental designs, questionnaire construction, telephone surveys, computerized statistical analysis.

**529. Investigative Reporting (3)**

One lecture and four hours of activity.  
Prerequisites: Journalism 320; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

Development of articles of substance and depth in specialized areas. Research, analysis and interpretation of complex issues in the news. Special problems of the sustained, reportorial effort. Field and laboratory practice.

**530. Media Management (3)**

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.

**585. Problems and Practices in Public Relations (3)**

Prerequisites: Journalism 481; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

Current public relations practices and problems in a wide variety of commercial, industrial, financial, governmental, cultural and social organizations.

### GRADUATE COURSES Refer to the Graduate Bulletin.

## Judaic Studies

In the College of Arts and Letters

OFFICE: Adams Humanities 4188  
TELEPHONE: (619) 594-5338

**Faculty**

Faculty assigned to teach courses in Judaic studies are drawn from departments in the College of Arts and Letters.

**Chair:** Baron (History)

**Committee:** Bar-Lev (Linguistics), Cayleff (Women's Studies), Chandler (Sociology), DuFault (History), Geffer (Religious Studies), Grossbard-Schechtman (Economics), Hoiler (Religious Studies), Koster (Information Systems), Kushner (History), O'Brien (History), Sheres (English and Comparative Literature), Sparks (Religious Studies), Strom (Teacher Education), Wood (Sociology).

**Offered by Judaic Studies**

Minor in Judaic Studies.

**The Minor**

The minor in Judaic studies provides a balanced interdisciplinary study of Jewish contributions to world culture and history. It serves the needs of students who plan to (1) specialize in disciplines in which an understanding of Jewish contributions is essential, or (2) follow careers in teaching, community service, foreign service, or the ministry. Students seeking a minor in Judaic studies may want to consider combining it with a major in Social Science with an emphasis on Africa and the Middle East. Many courses relevant to this major are available in anthropology, economics, geography, history, political science, and sociology.

**Judaic Studies Minor**

Dr. Lawrence Baron, Department of History, is adviser for this minor.

The minor in Judaic studies consists of a minimum of 19-20 units to include seven to eight units selected from Humanities 130 and Hebrew 101, 102, or 201; and 12 upper division units selected from Comparative Literature 405, 526; History 440, 487, 488, 574; Religious Studies 301, 330; Judaic Studies 496, 580; Hebrew 496; and other relevant courses may be counted as part of the 12 upper division units taken with the approval of the adviser for Judaic Studies.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

**Courses****LOWER DIVISION COURSES****100. New Perspectives in Judaic Studies (1) Cr/NC I, II**

New interpretations of Jewish history, culture, and social issues. Presentations from perspective of various disciplines. Contemporary issues.

“Perhaps the most valuable result of all education is the ability to make yourself do the thing you have to do, when it ought to be done, whether you like it or not . . . .”

—Technical Education (1877)

**296. Topics in Judaic Studies (1-3)**

Selected topics. 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.

### UPPER DIVISION COURSE (Intended for Undergraduates)

**496. Topics in Judaic Studies (1-3)**

Prerequisite: Upper division status.  
Selected topics. 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.

### UPPER DIVISION COURSE (Also Acceptable for Advanced Degrees)

**580. Special Topics in Judaic Studies (1-3)**

Prerequisite: Upper division standing.  
Special topics appropriate to the interdisciplinary study of the modern Jewish experience. Credit will vary depending on the scope and nature of the topic. May be repeated with different content. Maximum credit six units.



# Latin American Studies

In the College of Arts and Letters

OFFICE: Storm Hall 146  
TELEPHONE: (619) 594-1103

## Faculty

Latin American studies is administered by the Latin American Studies Committee. Faculty assigned to teach courses in Latin American studies are drawn from the Departments of Anthropology, Art, Comparative Literature, Economics, Geography, History, Journalism, Mexican American Studies, Political Science, Public Administration and Urban Studies, Sociology, Spanish and Portuguese Languages and Literatures, and Women's Studies; and the College of Business Administration.

**Chair and Undergraduate Adviser:** Davies (History)

**Committee:** Ball (Anthropology), Barrera (Spanish), Case (Spanish), Castillo (Spanish), Christensen (Spanish), Clement (Economics), Concepción (Public Administration and Urban Studies), Cuniff (History), Del Castillo (Mexican American Studies), Doyle (Spanish), Espin (Women's Studies), Esser (Art), Flemion (History), Fredrich (Geography), Ganster (Institute for Regional Studies of the Californias), Griffin (Geography), Griswold del Castillo (Mexican American Studies), Hartung (Journalism), Head (Spanish), Herzog (Mexican American Studies), Hicks (English and Comparative Literature), Higgs (Spanish), Kelley (Social Work), Loveman (Political Science), Nericio (English and Comparative Literature), Padgett (Political Science), Rodriguez (Mexican American Studies), Rumbaut (Sociology), Segade (Spanish), Silverman (Portuguese), Stromberg (Foreign Language Laboratory), Vanderwood (History), Villarino (Mexican American Studies), Watson, L. (Anthropology), Watson, M. (Women's Studies), Weeks (Sociology), Young (Spanish).

## Offered by Latin American Studies

Master of Arts degree in Latin American studies.  
Major in Latin American studies with the B.A. degree in liberal arts and sciences.  
Minor in Latin American studies.

## The Major

The major in Latin American studies is a multidisciplinary program designed to provide an effective understanding of the cultures and governments of Latin America, offering basic education and training for business or professional careers that require specialized knowledge of this exciting and diverse area of the world.

A major in Latin American studies provides a multitude of career opportunities. Employment possibilities exist not only in Latin America, but throughout the world. Graduates can apply their specialization to service in international organizations and government positions at the federal or state level. Numerous employment situations can be found in the private sector. Private agencies and corporations have significant interests in Latin America and are looking for area specialists. Those students who wish to continue in their studies will find opportunities in teaching at all levels. A major in Latin American studies opens many avenues in the choice of a career.

High school students preparing to enter this program should include in the high school course of study not less than three years of study in one foreign language, preferably Spanish or Portuguese. Proficiency in either of these languages is indispensable to a successful career in this area of study.

## Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible. Students are required to meet with their department adviser within the first two semesters after declaration or change of major.

## Latin American Studies Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 03081)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

**Preparation for the Major.** Portuguese 101, or Spanish 100A, 100B, 100C, 202, 211, 212, with a minimum grade point average of 2.0 for all work attempted (5-22 units); 12 units selected from Anthropology 101, Economics 101 and 102, Geography 101, History 115A-115B, Latin American Studies 101, Political Science 101 and 103.

**Foreign Language Requirement.** Portuguese 101 and 301 or Spanish 100A, 100B, and 100C.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units selected from courses in anthropology, art, economics, geography, history, Latin American studies, Mexican American studies, political science, Portuguese, sociology, Spanish, and women's studies, with not less than 12 units in one field and nine in each of two other fields. At least 33 units must be in courses having Latin American content. The student will file with the Evaluations Office a master plan approved by the adviser for the Latin American studies curriculum.

Courses acceptable for the Latin American studies major include Latin American Studies 495, 498, 560, 580; Anthropology 442\*, 443\*, 529\*, 582\*; Art 561, 562; Comparative Literature 445; Economics 336, 365, 464, 483, 565, 592\*; Geography 323, 324, 498 (when relevant), 540\* (when relevant); History 415A-415B, 541A, 551A-551B, 552, 553, 554, 555, 556, 557, 558, 559; Mexican American Studies 306, 310, 335, 350A, 355, 375, 376, 380, 498, 597; Political Science 361, 482, 566, 567, 568, 577; Portuguese 535; Public Administration and Urban Studies 580 (when relevant); Sociology 450\*, 555\*, 556\*, Spanish 306A-306B\*, 441\*, 442\*, 515A-515B, 520, 522, 524, 570, 571, 572; Telecommunications and Film 363 (when relevant), 562\*, 590\*; Women's Studies 310 (when relevant), 553\* (when relevant), 580\* (when relevant).

Courses numbered 496, 499, and 596 of relevant content in the above departments may be used for the Latin American studies major.

\* Indicates course with prerequisites not included in requirements listed above.

## Latin American Studies Major (Imperial Valley Campus)

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 03081)

At the Imperial Valley campus the major in Latin American studies is essentially the same as the Latin American studies major offered at the San Diego campus.

It is designed to provide (1) a foundation of understanding of the history, culture and governments of the countries of Latin America and the multiple interrelationships among those countries; and (2) a basic education and training for a business or professional career involving understanding of Latin America.

**Preparation for the Major.** The lower division preparation for the major can be fulfilled by taking the following courses at Imperial Valley College, or their equivalent: elementary Spanish; intermediate Spanish or bilingual Spanish; intermediate conversational Spanish or

bilingual oral Spanish; advanced conversational Spanish; and 12 units selected from physical anthropology, physical geography, history of the Americas, introduction to political science, comparative politics, and civilization of Spanish America and Brazil.

A minimum grade point average of 2.0 is required for all work attempted.

**Foreign Language Requirement.** The foreign language requirement for graduation is automatically fulfilled through coursework for preparation for the major.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units selected from the courses listed below with not less than 12 units in one field and nine in two other fields. At least 33 units must be in courses having Latin American content: Latin American Studies 344; Anthropology 442; Art 496 (when relevant), 561, 562; Economics 365, 464, 496 (when relevant); Geography 323, 324, 496 (when relevant); History 415A-415B, 496 (when relevant), 538, 551A-551B, 552, 557, 558; Mexican American Studies 335, 350A, 376; Political Science 566, 567, 568; Sociology 350, 450, 556 (when relevant); Spanish 306A-306B, 515A-515B, 570, 571, 572; Women's Studies 310 (when relevant).

## Latin American Studies Minor\*

The minor in Latin American studies consists of a minimum of 15 units of Latin American content courses. At least 12 of these units must consist of upper division courses. In addition, students must complete Spanish 100C or the equivalent. No more than six units may be drawn from any one department's or program's offerings. The student will file with the Evaluations Office a master plan approved by the adviser for the Latin American studies curriculum. Units may be selected from among the following:

Latin American Studies 101, 495, 498, 560, 580; Anthropology 442 (when relevant), 529, 582 (when relevant); Art 561, 562; Comparative Literature 445; Economics 336, 365, 464, 483, 565, 592; Geography 323, 324; History 115A-115B, 415A-415B, 541A, 551A-551B, 552, 553, 554, 555, 556, 557, 558, 559; Mexican American Studies 306, 310, 335, 350A, 355, 375, 376, 380, 498; Music 596; Political Science 361, 482, 566, 567, 568, 577; Portuguese 535; Public Administration and Urban Studies 580 (when relevant); Sociology 450 (when relevant), 555, 556 (when relevant); Spanish 306A-306B, 441, 442, 515A-515B, 520, 522, 524, 570, 571, 572; Telecommunications and Film 363 (when relevant), 562, 590; Women's Studies 310 (when relevant), 580 (when relevant).

Courses numbered 496, 499, and 596 of relevant content in the above departments may be used for the Latin American studies minor.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. In designing their Latin American studies programs for a minor, students may not include courses drawn from their major department.

\* Additional prerequisites may be required for courses in the minor.

## Courses

### LOWER DIVISION COURSE

#### 101. Latin American Heritage (3)

Introduction to Latin American cultures and peoples from an interdisciplinary perspective.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 344. Cooperative Studies at the Universidad Autónoma de Baja California (3-9) (Offered at IVC only)

Prerequisites: Spanish 301A and 301B; declared major in Latin American studies.

Latin American studies majors will attend classes with a Latin American focus at the Universidad Autónoma de Baja California; SDSU/IVC faculty will cooperate in supervision and evaluation of students. May be repeated with new content. Maximum credit nine units.

#### 495. Latin American Studies Internship (3) I, II Cr/NC

Prerequisite: Six upper division units in Latin American content courses.

Opportunity for Latin American studies undergraduates to implement area specialist skills. Placement with a local organization with legal, commercial, or social service functions whose activities are primarily Latin American related.

#### 496. Experimental Topics (1-4)

Selected topics. 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.

#### 498. Seminar on Latin America (3)

Exploration of the interdisciplinary approach to Latin America including evaluation of relevant resources and methods. Taught by a team of instructors representing two or more disciplines.

#### 499. Special Study (1-3)

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 560. Latin America After World War II (3) II

Prerequisites: Latin American Studies 101; History 115A, 115B; and either Political Science 566 or consent of 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.



# Liberal Studies

For further information regarding Liberal Studies, consult the following:

## OFFICE LOCATIONS/TELEPHONE NUMBERS

EMPHASIS IN THREE DEPARTMENTS .. Administration 223  
(619) 594-5841  
EMPHASIS IN EDUCATION ..... University Advising Center  
5194 College Ave. (CO-194)  
(619) 594-6668

## Faculty (Emphasis in Education)

Allison (English), Bar-Lev (Linguistics), Griswold (English), Kuznets (English), Lujan (Teacher Education), McKerrow (Drama), Park (Teacher Education), Sowder, L. (Mathematics), Starr (History), Stites (History), Thile (Communicative Disorders), Vartanian (History)

**Committee:** Anderson (Drama), Bar-Lev (Linguistics), Christensen (Communicative Disorders), Harvey, A.C. (Drama), Ima (Sociology), Indermill (English), Kitano (Special Education), Mathewson (Chemistry), McAdams (University Advising Center), Mehaffy (Teacher Education), Pacheco (Policy Studies in Language and Cross-Cultural Education), Russum (Imperial Valley Campus), Scott (Division of Undergraduate Studies)

## The Major

The liberal studies major provides two emphases for students wishing to follow degree programs involving more than one discipline or area of study. The Emphasis in Three Departments offers an opportunity to combine three disciplines in a focused program of study. The Emphasis in Education provides a general approach to learning particularly appropriate for students interested in entering elementary education; specializations are included to permit in-depth knowledge in a particular department.

The **Emphasis in Three Departments** is a student-designed major incorporating coursework from three different departments. It is appropriate for students whose postgraduate goals are not well addressed by a traditional major or major/minor combination.

Students design and justify their own master plans to suit their individual career goals. Approval of the plans must be secured from each of the involved departmental advisers and from the Dean of Undergraduate Studies prior to completion of 90 semester units. Information regarding participating departments and procedures for application is available from the Division of Undergraduate Studies.

Some common master plans include *International Security and Conflict Resolution*, with coursework in biology, economics, and history; and *Performing Arts*, with coursework in music, dance, and drama. Programs are also available in *Design and Development Technology*, and in *Japan Studies*.

The **Emphasis in Education** is a diversified interdisciplinary liberal arts major which includes a 12-unit area of specialization. Some students choose this major because their goal is a liberal education or they seek breadth before a specialized postgraduate degree. Most students who select this major, however, are seeking a multiple subject credential. This major meets all the requirements for the multiple subject/diversified major as specified in the Ryan Act and is an approved major for the multiple subject credential leading to a career in teaching at the elementary level.

Individuals seeking this credential who complete this major are exempt from the National Teachers Examination. Additional requirements for admission to the credential program are listed in this catalog under Policy Studies and Teacher Education.

## Courses

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 300. Introduction to Liberal Studies (3)

Prerequisites: Preparation for the major completed or to be completed concurrently. Completion of lower division Writing Competency and Entry-Level Mathematics requirements.

Introduction to ideas, structures, and values within and among the various disciplines in this interdisciplinary major. Exploration of issues

of diversity in contemporary society through directed field experience and required readings. Individual qualitative evaluation process required by major included.

#### 498. Assessment in Liberal Studies (1) Cr/NC

Prerequisite: Successful completion of three upper division semesters of liberal studies major.

Completion and assessment of portfolio including dialog summarizing educational experiences and preparing for role as future educator.

## Liberal Studies Major

With the B.A. Degree in Liberal Arts and Sciences

### Emphasis in Three Departments (Major Code: 49011)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

The student master plan must be approved (AD-223) before this major may be declared.

A minor is not required with this major.

**Preparation for the Major.** A minimum of two courses (normally defined as six units) in each of the three departments selected in the major must be completed in the lower division as foundation for upper division courses. In departments where lower division offerings are insufficient to meet this requirement, the total minimum upper division requirement may be extended.

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units selected from three departments: (a) with no fewer than nine units from each of the three departments; and (b) with no fewer than six units from each of the three departments completed at San Diego State University; and (c) with minimum overall and San Diego State University grade point averages of 2.0 in each of the three departments.

### Emphasis in Education (Premajor Code: 49012) (Major Code: 49015)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

Completion of the Liberal Studies Emphasis in Education major also fulfills General Education requirements.

A minor is not required with this major.

In addition to the requirements listed below, the following courses are required for entrance into Teacher Education or Policy Studies in Language and Cross-Cultural Education: Education 451 and Policy Studies in Language and Cross-Cultural Education 515 (required for PLC program only).

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Preparation for the Major.** Fifty-one units distributed as follows:

1. **Composition** – Three units selected from Africana Studies 120; English 100; Linguistics 100; Mexican American Studies 111B.
  2. **Composition** – Three units selected from Africana Studies 200; English 200; Linguistics 200.
  3. **Speech** – Three units selected from Africana Studies 140; Mexican American Studies 111A; Speech Communication 103.
  4. **Literature** – Three units selected from Comparative Literature 270A, 270B; English 220.
  5. **Mathematics** – Mathematics 210.
  6. **Mathematics** – Mathematics 211.
  7. **Life Sciences** – Three units (or four units including laboratory) selected from Biology 100, 100L, 101, 101L; Natural Science 110B.
  8. **Physical or Earth Sciences** – Three units (or four units including laboratory) selected from the physical sciences to include Astronomy 101, 109; Chemistry 100; Natural Science 100, 102, 110A; Physics 103, 107; or three units (or four units including laboratory) selected from earth sciences to include Geography 101, 101L, 103, 103L; Geological Sciences 100, 101.
  9. **Laboratory** – from either category 7 or 8.
  10. **Global Perspective** – Anthropology 102 or Geography 102.
  11. **Individual Perspective** – Psychology 101.
  12. **United States Organization** – Six units selected from Economics 100, 101, 102; Sociology 101; or any General Education American Institutions course (see section of catalog on "Graduation Requirements" for approved list). American Institutions may be taken at upper or lower division level.
  13. **Values and Ethics** – Three units selected from Philosophy 101, 102, 103; Religious Studies 101, 102.
  14. **Western or World Civilization** – Three units selected from History 100, 101, 105, 106.
  15. **Music** – Music 102.
  16. **Art/Drama** – Three units selected from Art 100, 101, 157, 158, 258, 259; Drama 100, 105, 120.
  17. **Physical Education** – Physical Education 241A, 241B.
- Upper Division Writing Requirement.** English 306W (very strongly recommended) or English 500W with a grade of C (2.0) or better.
- Upper Division Major.** Fifty-nine to sixty units as specified. One three-unit course in the major or specialization must be selected from History 415A, 415B, 420, 421, 473A, 473B, 475A, 475B or from Africana, American Indian, Mexican American, or Women's Studies courses listed below.

1. **Liberal Studies 300** – Introduction to Liberal Studies.
2. **Science** – Seven to eight units. Courses for the major together with courses for preparation for the major shall include at least one course from each of the three science categories: life science, physical science, earth science.  
Two courses from the Natural Science 412 series: Natural Science 412A (physical), 412B (earth), 412C (life); OR one course from the Natural Science 412 series and an additional course from the following list:  
*Life:* Biology 315, 319, 321, 324, 330, 336, 339, 454.  
*Physical:* Physics 201, 301, Astronomy 301.  
*Earth:* Geological Sciences 301, 303, Oceanography 320.  
**Interdisciplinary:** (May be selected when three categories have been met.) Natural Science 315, 316, 317, 333.
3. **Mathematics** – Mathematics 312 and 313.
4. **Composition/Literature** – Six units selected from English 306A and 306W (strongly recommended); OR 500W and three units

selected from Africana Studies 460; Comparative Literature 470; English 301, 302, 494, 501; Mexican American Studies 335; Women's Studies 352.

5. **Language Structure** – Linguistics 420.

6. **Child Language Acquisition** – Linguistics 452.

7. **Child Development and Learning Theory** – Psychology 330 and Communicative Disorders 322.

8. **History** – Select two courses. If item 14 under preparation for the major was satisfied with World History, then at least one course must be taken from the Western Civilization selection. If item 14 under preparation for the major was satisfied with Western Civilization, then at least one course must be taken from the Non-Western Civilization selection.

**Non-Western Civilization:** Africana Studies 470, History 415A, 415B, History 420, History 421, History 473A, 473B, History 475A, 475B.

**Western Civilization:** History 305A, 305B, 407A, 407B.

**United States:** Africana Studies 471A, 471B; American Indian Studies 440, History 530, 548A, 548B; Mexican American Studies 350A, 350B; upper division American Institutions courses (if not completed at lower division).

9. **Humanities/Performing Arts/Visual Arts** – Six units selected from Africana Studies 480; Art 308, 387; Drama 310, 315; Humanities 401, 402, 403, 404; Mexican American Studies 310; Music 343, 344, 351A, 351B, 351C, 351D, 351E, 351F.

10. **Specialization** – Twelve units.

Many specializations require selection of lower division prerequisites included in preparation for the major. If additional prerequisites are required these are noted. Students may not double count courses in the upper division major #1-9 and the specialization.

### Africana Studies

Twelve units selected from Africana Studies 330, 331, 332, 362, 380, 420, 445, 452, 460, 461, 463, 471A, 471B, 480, 485.

### American Indian Studies

American Indian Studies 320, 440, 470, and three units selected from American Indian Studies 303, 420, 430, 450, 533.

### Anthropology

Prerequisite: Anthropology 102.  
Anthropology 350; nine units selected from Anthropology 410, 424, 430, 432, 439, 526, 529, 532; of these nine units, three units may also be selected from Anthropology 440 through 452.

### Art

Prerequisite: At least three units selected from Art 258, 259.  
Three units selected from Art 308, 387; three units selected from Art 560\*, 561, 562, 576; three units selected from Art 557\*, 558, 577\*; three units selected from Art 561, 562, 564\*\*, 567, 568, 569, 576.

Students with sufficient lower division coursework may request a specialization in Studio Arts to be approved by the Art Department.

\* Prerequisites: Art 258 and 259.

\*\* Prerequisite: Art 263.

### Biology

Prerequisite: Biology 101, 101L (preferred); or Biology 100, 100L.  
Twelve units selected as follows: Biology 315; Biology 336 and 336L, or 410; Biology 330 and 330L, or 319 (recommended for those without 101, 101L); Biology 499 Research (1-2 units).

### Classics

Classics 310, 320, 330, 340.

### Communicative Disorders

Twelve units selected from Communicative Disorders 358\*, 450, 458\*, 558\*, 568.

\* Optional labs are available for all sign language courses.



### Comparative Literature

Prerequisite: Three units selected from Comparative Literature 210, 270A, 270B.

Twelve units selected as follows: three units selected from Comparative Literature 405, 510, 511, 512, 514; three units selected from Comparative Literature 440, 445, 455, 460; three units selected from Comparative Literature 470, 561, 562, 563, 571; three units selected from those above or special topics courses as approved by the adviser.

### Drama

Prerequisite: Three units selected from Drama 100, 120, 130. **Creative Drama Focus:** Drama 480; three units selected from Drama 315, 329A-329B, 515; three units selected from Drama 310, 510; three units selected from Drama 460A, 460B, 461.

**Producing Plays in the Classroom Focus:** (Additional prerequisite: Drama 240A or 240B – both preferred.) Drama 310, 315, 359\* or 515, 480.

\* Prerequisite waived for Emphasis in Education majors.

### English

Prerequisite: English 220.

Three units selected from English 302, 405, 533; three units selected from English 501, Comparative Literature 470; three units selected from English 301, 493, Comparative Literature 594; three units selected from English 491, 494, 519, 520, 525, 548.

### Foreign Language

Twelve upper division units in any foreign language. Students who plan to enter the Multiple Subject with Bilingual Emphasis credential program, see specialization in Spanish. Other languages offered at San Diego State University include Chinese, Classics (Greek and Latin), French, German, Hebrew, Italian, Japanese, Portuguese, and Russian. Additional prerequisites may be required.

### Geography

Prerequisite: Geography 102.

Geography 312 or 321; 354; 370; 378 or 401. If any of these requirements have been taken for the core major, select additional units from Geography 380, 507, 509, 569.

### History

Twelve units selected from Africana Studies 471A, 471B; American Indian Studies 440; History 407A-407B, 415A-415B, 420, 421, 440, 441, 442A-442B, 473A-473B, 475A-475B, 487, 500A-500B, 501, 530, 531, 540, 541A-541B, 545A, 547A, 548A, 549; Mexican American Studies 350A-350B; Women's Studies 340, 341A-341B.

### Linguistics

Linguistics 550 or 553; 551 or 524; 552. Three units selected from previous list or Linguistics 521, 522, 525, 530, Anthropology 410.

### Mathematics

Mathematics 121 and 309. Six units selected from Mathematics 302\*, 303, 357\*.

\* Mathematics 121 acceptable as prerequisite.

### Mexican American Studies

Twelve units selected from Mexican American Studies 310\*, 320, 324, 335, 350A-350B, 376, 464\*, 480\*, 481\*.

\* Highly recommended.

### Music

Prerequisites: Music 102 and 151.

Music 345; three units selected from Music 343, 344; three units selected from Music 351A-351F, Africana Studies 480, Mexican American Studies 310; two units\* selected from Music 369, 370, 375, 376, 380, 385, 389, plus one unit selected from Music 340\*\*, 496.

\* Consent of instructor required.

\*\* Prerequisite waived for Emphasis in Education majors.

### Natural Science

(Includes one additional lower division unit and one additional upper division unit.)

Prerequisites: Biology 100 and 100L, or Natural Science 110B; and Natural Science 102 or 110A or Physics 107.

Three units selected from Physics 301, Natural Science 317, 333; three units selected from Geological Sciences 302, Biology 330, 336, 341; three units selected from Geological Sciences 303, Oceanography 320; four units selected from Natural Science 412A, 412B, 412C.

### Performing Arts Specialization

(Depending on courses may include one additional upper division unit or two lower division units and eleven upper division units.)

Additional prerequisites: Dance 111 and 285, Dance 486; Music 345; three units selected from Drama 315, 480; three units selected from Drama 329A-329B, Music 340\*, 351.

\* Prerequisite waived for Emphasis in Education majors.

### Political Science

Twelve units selected from Political Science 301A, 301B, 302, 305, 334, 338, 346, 348, 357, 359, 361, 362, 363, 375, 422, 425, 426, 436, 481, 482, 530, 531, 562, 566, 567, 568.

### Psychology

Prerequisite: Psychology 101. Additional prerequisite: Psychology 211.

Psychology 340; nine units selected from Psychology 350, 351, 432 (highly recommended), 452, 454, 456.

### Religious Studies

Prerequisite: Religious Studies 101 or 102.

Twelve units selected from Religious Studies 300 (highly recommended), 353, 354, 360, 363, 365 (recommended).

### Sociology

Prerequisite: Sociology 101.

Twelve units selected from Sociology 320, 355, 410, 421, 433, 441, 444, 445, 455, 517, 539, 555.

### Spanish

Additional prerequisite: Spanish 202 or equivalent proficiency. Spanish 301A, 301B, 302, and 450 (for students entering bilingual program) or three units selected from 305A, 305B, 306A, 306B.

### Women's Studies

Twelve units selected from Women's Studies 310, 320, 325, 330, 340, 351, 352, 356, 370, 375, 390, 485.

11. **Liberal Studies 498** – (1 unit) Assessment in Liberal Studies. (Will be waived for students not planning to enter the credential program.)

# Linguistics

In the College of Arts and Letters

OFFICE: Business Administration 327  
TELEPHONE: (619) 594-5268

### Faculty

Emeritus: Elgin, Frey

Chair: Webb

Professors: Bar-Lev, Donahue, Johns, Underhill

Associate Professors: Choi, Kaplan, Seright, Webb

### Offered by the Department of Linguistics and Oriental Languages

Master of Arts degree in linguistics.

Major in linguistics with the B.A. degree in liberal arts and sciences.

Teaching major in linguistics for single subject teaching credential in English.

Minor in linguistics.

Certificate in applied linguistics and English as a second language (ESL).

### The Major

Linguistics is the scientific study of language. The structure of a wide variety of languages is looked at, not to learn these languages, but to learn about them in order to understand the universal properties of human language.

The linguistics program offers coursework in all areas of linguistic analysis: the core areas of phonology, syntax, semantics, and historical linguistics; and interdisciplinary areas such as applied linguistics, sociolinguistics, psycholinguistics, bilingualism, computational linguistics, and the linguistics of certain languages and language families.

Linguistics majors must complete a minor in another field approved by the adviser in linguistics. Recommended fields include anthropology, communicative disorders, ethnic studies, a foreign language, history, journalism, literature, philosophy, psychology, public administration and urban studies, sociology, and speech communication.

In addition to the major and minor programs, the Department of Linguistics and Oriental Languages offers a Certificate in Applied Linguistics and English as a Second Language (ESL). This certificate prepares students to teach English as a second language in adult and private schools and to teach English in foreign countries.

Employment opportunities for linguistics majors exist in the teaching of English as a second language to immigrant and refugee population groups in various locales throughout the southwestern United States. In addition, many students are interested in teaching English in Latin America, the Far East, or other areas outside the United States and continental Europe. Linguistics training can also be used as a valuable skill in conjunction with a California teaching credential in another field. Government work is another alternative, where such divisions as the state department and the foreign service hire trained linguists. Researchers are needed at institutes working in the fields of animal communication, computer science development, disorders of communication, or advanced research in linguistics theory. By combining a linguistics major with courses in accounting, business administration, or related fields, there are jobs available with multinational corporations, particularly those which emphasize trade among the Pacific rim nations. Linguists are also hired in such fields as computer science, advertising, communication media, public relations, and curriculum development.

With a master's or doctoral degree, linguistics majors may find teaching positions at community colleges or universities.

### Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

### Linguistics Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 15051)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in linguistics courses can apply to the degree.

Students majoring in linguistics must complete a minor in another field approved by the departmental adviser in linguistics. Recommended fields include anthropology, communicative disorders, ethnic studies, a foreign language, history, journalism, literature, philosophy, psychology, public administration and urban studies, sociology, and speech communication.

**Preparation for the Major.** Linguistics 101, (3 units)

Students should note that a number of the upper division required and recommended courses listed below have lower division prerequisites, but these prerequisites do not constitute requirements per se for the completion of the major.

**Foreign Language Requirement.** Competency equivalent to that which is normally attained through three college semesters of a foreign language with a B (3.0) average, or the equivalent. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or Linguistics 396W, English 305W or 500W with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units is required; at least 18 of these must be in Linguistics (and those 18 must include Linguistics 420 or 520 and 521 and 522); with the approval of the adviser, up to six units may be selected from related fields.

### Linguistics Major

For the Single Subject Teaching Credential in English  
With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 15051)

For a description of the single subject teaching credential in English which is available to linguistic majors, refer to this section of the catalog under English.

### Minor in Linguistics

The minor in linguistics consists of a minimum of 15 units, 12 of which must be upper division units and at least 12 of which must be from linguistics.

The student must select a specialization from one of the following subject areas. The following courses are appropriate for all subject areas: Linguistics 101, 420, 520, 521, 522, 524, 551, 552. Linguistics 496 and 499 may be appropriate for any area depending on content.

**Descriptive and Theoretical Linguistics:** Linguistics 523, 525, 530, 550, 560; Philosophy 531.

**Applied Linguistics:** Linguistics 354, 452, 525, 530, 550, 553; Anthropology 410.



*Historical Linguistics:* Linguistics 410, 560 (both required).

*Linguistics and English* (recommended for English majors): Linguistics 410, 525, 530, 550, 560; Anthropology 410.

*Linguistics and Foreign Languages* (recommended for foreign language majors): Linguistics 410, 550, 553, 560; Anthropology 410.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## 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 basic certificate requires 12 units to include Linguistics 420 or 520, 452 or 552, 524 or 551, and 550. Under certain circumstances comparable courses taken at other institutions may count toward the certificate. Such courses must be evaluated and approved by the certificate adviser. In addition, there is a 15-hour tutoring practicum requirement. In order to enroll, you must contact the certificate adviser in the Department of Linguistics and Oriental Languages. Courses in the certificate may be counted toward the major in linguistics but may not be counted toward the minor.

Refer to the Graduate Bulletin for information on the advanced certificate.

## Courses

### LOWER DIVISION COURSES

#### General

#### 101. Introduction to Language (3) I, II

The nature of language. Sound, meaning, and grammar. Language history and change. Dialects and variation. Language acquisition. Animal communication. Language and the brain. Not open to students with credit in upper division linguistics courses.

#### 250. Directed Language Study (3) I, II

Prerequisite: Consent of instructor.

Directed independent study of a foreign language not offered within the course structure at San Diego State University with the aim of acquiring a basic competency in reading, writing, and grammar. No instruction in speaking or understanding the spoken language is included in this course. Maximum credit three units.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### English Composition for International Students

#### 100. English Composition for International Students (3)

Prerequisites: Satisfaction of the English Placement Test and Writing Competency requirements. (See Graduation Requirements section of catalog.) **Proof of completion of prerequisites required:** Copy of EPT or competency scores (including ISEPT) or verification of exemption; proof of Cr in Academic Skills 92A or 92B or 97A or 97B, or notification from Academic Skills.

Introduction to college-level written English; attention to English language/grammar needs of non-native speakers of English; grammatical and rhetorical techniques for effective writing, based in part on study of models of current American writing. Not open to students with credit in Africana Studies 120 or English 100 or higher-numbered composition or creative writing course or Mexican American Studies 111B.

#### 200. Advanced English for International Students (3)

Prerequisites: Satisfaction of the English Placement Test and Writing Competency requirements; and Linguistics 100. **Proof of completion of prerequisites required:** Test scores or verification of exemption; grade report or copy of transcript.

Continuation of Linguistics 100, developing standard written English from wider language experience. Practice and training in the formal and informal language, idioms and practical English phonetics. Exercises based on a variety of dialects, content, and styles. Not open to students with credit in English 200.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 305W. Advanced Composition for International Students (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; grade report or copy of transcript.

Advanced expository writing, with practice in the various associated skills (organization, research, presentation, rhetoric). The goal is to enable non-native English speakers to function competently with written English on advanced university levels.

#### 340. Exploratory Foreign Language Study (3) II

Prerequisite: Linguistics 101.

Exposure to several languages and language structures to improve language learning abilities.

#### 354. Language and Computers (3)

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences.

Computers, computer programming languages, and "artificial intelligence" viewed from perspective of human language. Not open to students with credit in Linguistics 554.

#### 396W. Writing Proficiency (1)

Prerequisite: Consent of instructor. Limited to linguistics majors. 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; grade report or copy of transcript.

Upper division writing course taken in conjunction with any 500-numbered linguistics course. Emphasizes composition skills in research methods, essay organization, paragraphing, sentence structure, and diction, all related to the particular 500-level linguistics course chosen.

#### 410. History of English (3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

The history of English and its present day use.

#### 420. Linguistics and English (3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Introduction to sound and grammatical structure of language, with special attention to English. Language acquisition and variation. Of special interest to prospective teachers. Not open to students with credit in Linguistics 520.

#### 452. Child Language Acquisition (3) I, II

Prerequisite: Credit or concurrent registration in Linguistics 101, 420, or 520.

Principles of child language development. Sounds and grammar in speech of young children. Acquisition of reading and vocabulary. Relationship between cognitive development and language. Development of language in bilinguals. Second language acquisition.

#### 496. Experimental Topics in Linguistics (1-4) I, II

Specialized study of a selected topic in 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 six units.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor.

Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 520. Fundamentals of Linguistics (3) I, II, S

Prerequisite: Upper division standing.

Principles of modern linguistics, with attention to English grammar (syntax, morphology, phonology). Language change, dialects, sociolinguistics, psycholinguistics, language acquisition.

#### 521. Phonology (3) I, II

Prerequisite: Linguistics 420 or 520.

Introduction to the theoretical principles of transformational-generative phonology.

#### 522. Syntax (3) I, II

Prerequisite: Linguistics 420 or 520.

Introduction to the theoretical principles of transformational-generative syntax.

#### 523. Phonemics and Morphemics (3)

The study of procedures for arriving at the phonetic inventory of languages and the structuring of sound units (both linear and intonational) into phonemic systems; the study of morphemic hierarchies and their arrangements in forming words.

#### 524. American Dialectology (3) I, II

Prerequisite: Upper division standing.

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.

#### 560. Historical Linguistics (3)

Prerequisites: Linguistics 410 and 520 or 521.

Methods and principles used in historical study of language; processes of language change in phonology, morphology, syntax, and semantics; linguistic reconstruction; origin of language; language families; development of writing; examples from various language families.

#### 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.

### GRADUATE COURSES Refer to the Graduate Bulletin.



# Management

In the College of Business Administration

OFFICE: Student Services 3428  
TELEPHONE: (619) 594-5306

A Member of the American Assembly of Collegiate Schools of Business.

## Faculty

Emeritus: Mitton, Pierson, Srbich  
Chair: Brady  
Professors: Atchison, Belasco, Brady, Ghorpade, Hampton, Hergert, Marino, Robbins, Wright  
Associate Professors: Butler, De Noble, Ehrlich, Hatch, Rhyne, Teagarden  
Assistant Professor: Dunn

## Offered by the Department

Master of Science degree in business administration.  
Master of Business Administration.  
Major in human resource management with the B.S. degree in business administration.  
Major in management with the B.S. degree in business administration.  
Teaching major in business for the single subject teaching credential.  
Minor in management.  
Minor in human resource management.  
Minor in small business management (available at Imperial Valley Campus only).  
Certificate in business administration (available at Imperial Valley Campus only).

## Admission to the Major

The undergraduate business administration program at San Diego State University is structured such that students desiring a business administration major are first admitted to the pre-business administration major for their first two years of university work. During these first two years students should complete general education courses and a common core of nine lower division preparation for the business major courses — Accountancy 201, Financial Accounting Fundamentals; 202, Managerial Accounting Fundamentals; Finance 140, Legal Environment of Business; Economics 101, Principles of Economics (Macro); Economics 102, Principles of Economics (Micro); Information and Decision Systems 180, Principles of Information Systems; Information and Decision Systems 290, Business Communication; Mathematics 119, Elementary Statistics for Business; and Mathematics 120, Calculus for Business Analysis. These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C. All students must achieve a passing score on a quantitative competency examination. Students must have completed 56 college units.

**Supplemental admissions criteria must be met before students may declare an upper division major and be eligible for upper division courses.** For current information concerning admissions criteria and procedures, contact the Undergraduate Business Advising Office in the College of Business Administration.

Also, before enrolling in upper division courses offered by the College of Business Administration, students must be competent in the operation of personal computers, including word processing and spreadsheets. These skills are required in upper division business courses.

Business administration majors may not complete a minor in the College of Business Administration.

## Retention Policy

The College of Business Administration is concerned that each individual upper division student makes reasonable academic progress toward earning a degree. To this end, the College will counsel students who have earned less than a "C" (2.0) average each semester. Further, such students will be warned that continued poor performance may result in their removal from any business major.

## Transfer Credit

**Lower Division:** Courses clearly equivalent in scope and content to San Diego State University courses required for minors or as preparation for all business majors will be accepted from regionally accredited United States institutions and from foreign institutions recognized by San Diego State University and the College of Business Administration.

**Upper Division:** It is the policy of the San Diego State University College of Business Administration to accept *upper division transfer credits* where (a) the course content, requirements, and level are equivalent to San Diego State University courses and (b) where the course was taught in an American Assembly of Collegiate Schools of Business accredited program. Exceptions require thorough documentation evidencing the above standards.

## The Majors

Managers are responsible for achieving organizational objectives by coordinating money, materials, machines, and most important of all, the efforts of people. Managers set objectives, establish policies, plan, organize, direct, communicate, and make decisions. Since their principal concern is solving problems, managers are continually defining problems and seeking solutions.

To be an effective manager, an individual needs a broad knowledge of the practice of management, the workings of business and the economy, and the behavior of people. The knowledge obtained in the bachelor's degree should be sufficient to qualify the student for a broad range of beginning managerial positions in business organizations. The graduate in management is prepared not only for managerial functions, but for those functions set within the context of a particular type of operation.

Recent government and private manpower studies indicate that the demand for professional managers should continue to increase. While the types of employment secured by management graduates are varied, a recent study conducted by the management department showed that many graduates have gone into the following types of positions:

Production and operations managers supervise manufacturing and service operations, and are responsible for scheduling production and operations activities and controlling operational costs;

Sales managers, hire, train, and supervise sales personnel; evaluate the work of sales people, and develop incentive programs;

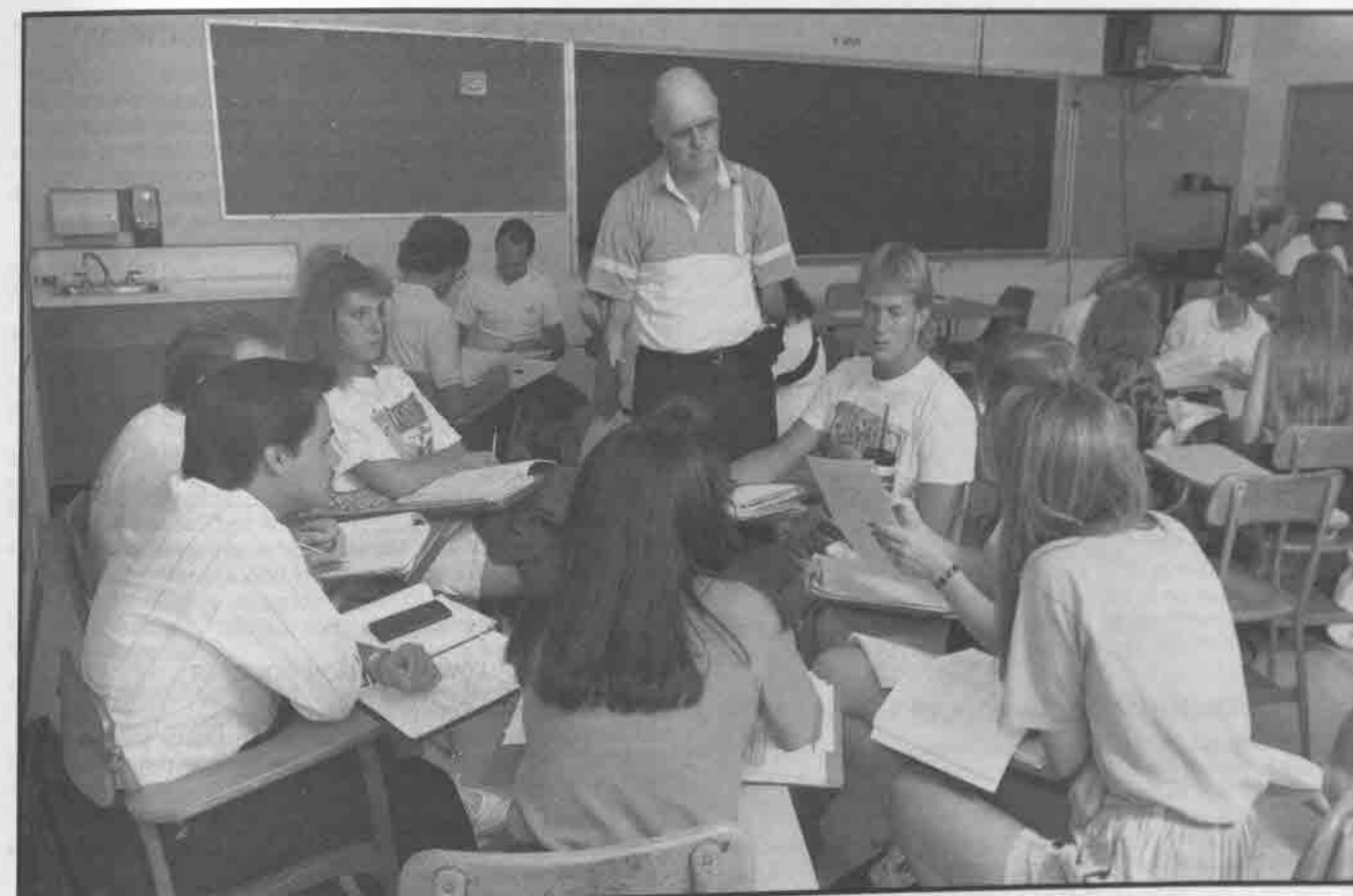
Financial managers supervise operations in banks, security exchanges, credit unions, and savings and loan associations;

Merchandising managers supervise operations in retail stores;

Organization and management analysts design and evaluate organizational structures and jobs.

International managers supervise foreign-based manufacturing and/or marketing operations for American companies; and

Corporate planners develop strategic plans for corporations.



Human resource management is a functionally oriented major which prepares graduates to work in personnel departments as employment specialists, recruiters, job evaluators, compensation specialists, benefits analysts, training officers, labor relations specialists, and industrial relations and human resource managers. Human resource managers are concerned with human problems in business and government organizations. They work on problems concerning employee selection, union relations, pay/benefit scales, leadership, motivation, affirmative action, and equal opportunity.

A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of business administration and economics. A maximum of six lower division units of accountancy courses may be used to satisfy degree requirements. Of the 128 units required for the degree, at least 60 units must be at the upper division level. A "C" average is required in the courses stipulated here for the major.

## Human Resource Management Major

With the B.S. Degree in Business Administration  
(Major Code: 05151)

**Preparation for the Major.** Accountancy 201, 202; Economics 101, 102; Finance 140; Information and Decision Systems 180, 290; Economics 201 or Mathematics 119; and Mathematics 120, or 150, or 155 and 156. (27-30 units)

These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C. **Additional progress requirements must be met before a student is admitted to an upper division major.**

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** Forty-two upper division units to include Management 350, 352, 356, 405, 451, 452, 453, 454, 460; Finance 323; Information and Decision Systems 301, 302; Marketing 370; and three units selected from Management 456; Economics 380, 483; Finance 525; Information and Decision Systems 360, 366, 461, 462; Psychology 326, 470; Sociology 355, 410, 531.

## Management Major

With the B.S. Degree in Business Administration  
(Major Code: 05061)

**Preparation for the Major.** Accountancy 201, 202; Finance 140; Information and Decision Systems 180, 290; Economics 101, 102; Economics 201 or Mathematics 119; and Mathematics 120, or 150, or 155 and 156. (27-30 units)

These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C. **Additional progress requirements must be met before a student is admitted to an upper division major.**

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** Forty-two upper division units consisting of Management 350, 352, 356, 405, 451, 454; Finance 323; Information and Decision Systems 301, 302; Marketing 370; and twelve units selected with the approval of an adviser from the management faculty. Within this area, students may specialize in entrepreneurship, international business, organization and management analysis, small business management, and strategic management.



A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of business administration and economics. A maximum of six lower division units of accountancy courses may be used to satisfy degree requirements. Of the 128 units required for the degree, at least 60 units must be at the upper division level. A "C" average is required in the courses stipulated here for the major.

## Business Major

### For the Single Subject Teaching Credential With the B.S. Degree in Business Administration

All candidates for the single subject teaching credential in business must complete all requirements for the applicable specialization as outlined in this section of the catalog under Policy Studies or Teacher Education. Students must complete the requirements of a major in one of the five departments within the College of Business Administration. In consultation with the single subject credential adviser in the College of Business Administration, undergraduate students must develop programs which fulfill the State credential requirements. All undergraduate majors must demonstrate office skills proficiency. Finance 589, Personal Financial Planning, is required of all teaching credential majors. Of the 128 units required for the degree, at least 60 units must be at the upper division level.

Student program must be approved in advance by the College of Business Administration single subject credential adviser.

## Human Resource Management Minor

The minor in human resource management consists of a minimum of 21 units to include Accountancy 201, Economics 101, 102; Management 350, 352; and six units selected from Management 452, 453, and 460.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Additional requirements must be met before the student may obtain permission to declare a business minor from the business minor adviser in the college of the student's major.

## Management Minor

The minor in management consists of a minimum of 21 units to include Accountancy 201; Economics 101, 102; Management 350, 352, 356, and 451 or 454.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Additional requirements must be met before the student may obtain permission to declare a business minor from the business minor adviser in the college of the student's major.

## Small Business Management Minor (Imperial Valley Campus)

The minor in small business management consists of a minimum of 24 units to include Economics 101, 102; Accountancy 201, 202; Management 350, 450; Marketing 370; and three units selected from Finance 323, Information and Decision Systems 360, Management 352.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Certificate in Business Administration (Imperial Valley Campus)

This certificate is designed primarily for persons who want to gain an increased understanding of essential principles through upper division business courses, and for students who decide to go on to pursue the B.S. degree with a major in either management, finance, accounting, marketing, information systems, insurance, or real estate at the San Diego campus. For those not seeking the B.S. degree it provides a program designed to give self-improvement opportunities for the purpose of securing employment, promotion or upward mobility on the job.

All students seeking admission to the program must have successfully completed 56 transferable lower division units with a grade point average of 2.0. This includes completion of the lower division preparation required for any business administration major, i.e., Accountancy 201, 202; Finance 140; Information and Decision Systems 180, 290; Economics 101 and 102; Mathematics 119 or Economics 201, and Mathematics 120.

The certificate will be awarded upon successful completion of the following courses: Finance 323; Information and Decision Systems 301 or 302; Management 350; Marketing 370; and three units selected from Finance 321, 589; or Management 356. (15 units)

## Courses

### LOWER DIVISION COURSES

#### 150. The Business Enterprise (3) I, II

The business enterprise and its function in society; interrelations of ownership, entrepreneurship, and administration; interactions within the firm and within and among industries.

#### 202. Business Professions (1) I, II Cr/NC

Enables students to evaluate their professional potentials through series of classroom panels of business executives representing wide range of business-industry areas and through personal interview with business executives. Not open to students with credit in Management 402. (Formerly numbered Business Administration 402.)

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 350. Management and Organizational Behavior (3) I, II

Prerequisite: Approved upper division business major, business minor, or another major approved by the College of Business Administration. **Proof of completion of prerequisite required:** Change of major form or other evidence of acceptable major code.

Human behavior at individual, interpersonal, and group levels including effect of organization structure on behavior. Emphasis on managerial roles, historical evolution of management, ethics, and behavior in multicultural contexts. Not open to students with credit in Management 351.

#### 352. Human Resource Management (3) I, II

Prerequisite: Management 350. Recommended: Information and Decision Systems 301.

The employment relationship. Functions and techniques; role of government, unions, behavior, and environmental variables in human resource management.

#### 355. American Business History (3)

Prerequisite: Management 350.

Development of the American business system. Changes in the management and structure of business organizations and the role of business in American society. (Formerly numbered Management 455.)

#### 356. Social and Ethical Issues in Business (3) I, II

Prerequisite: Management 350.

Ethics of various issues in business, including social responsibility, environmental protection, privacy, individual rights, occupational safety and health, product liability, equality of opportunity, and the morality of capitalism.

#### 357. Multinational Business and Comparative Management (3) I, II

Prerequisite: Management 350.

Context of international business, environment, institutions, and business practices. Cultural awareness, sensitivity, interpersonal, and leadership skills needed in an international context.

#### 401. Business Internship (1-3) I, II Cr/NC

Prerequisite: Consent of faculty adviser.

Students to be assigned to business firms to work under the joint supervision of the business firm's supervisor and the course instructor. (Formerly numbered Business Administration 401.)

#### 405. Business Strategy and Integration (3) I, II

Prerequisites: Management 350, Finance 323, Information and Decision Systems 301 or 302, Marketing 370. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Integration of principles and concepts from all fields of business administration. Emphasis on interaction of disciplines for effective strategy and establishment of top management policy through a combination of case study and a business simulation game.

#### 450. Venture Management (3)

Prerequisites: Management 350 and senior standing.

Process of initiating, expanding, purchasing, and consolidating businesses. Concepts, theories, and techniques of managerial innovation and implementation.

#### 451. Organization Design and Change (3) I, II

Prerequisite: Management 350.

Management of organization design and development. Internal and external organizational factors such as environment, size, technology, power, politics, strategy, human resources, job design, and organization culture.

#### 452. Compensation Administration (3) I, II

Prerequisite: Management 352.

Design of compensation programs including determination of wage levels, development of wage structures, performance pay systems, benefit plans, and administration of wages and benefits. Effect of economic, psychological, and legal factors on design and implementation of compensation programs.

#### 453. Issues in Regulation of Employment Relationship (3)

Prerequisite: Management 352.

Public policy and the employment relationship. Patterns and practices of conflict resolutions. Emerging labor sectors and selected issues in the employment relationship.

#### 454. Interpersonal Processes (3) I, II, S

Prerequisite: Management 350.

Conceptual study and experiential training in interpersonal skills of management; acquisition of personal, managerial, and entrepreneurial behavioral competencies.

#### 456. Conceptual Foundations of Business (3) I, II

Prerequisite: Completion of General Education requirement in Foundations II, B., Social and Behavioral Sciences.

Development and evolution of values and ideas characteristic of the business society: individualism, materialism, rationality, technology, and other major components of business ideology. Capitalism/socialism debate. Majors in the College of Business Administration may not use this course to satisfy requirements for General Education.

#### 457. Applications in Management (1-3) I, II

Prerequisites: Senior standing and consent of instructor.

Developing specific skills in areas of management. See Class Schedule for specific content.

#### 458. Management Decision Games (1-3) I, II

Prerequisite: Consent of instructor.

Integrated managerial decision making within a dynamic environment through the use of business games.

#### 460. Personnel Staffing and Development (3) I, II

Prerequisite: Management 352.

Design of personnel activities for matching people and jobs. Includes development of techniques for personnel planning, staffing, appraisal, and development. Environmental constraints including legal and market forces.

#### 466. International Business Strategy and Multinational Enterprises (3) I, II

Prerequisites: Management 350, Finance 323, Marketing 370. Recommended: Management 357.

Business activities across national borders with emphasis on interaction and integration of business disciplines for effective strategy making in multinational enterprises operating in developing, newly industrialized, and developed countries.

#### 496. Selected Topics in Management (1-4) I, II

Prerequisite: Consent of department chair.

Selected areas of concern in management; see Class Schedule for specific content. May be repeated with new content with consent of department chair. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

#### 498. Investigation and Report (1-3) I, II

Prerequisites: Senior standing and consent of instructor.

A comprehensive and original study of a problem connected with management under the direction of one or more members of the management staff. May be repeated with new content. Maximum credit six units.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor.

Individual study. Maximum credit six units.

### UPPER DIVISION COURSE (Also Acceptable for Advanced Degrees)

#### 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 Refer to the Graduate Bulletin.



# Marketing

In the College of Business Administration

OFFICE: Student Services 3229  
TELEPHONE: (619) 594-5317

A Member of the American Assembly of  
Collegiate Schools of Business.

## Faculty

Emeritus: Akers, Apple, Barber, Darley, Hale, McFall, Settle  
Chair: Belch, G.  
Professors: Belch, G., Belch, M., Haas, Krentler, Lindgren,  
Sciglimpaglia, Stampff, Tyagi, Vanier, Wotruba  
Associate Professor: Saghafl  
Assistant Professors: Kanwar, Rochford

## Offered by the Department

Master of Science degree in business administration.  
Master of Business Administration.  
Major in marketing with the B.S. degree in business  
administration.  
Teaching major in business for the single subject teaching  
credential.  
Minor in marketing.

## Admission to the Major

The undergraduate business administration program at San Diego State University is structured such that students desiring a business administration major are first admitted to the prebusiness administration major for their first two years of university work. During these first two years students should complete general education courses and a common core of nine lower division preparation for the business major courses — Accountancy 201, Financial Accounting Fundamentals, 202, Managerial Accounting Fundamentals; Finance 140, Business Law; Economics 101, Principles of Economics (Macro); Economics 102, Principles of Economics (Micro); Information and Decision Systems 180, Principles of Information Systems; Information and Decision Systems 290, Business Communication (not required for accounting majors); Mathematics 119, Elementary Statistics for Business; and Mathematics 120, Calculus for Business Analysis. These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C. All students must achieve a passing score on a quantitative competency examination. Students must have completed 56 college units.

**Supplemental admissions criteria must be met before students may declare an upper division major and be eligible for upper division courses.** For current information concerning admissions criteria and procedures, contact the Undergraduate Business Advising Office in the College of Business Administration.

Also, before enrolling in upper division courses offered by the College of Business Administration, students must be competent in the operation of personal computers, including word processing and spreadsheets. These skills are required in upper division business courses.

Business administration majors may not complete a minor in the College of Business Administration.

## Retention Policy

The College of Business Administration is concerned that each individual upper division student makes reasonable academic progress toward earning a degree. To this end, the College will counsel students who have earned less than a "C" (2.0) average each semester. Further, such students will be warned that continued poor performance may result in their removal from any business major.

## Transfer Credit

**Lower Division:** Courses clearly equivalent in scope and content to San Diego State University courses required for minors or as preparation for all business majors will be accepted from regionally accredited United States institutions and from foreign institutions recognized by San Diego State University and the College of Business Administration.

**Upper Division:** It is the policy of the San Diego State University College of Business Administration to accept *upper division transfer credits* where (a) the course content, requirements, and level are equivalent to San Diego State University courses and (b) where the course was taught in an American Assembly of Collegiate Schools of Business accredited program. Exceptions require thorough documentation evidencing the above standards.

## The Major

Marketing is defined as "the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods and services to create exchanges that satisfy individual and organizational objectives." (American Marketing Association, 1986)

The marketing major studies how products and services are developed, priced, promoted, distributed and sold. The process requires an understanding of buyer and seller behavior within the context of the overall market environment. Added emphasis is given to the important area of global markets with their own particular nuances.

Marketing is an essential part of every business. Not-for-profit organizations also have to market their products/services, and the marketing discipline addresses the special needs of such organizations.

The employment outlook for graduates in marketing continues to be very favorable in all areas, especially in sales for those who hold the bachelor's degree. Some of the more common career opportunities for marketing graduates include:

Sales, which is the most common source of employment for recent marketing graduates. Sales people supervise retailing operation in large department stores, serve as sales representatives for manufacturers and wholesalers, and sell a variety of services and equipment.

Advertising and promotion specialists such as copywriters assemble information on products and services, study the characteristics of potential consumers, and prepare written materials to attract attention and stimulate interest among customers; advertising managers supervise the promotional activities of retailers, wholesalers, or manufacturers; account executives represent advertising agencies in negotiating contracts with clients for advertising services, offer advice in problem areas, and serve as troubleshooters in disputes between clients and the agency; media directors coordinate the purchasing of space in newspapers and magazines and arrange for commercials on radio and television; and production managers supervise the work of copywriters, artists, and other members of an advertising team.

Market research specialists collect, analyze, and interpret data to determine potential sales of a product or a service. They organize and supervise surveys, study the results by using statistical tests, and prepare reports with recommendations for management.

Product specialist/managers plan and coordinate the marketing functions specific to particular product(s)/brands.

Physical distribution specialists are responsible for the warehousing of products, the packing of shipments, and the delivery of orders to retailers or consumers.

Purchasing specialists, commonly known as buyers, acquire the materials and the services that are essential to the operation of a business or organization.

## Marketing Major

With the B.S. Degree in Business Administration  
(Major Code: 05091)

**Preparation for the Major.** Accountancy 201, 202; Economics 101, 102; Finance 140; Information and Decision Systems 180, 290; Mathematics 120, or 150, or 155 and 156; and Economics 201 or Mathematics 119. (27-30 units)

These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C. **Additional progress requirements must be met before a student is admitted to an upper division major.**

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** Forty-six upper division units consisting of Marketing 370, 371, 470, 471, 479; Finance 323; Information and Decision Systems 301, 302; Management 350, 405; sixteen units selected from Marketing 372, 373, 376, 377, 472, 473, 474, 476, 477, 478. A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of business administration and economics. A maximum of six lower division units of accountancy courses may be used to satisfy degree requirements. Of the 128 units required for the degree, at least 60 units must be at the upper division level. A "C" average is required in the courses stipulated here for the major.

## Business Major

For the Single Subject Teaching Credential  
With the B.S. Degree in Business Administration

All candidates for the single subject teaching credential in business must complete all requirements for the applicable specialization as outlined in this section of the catalog under Policy Studies or Teacher Education. Students must complete the requirements of a major in one of the five departments within the College of Business Administration. In consultation with the single subject credential adviser in the College of Business Administration, undergraduate students must develop programs which fulfill the State credential requirements. All undergraduate majors must demonstrate office skills proficiency. Finance 389, Personal Financial Planning, is required of all teaching credential majors. Of the 128 units required for the degree, at least 60 units must be at the upper division level.

Student program must be approved in advance by the College of Business Administration single subject credential adviser.

## Marketing Minor

The minor in marketing consists of a minimum of 21 units to include Marketing 370; Accountancy 201; Economics 102; and 12 units selected from Information and Decision Systems 301, Marketing 371, 372, 373, 376, 377, 470, 471, 472, 473, 474, 477, 478.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Additional requirements must be met before the student may obtain permission to declare a business minor from the business minor adviser in the college of the student's major.

## Courses

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 370. Marketing (3) I, II

Prerequisite: Approved upper division business major, business minor, or another major approved by the College of Business Administration. **Proof of completion of prerequisite required:** Change of major form or other evidence of acceptable major code. Marketing majors must complete this course with a minimum grade of C (2.0).

Function of marketing in the organization and in society. Topics include market analysis and consumer behavior; product planning, pricing, promotion, distribution, and international marketing.

#### 371. Consumer and Buyer Behavior (4) I, II

Prerequisite: Marketing 370 with a minimum grade of C (2.0). **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Personal, social, and cultural factors that distinguish identifiable market segments and influence buyers' and consumers' responses to marketing programs.

#### 372. Retail Marketing Methods (4) I, II

Prerequisite: Marketing 370 with a minimum grade of C (2.0). **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Retail store and direct retail marketing organization, site location, personnel, promotion, purchasing, merchandising, inventory, and control methods.

#### 373. Marketing Communication and Promotion (4)

Prerequisite: Marketing 370 with a minimum grade of C (2.0). **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Communication and promotion theory; advertising, personal and media selling, public relations, and publicity strategy, methods, measurement, and ethics.

#### 376. Global Marketing Strategy (4) I, II

Prerequisite: Marketing 370 with a minimum grade of C (2.0). **Proof of completion of prerequisite required:** Grade report or copy of transcript.

International marketing and trade principles; comparative economic and sociocultural systems; entry, counter-trading, transfer pricing, and promotion.

#### 377. Selling Strategy and Practices (4) I, II

Prerequisite: Marketing 370 with a minimum grade of C (2.0). **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Selling strategy and practices as an integral part of the total marketing system, including territory management, consultative selling, negotiation, and system selling.

#### 470. Marketing Research (3) I, II

Prerequisites: Completion of lower division courses in the major or minor. A minimum grade of C (2.0) in Information and Decision Systems 301 and Marketing 370. **Proof of completion of prerequisites required:** Grade report or copy of transcript. Concurrent registration in Marketing 471.

Methods of information generation and interpretation for marketing decisions; research design, data sources and collection, analysis and reporting techniques.

#### 471. Marketing Research Project (1) I, II

Two hours of activity.  
Prerequisite: Concurrent registration in Marketing 470 or 476. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Marketing research methods, analysis and interpretation of data generated by research. Topics in survey methods and multivariate statistical analysis. Maximum credit two units.

#### 472. Advertising Management (3)

Prerequisites: Marketing 371 and 373; concurrent registration in Marketing 478. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Advertising and sales promotion functions and management; program design, integration, coordination, evaluation, and control.

#### 473. Sales Management (4) I, II

Prerequisite: Marketing 370 with a minimum grade of C (2.0). **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Sales force organization, recruitment, selection, training, compensation, evaluation, and control; sales analysis, costs, budgets, and quotas; coordination with personal selling.



**474. Business Marketing (4) I, II**

Prerequisite: Marketing 370 with a minimum grade of C (2.0). **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Marketing practices and strategy designed for organizational customers; focuses on purchasing practices of organizational customers and development of marketing mixes for private, commercial, institutional, and governmental markets, both domestic and global.

**476. Advanced Marketing Research (3) I, II**

Prerequisites: Marketing 470; concurrent registration in Marketing 471. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Marketing research methods; analysis and interpretation of data generated by research. Topics in survey methods and multivariate statistical analysis.

**477. Social Sector Marketing Strategy (4) I, II**

Prerequisite: Marketing 370 with a minimum grade of C (2.0). **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Marketing strategy transfer and applications to social, political, and governmental issues, concepts, programs, organizations, and personalities.

**478. Advertising Management Project (1)**

Two hours of activity.

Prerequisite: Concurrent registration in Marketing 472. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

An advertising or sales promotion program development project; initial design, pretesting, assessment, and preliminary program element evaluation.

**479. Strategic Marketing Management (4) I, II**

Prerequisites: Marketing 371 and 470. Completion of lower division courses required in the major or minor. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Strategic planning, integration, management, and control of the marketing functions and mix; applying decision techniques for marketing problem solution.

**496. Selected Topics in Marketing (1-4) I, II**

Prerequisite: Consent of department chair.

Selected areas of concern in marketing. See Class Schedule for specific content. May be repeated with new content with consent of department chair. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

**498. Investigation and Report (1-3) I, II**

Prerequisites: Senior standing and consent of instructor.

A comprehensive and original study of a problem connected with marketing under the direction of one or more members of the marketing staff. May be repeated with new content. Maximum credit six units.

**499. Special Study (1-3) I, II**

Prerequisite: Consent of instructor.

Individual study. Maximum credit six units.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.



# Mathematics

In the College of Sciences

OFFICE: Business Administration/Mathematics 203  
TELEPHONE: (619) 594-6191

**Faculty**

Emeritus: Becker, Branstetter, Bryant, Eagle, Fountain, Harris, Harvey, Ho, Marosz, Nower, Riggs, Romano, Smith, Warren, Willerdig

Chair: Elwin

Professors: Anantha, Baase, Beck, Bell, Branca, Bray, Carlson, Carroll, Davis, Deaton, Donald, Drobnies, Eisemann, Elwin, Garrison, Geveci, Gindler, Golbeck, Grone, Hager, Holmes, Howard, Lesley, Lutz, Mahaffy, Marovac, McLeod, Moser, Park, Pierce, Ross, Salamon, Saltz, Short, Sowder, J., Sowder, L., Swinarski, Van de Wetering, Villone, Vuskovic

Associate Professors: Burdick, Dunster, Eckberg, Flores,

Hintzman, Koehler, Lopez, Lui, Macky, Marcus, Stewart,

Thompson, A., Thompson, P., Vinge, Whitman, Whitney

Assistant Professors: Castillo, Hui, Kirschvink, Steffey

**Offered by the Department of Mathematical Sciences**

Master of Arts degree in mathematics.

Master of Science degree in applied mathematics.

Master of Science degree in statistics.

Master of Arts for teaching service with a concentration in mathematics.

Major in mathematics with the B.A. degree in liberal arts and sciences.

Major in mathematics with the B.S. degree in applied arts and sciences.

Emphasis in applied mathematics.

Emphasis in computer science.

Emphasis in statistics.

Teaching major in mathematics for the single subject teaching credential.

Minor in mathematics.

Certificate in introductory mathematics.

Certificate in single subject mathematics.

**The Majors**

Mathematics is considered a discipline in its own right as well as the language of the sciences. Because of the broad scope, the Department of Mathematical Sciences offers a variety of degrees and emphases designed to provide several blends of mathematics and specialties to the student.

The study of mathematics prepares students to solve problems. In recent years, the line between pure and applied mathematics has become blurred, and the applications of mathematics have grown enormously.

Mathematics graduates are employed as teachers; systems analysts, who develop and implement business and other systems for management; customer service and field engineers, who install and maintain equipment in satisfactory operating condition; marketing and sales persons, specializing in business systems; and statisticians.

**Mathematics Major**

**With the B.A. Degree in Liberal Arts and Sciences (Major Code: 17011)**

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in mathematics courses can apply to the degree.

A minor is not required with this major.

**Preparation for the Major.** Mathematics 150 and 151, or 155 and 156 and 157; and 245, 252, 254. (19 units)

Recommended: Physics 195, 195L, 196, 196L, 197, 197L.

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to the section of this catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 27 upper division units, selected with approval of the departmental adviser before starting upper division work, including Mathematics 337, 521A, 524, 534A, and one two-semester sequence chosen from the following: Mathematics 521A-521B, 521A and Computer Science 562; Mathematics 337 and 531; 534A-534B; 534A and 535; 541 and 542; 550 and 553; 551A and 551B; Computer Science 310 and 320 or 520; and nine units of electives. The student must complete an outline for the major and file a copy signed by the adviser with the Evaluations Office.

**Mathematics Major**

**With the B.S. Degree in Applied Arts and Sciences (Major Code: 17031)**

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

The purpose of this major is to allow students with a strong interest in the mathematical aspects of a particular science to apply courses in that science to their major. This should provide a good background for employment or graduate work in applied mathematics or in that science.

Students must see the adviser and be accepted in the major prior to enrolling in Computer Science 310, 320, 514, 530, 550, 554, 558, 560, 562, 572, and certain sections of Mathematics 596.

**Preparation for the Major.** Mathematics 150 and 151, or 155 and 156 and 157; and 245, 252, 254, Computer Science 107. (22 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units to include Mathematics 337, 524, 534A, 534B; at least six units selected from Mathematics 336, 362; 521A, 531, 532, 533, 537; twelve units from a science to which mathematics may be applied (these should be from a single science and must be approved by the B.S. adviser); and six units of electives in mathematics excluding Mathematics 302, 303, 309, 312, 313, 357, 414. Student must complete outline for major and file a copy signed by adviser with Evaluations Office.

**Emphasis in Applied Mathematics (Major Code: 17031)**

This emphasis is designed to train the student in those areas of mathematics which may be applied to formulate and solve problems in other disciplines. The program is designed to qualify the student for employment as an applied mathematician, but the graduate would be well prepared for graduate study in pure or applied mathematics.

**Preparation for the Major.** Mathematics 150 and 151, or 155 and 156 and 157; and 245, 250, 252, 254, Computer Science 107, 108. (28 units)



**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units to include Mathematics 337, 524, 532, 534A, 534B, 541, 350A or 551A; and twelve units selected from Mathematics 336, 362, 521A, 531, 533, 537, 542, 550, 350B or 551B, 561, 596 (approved by the Applied Mathematics adviser), Computer Science 310, 320, 520; and three units of electives excluding Mathematics 302, 303, 312, 313, 357, 414. Student must complete outline for major and file a copy signed by adviser with Evaluations Office.

**Auxiliary Area.** A minimum of 12 units from an area to which mathematics may be applied. A typical program might be Physics 195, 195L, 196, 196L, 197, 197L; or Chemistry 200, 201, and a course for which these are prerequisite; or Biology 200A and 200B; and courses for which these are prerequisite; or Economics 101, 102, 307. The intent is to train the student in an area in some depth. Some latitude may be allowed in the choice of department and mix of courses, but all programs must be approved by the Applied Mathematics adviser. The 12-unit requirement is minimal, and a minor in an approved field is highly recommended.

#### Emphasis in Computer Science (Major Code: 17031)

**Preparation for the Major.** Mathematics 150 and 151, or 155, and 156 and 157; and 245, 252, 254, Computer Science 107, 108, 237. (28 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units in mathematics to include Mathematics 337, 524, 534A, Computer Science 310, and 320 or 520; at least three units from Mathematics 336, 362, 521A, 531, 532, 533, 534B, 537, 561; at least six units from Mathematics 541, 542, Computer Science 524, 530, 560, 562, 564; and twelve units of electives excluding Mathematics 302, 303, 309, 312, 313, 357, 414. Student must complete outline for major and file a copy signed by adviser with Evaluations Office.

#### Emphasis in Statistics (Major Code: 17021)

**Preparation for the Major.** Mathematics 150 and 151, or 155 and 156 and 157; and 245, 250, 252, 254, Computer Science 106 or 107. (25 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units in mathematics to include Mathematics 350A, 350B, 534A, 551A, 551B, 554A; at least twelve units from Mathematics 336, 337, 521A, 524, 531, 532, 533, 534B, 537, 550, 553; and six units of electives excluding Mathematics 302, 303, 309, 312, 313, 357, 414. Student must complete outline for major and file a copy signed by adviser with Evaluations Office.

### Mathematics Major

**For the Single Subject Teaching Credential  
With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 17011)**

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under Policy Studies or Teacher Education. For students completing the single subject teaching credential program, no more than 48 units in mathematics courses can apply to the degree.

This major may be used by students in teacher education as an undergraduate major for the B.A. degree in liberal arts and sciences.

**Preparation for the Major.** Mathematics 150 and 151, or 155 and 156 and 157; and 245, 252, 254, Computer Science 107. (22 units)

Recommended: Physics 195, 195L, 196, 196L, 197, 197L. (12 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to the section of the catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units in mathematics to include Mathematics 302, 357, 414, 521A, 534A; an upper division course in geometry; and six units of electives in mathematics approved by the credential adviser. Student must complete outline for major and file a copy signed by adviser with Evaluations Office.

### Single Subject Waiver Program in Mathematics

Students who do not wish to complete a major in mathematics but want to satisfy the requirements for the single subject waiver program in mathematics must complete the following requirements.

To be admitted to the program, students must demonstrate competency in high school mathematics (algebra through trigonometry) by passing a mathematics placement test.

**Waiver Program.** A minimum of 45-46 units to include Mathematics 150 and 151, or 155 and 156 and 157; and 245, 252, 254, 302, 357, 414, 510, 521A; Computer Science 107; and nine units of electives selected with the approval of the adviser from physical and mathematical sciences. Students may substitute equivalent courses taken at this or other universities only with the approval of the single subject credential adviser. An approved calculus sequence of 12 units may be substituted for the 13-unit calculus sequence (Mathematics 150, 151, 252), thus reducing the total unit requirement from 46 to 45.

### Mathematics Minor.

The minor in mathematics consists of a minimum of 20-22 units in mathematics to include 12 upper division units, at least six of which have as prerequisite Mathematics 151 or 157; or Mathematics 252 and nine upper division units in mathematics, at least six of which have as prerequisite Mathematics 151. The courses selected will be subject to the approval of the minor adviser.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

### Introductory Mathematics Certificate

The purpose of the Introductory Mathematics Certificate program is to provide individuals with appropriate mathematics coursework to qualify them to receive a supplementary authorization in introductory mathematics from the Commission on Teacher Credentialing. Admission is open to individuals who are majoring or have majored in an area other than mathematics and who have the equivalent of two years of high school mathematics and satisfy the Entry-Level Mathematics Examination. In order to enroll in the program, individuals should contact the supplementary mathematics credential adviser in the Department of Mathematical Sciences.

The program consists of 18-20 units to include Mathematics 140, 150 or 155, 302, 312 (with departmental credential adviser permission), 313, 357.

Individuals must complete at least six units at San Diego State University and have a cumulative grade point average of 2.5 in the required courses to qualify for the certificate.

With the approval of the department, a student may apply no more than three units of coursework from the certificate program toward a major. Courses in the certificate may not be counted toward the minor.

### Single Subject Mathematics Certificate

The purpose of the Single Subject Mathematics Certificate program is to provide individuals with appropriate mathematics coursework to qualify them to receive a credential in single subject mathematics. Admission is open to individuals who are majoring or have majored in an area other than mathematics and who have the equivalent of two years of high school mathematics and satisfy the Entry-Level Mathematics Examination. In order to enroll in the program, individuals should contact the single subject mathematics credential adviser in the Department of Mathematical Sciences.

The program consists of 46 units to include Computer Science 107, Mathematics 150 and 151, or 155 and 156 and 157; and 245, 252, 254, 302, 357, 414, 510, 521A, and nine units of electives selected from mathematical or physical sciences.

Individuals must complete at least nine upper division units at San Diego State University and have a cumulative grade point average of 2.5 in the required courses to qualify for the certificate.

### Mathematics Departmental Placement Examination

All students who expect to enroll in Computer Science 106, 107, 108, Mathematics 104, 118, 119, 120, 121, 140, 150, 155, 210, 211, and 250 must satisfy the Entry-Level Mathematics Examination requirement and pass the required part of the Mathematics Departmental Placement Examination. For Mathematics 150 and 155, certain prerequisite courses taken at San Diego State University may be used to satisfy the Mathematics Departmental Placement Examination requirement.

### Computer Science

(See this section of catalog under Computer Science.)

### Courses

(Intermediate algebra is prerequisite to all mathematics courses.)

#### LOWER DIVISION COURSES

##### 104. Trigonometry (2) I, II (CAN MATH 8)

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental Placement Examination, Part IA. **Proof of completion of prerequisites required:** Copy of ELM score or verification of exemption; copy of Placement Examination score or grade report or copy of transcript.

Basic concepts of analytic trigonometry.

##### 118. Topics in Mathematics (3) (CAN MATH 2)

Prerequisites: Satisfaction of Entry-Level Mathematics requirement and qualification on the Mathematics Departmental Placement Examination, Part IA. **Proof of completion of prerequisites required:** Copy of ELM score or verification of exemption; copy of Placement Examination score or grade report or copy of transcript.

Topics selected from algebra, analysis, geometry, logic, probability, or statistics, designed to give student insight into structure of mathematical theories and their applications. Not open to students with credit in Mathematics 140 or higher numbered courses.

##### 119. Elementary Statistics for Business (3) I, II, S

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental Placement Examination, Part IA. **Proof of completion of prerequisites required:** Copy of ELM score or verification of exemption; copy of Placement Examination score or grade report or copy of transcript.

Measures of central tendency/variability; frequency distributions;

Probability; Bayes theorem; probability distributions including binomial, hypergeometric, normal sampling and distributions. Significance testing. Regression and correlation. Not open to students with credit in Mathematics 250. Students with credit or concurrent registration in the following lower division statistics courses other than Mathematics 250 will be awarded a total of four units for the two (or more) courses: Biology 215, Economics 201, Engineering 140, Mathematics 119, Political Science 201, Psychology 270, and Sociology 201.

##### 120. Calculus for Business Analysis (3) I, II, S (CAN MATH 34)

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental Placement Examination, Part IA. **Proof of completion of prerequisites required:** Copy of ELM score or verification of exemption; copy of Placement Examination score or grade report or copy of transcript.

Matrix algebra. Calculus including differentiation and integration. Graphing and optimization. Exponential and logarithmic functions. Multivariable calculus.

##### 121. Calculus for the Life Sciences I (3) I, II (CAN MATH 30)

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental Placement Examination, Part IA. **Proof of completion of prerequisites required:** Copy of ELM score or verification of exemption; copy of Placement Examination score or grade report or copy of transcript.

Basic concepts of differential calculus with life science applications. Not intended for physical science or engineering majors. Not open to students with credit in Mathematics 150 or 155.

##### 122. Calculus for the Life Sciences II (3) I, II (CAN MATH 32)

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement; qualification on the Mathematics Departmental Placement Examination, Part IA; and Mathematics 121. **Proof of completion of prerequisites required:** Copy of ELM score or verification of exemption; copy of Placement Examination score or grade report or copy of transcript.

A continuation of Mathematics 121 with topics from integral calculus and an introduction to elementary differential equations. Not open to students with credit in Mathematics 150 or 155.

##### 140. College Algebra (3) I, II, S

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental Placement Examination, Part IA. **Proof of completion of prerequisites required:** Copy of ELM score or verification of exemption; copy of Placement Examination score or grade report or copy of transcript.

Functional notation, mathematical induction, complex numbers, DeMoivre's theorem, inequalities, binomial theorem, determinants, etc. Not open to students with credit in Mathematics 150 or 155.

##### 150. Single Variable Calculus (5) I, II, S

Prerequisites: Knowledge of algebra, geometry, and trigonometry as demonstrated by either (1) satisfactory completion of Mathematics 104 and 140 at SDSU with grades of C or better; or (2) satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental Placement Examination, Part P for Mathematics 140 and Part III for Mathematics 104. Appropriate combinations of (1) and (2) are also acceptable. **Proof of completion of prerequisites required:** Copy of ELM score or verification of exemption; copy of Placement Examination score or grade report or copy of transcript.

Concepts and techniques of one variable calculus. Differentiation and integration of algebraic, logarithmic, exponential, trigonometric and inverse trigonometric functions of one variable, with applications.

##### 151. Calculus and Analytic Geometry (4) I, II, S (CAN MATH 20)

Prerequisite: Mathematics 150 with minimum grade of C. Plane analytic geometry, polar coordinates, parametric equations in the plane, techniques of integration, indeterminate forms, improper integrals, Taylor's formula and infinite series.



**155. Differential Calculus (3) I, II**

Prerequisites: Demonstrated proficiency in college algebra and trigonometry and satisfaction of the Entry-Level Mathematics requirement. Proficiency in college algebra is demonstrated by either (1) qualification on Part P of the Mathematics Departmental Placement Examination or (2) by obtaining a grade of C in Mathematics 140 which must be taken at this university. Proficiency in trigonometry is demonstrated by either (1) qualification on Part III of the Mathematics Departmental Placement Examination or (2) by obtaining a minimum grade of C in Mathematics 104 which must be taken at this university. **Proof of completion of prerequisites required.**

Limits, differentiation of algebraic and trigonometric functions with applications. Not open to students with credit in Mathematics 150. Mathematics 155, 156, and 157 combined cover same topics as Mathematics 150 and 151.

**156. Integral Calculus (3) I, II**

Prerequisite: Mathematics 155 with a minimum grade of C. Integration of algebraic and transcendental functions with applications. Exponential and logarithmic functions. Techniques of integration. Not open to students with credit in Mathematics 150. Mathematics 155, 156, and 157 combined cover same topics as Mathematics 150 and 151.

**157. Series and Calculus (3)**

Prerequisite: Mathematics 156 with a minimum grade of C. Taylor's formula, infinite series, indeterminate forms, improper integrals, parametric equations, and polar coordinates. Not open to students with credit in Mathematics 151. Mathematics 155, 156, and 157 combined cover the same topics as Mathematics 150 and 151.

**210. Structure and Concepts of Elementary Mathematics I (3) I, II**

This course or its equivalent is required for students working toward a multiple subject credential in elementary education.

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental Placement Examination, Part IA. **Proof of completion of prerequisites required:** Copy of ELM score or verification of exemption; copy of Placement Examination score or grade report or copy of transcript.

Pre-number concepts; development of whole numbers, integers, and their operations; number theory; geometric concepts of two and three dimensional spaces; problem-solving strategies. (Formerly numbered Mathematics 210A.)

**211. Structure and Concepts of Elementary Mathematics II (3) I, II**

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental Placement Examination, Part IA; and Mathematics 210. **Proof of completion of prerequisites required:** Copy of ELM score or verification of exemption; copy of Placement Examination score or grade report or copy of transcript.

Systems of rational numbers and of real numbers, measurement, probability, statistics, and computer applications. (Formerly numbered Mathematics 210B.)

**245. Discrete Mathematics (3) I, II, S**

Prerequisite: Mathematics 122 or 151 or 157. Logic, methods of proof, set theory, number theory, equivalence and order relations, counting (combinations and permutations), solving recurrence relations. (Formerly numbered Mathematics 371.)

**249. Introduction to Biometry (3)**

Prerequisite: Open only to graduate students in the Graduate School of Public Health.

Mathematical probabilistic and statistical principles and methods relevant to biometry. Course cannot be used as part of the major or minor in mathematical sciences.

**250. Basic Statistical Methods (3) I, II**

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental Placement Examination, Part IA. **Proof of completion of prerequisites**

**required:** Copy of ELM score or verification of exemption; copy of Placement Examination score or grade report or copy of transcript.

Descriptive statistics: histogram, measures of central tendency and variability; sampling distributions. Estimation and hypothesis tests for means, proportions, variances, ANOVA models; linear regression and correlation, nonparametric methods. Not open to students with credit in Mathematics 119. Students with credit or concurrent registration in the following lower division statistics courses other than Mathematics 119 will be awarded a total of four units for the two (or more) courses: Biology 215, Economics 201, Engineering 140, Mathematics 250, Political Science 201, Psychology 270, and Sociology 201.

**252. Multivariate Calculus (4) I, II, S (CAN MATH 22)**

Prerequisite: Mathematics 151 or 157 with minimum grade of C. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Concepts and techniques of several variable calculus. Partial differentiation and multiple integration with applications. Analytic geometry and vectors in three dimensions. Line integrals and Green's theorem, differential equations.

**254. Introduction to Linear Algebra (3) I, II, S**

Prerequisite: Mathematics 151 or 157. Matrix algebra, Gauss elimination, determinants, vector spaces, linear transformations, orthogonality, eigenvalues, and eigenvectors. Not open to students with credit in Mathematics 253.

**296. Experimental Topics (1-4)**

Selected topics. 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.

**299. Special Study (1-3)**

Prerequisite: Consent of instructor. Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Intended for Undergraduates)

**NOTE:** Proof of completion of prerequisites required for all upper division courses: Grade report or copy of transcript.

**302. Basic Mathematical Concepts (3) I, II**

Prerequisite: Mathematics 151 or 157. Concepts of secondary school mathematics from teacher's point of view to include mappings, relations, and operations topics from mathematical systems and number theory.

**303. History of Mathematics (3) I, II**

Prerequisites: Mathematics 104 and 140, or students using course to satisfy General Education must complete the General Education requirement in Foundations IIA., Natural Sciences.

Major currents in the development of mathematics from ancient Egypt and Babylon to late nineteenth century Europe.

**309. LOGO in Elementary Mathematics (3) I, II**

Two lectures and three hours of laboratory. Prerequisites: Mathematics 211 and qualification on Mathematics Departmental Placement Examination, Part IA.

Programming in LOGO: graphics, recursion, list processing. Investigation of arithmetic and geometric techniques in elementary mathematics. May not be used as part of the major or minor in the Department of Mathematical Sciences.

**312. Modern Elementary Mathematics I (3) I, II**

Prerequisites: Mathematics 211 and qualification on Mathematics Departmental Placement Examination, Part IA.

Problem solving in mathematics, with attention to topics from the Mathematics Framework for California Public School. Enrollment limited to future teachers in elementary schools. (Formerly numbered Mathematics 310A.)

**313. Modern Elementary Mathematics II (3)**

Prerequisite: Mathematics 302 or 312. Continuation of Mathematics 312, focusing on geometric topics. (Formerly numbered Mathematics 310B.)

**336. Introduction to Mathematical Modeling (3) I**

Prerequisite: Mathematics 254. Models from the physical, natural, and social sciences including population models and arms race models. Emphasis on classes of models such as equilibrium models and compartment models.

**337. Elementary Differential Equations (3) I, II**

Prerequisite: Mathematics 151 or 157. Integration of first-order differential equations, initial and boundary value problems for second-order equations, series solutions and transform methods, regular singularities, eigenvalue problems and separation of variables.

**342A. Methods of Applied Mathematics I (3) I, II**

Prerequisite: Mathematics 252. Vector analysis, the divergence and Stoke's theorem and related integral theorems. Matrix analysis, eigenvalues and eigenvectors, diagonalization. Introduction to linear ordinary differential equations. Not open to students with credit in Mathematics 253 or 341A.

**342B. Methods of Applied Mathematics II (3) I, II**

Prerequisite: Mathematics 342A. Laplace transform and power series techniques for ordinary differential equations, Legendre polynomials, Bessel functions, solution of second-order linear partial differential equations by means of separation of variables, Fourier series, Sturm-Liouville theory, orthogonal expansions. Not open to students with credit in Mathematics 341A.

**342C. Methods of Applied Mathematics III (3) II**

Prerequisite: Mathematics 342B. Complex variables, residue theorem and application, Fourier transform and its application, relationship with the Laplace transform, Green's functions. Not open to students with credit in Mathematics 341B.

**350A. Statistical Methods (3) I**

Prerequisite: Mathematics 119 or 250 or Biology 215. One- and two-sample hypothesis tests; paired difference tests, tests for variances, analysis of variance. Linear regression and correlation. Chi-square tests. Simple nonparametric tests. The power of hypothesis tests.

**350B. Statistical Methods (3) II**

Prerequisite: Mathematics 350A. Multiple regression, factorial models and nonparametric methods, all with emphasis on applications.

**357. Probability and Statistics (3) I, II**

Prerequisite: Mathematics 150. Probability, measures of central tendency and dispersion, characteristics of frequency functions of discrete and continuous variates; applications. Highly recommended for all prospective secondary school teachers of mathematics.

**362. Optimization Theory (3) II**

Prerequisite: Mathematics 254. Necessary and sufficient conditions for optimizations in one and several variables. Euler's equation. Lagrange multipliers, linear programming, the simplex method. Introduction to duality and linear programming.

**414. Mathematics Curriculum and Instruction (3)**

Prerequisites: Senior standing and 12 upper division units in mathematics.

Historical development of mathematics and mathematics curriculum. Principles and procedures of mathematics instruction in secondary schools. For secondary and postsecondary teachers and teacher candidates. Course cannot be used as part of the major or minor in mathematical sciences with exception of major for the single subject teaching credential. (Formerly numbered Mathematics 314.)

**496. Experimental Topics (1-4)**

Selected topics. 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.

**498. Directed Readings in Mathematics Literature (1)**

Prerequisite: Credit or concurrent registration in the upper division mathematics course in which readings are to be undertaken. Individually directed readings in mathematics literature. May be repeated for a maximum of three units, taken each time from a different instructor.

**499. Special Study (1-3) I, II**

Prerequisite: Consent of instructor. Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

**NOTE:** Proof of completion of prerequisites required for all upper division courses: Grade report or copy of transcript.

**509. Computers in Teaching Mathematics (3)**

Two lectures and three hours of laboratory. Prerequisite: Mathematics 252 or 312. Solving mathematical tasks using an appropriate computer language. Using software for teaching mathematical concepts. Developing problem-based curricula. Intended for those interested in middle or high school mathematics teaching.

**510. Introduction to the Foundations of Geometry (3) I, II**

Prerequisite: Mathematics 122, 151, or 157. The foundations of Euclidean and hyperbolic geometries. Highly recommended for all prospective teachers of high school geometry.

**511. Projective Geometry (3)**

Prerequisite: Mathematics 254. Concurrence of lines, collinearity of points and other properties of figures not altered by projections; homogeneous coordinates and analytic properties of projective transformations.

**512. Non-Euclidean Geometry (3)**

Prerequisite: Mathematics 122, 151, or 157. 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. Not open to students with credit in Mathematics 520A-520B.



**531. Partial Differential Equations (3) I**

Prerequisite: Mathematics 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.

**537. Ordinary Differential Equations (3)**

Prerequisite: Mathematics 337.  
Theory of ordinary differential equations: elementary existence and uniqueness, dependence on initial conditions and parameters, linear systems, stability and asymptotic behavior, plane autonomous systems, series solutions at regular singular points. Not open to students with credit in Mathematics 530.

**541. Introduction to Numerical Analysis and Computing (3) I, II, S**

Prerequisites: Mathematics 254 or 342A; and Computer Science 107 or Engineering 120.  
Solution of equations of one variable, direct methods in numerical linear algebra, least squares approximation, interpolation and uniform approximation, quadrature. (Formerly numbered Mathematics 541A.)

**542. Introduction to Numerical Solutions of Differential Equations (3) II**

Prerequisites: Mathematics 337 and 541.  
Initial and boundary value problems for ordinary differential equations. Partial differential equations. Iterative methods, finite difference methods, and the method of lines. (Formerly numbered Mathematics 541B.)

**550. Probability (3) I, II, S**

Prerequisite: Mathematics 151.  
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, II**

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. (Formerly numbered Mathematics 554.)

**554B. Advanced Computer Oriented Statistical Analysis (3) II**

Prerequisite: Mathematics 554A.  
Analyze problems in multivariate ANOVA, factor analysis, repeated measures, logistic regression, 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.

**556. Computer Mathematics and Symbolic Programming (3)**

Prerequisites: Computer Science 107 and Mathematics 254.  
Use of mathematical and symbolic computer packages such as MACSYMA, SMP, MAPLE, REDUCE, and MUMATH to analyze problems in various branches of mathematics and computer science.

**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.

**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.

**GRADUATE COURSES**  
Refer to Graduate Bulletin.

# Mechanical Engineering

In the College of Engineering

OFFICE: Engineering 323M  
TELEPHONE: (619) 594-6067

The undergraduate degree in Mechanical Engineering is accredited by the Accreditation Board for Engineering and Technology, Inc.

**Faculty**

Emeritus: Bauer, Bilterman, Fitz, Morgan, Rao, Stone  
Chair: Pinto  
Professors: Bedore, Craig, Hoyt, Hussain, Mansfield, Murphy, Ohnysty, Pinto  
Associate Professors: Güven, Lowrey, Lybarger, Thompson  
Assistant Professor: Bhattacharjee

**Offered by the Department**

Master of Science degree in mechanical engineering.  
Major in mechanical engineering with the B.S. degree.

**Transfer Credit**

No credit will be given for upper division engineering coursework taken at an institution having an engineering program which has not been accredited by the Accreditation Board for Engineering and Technology, Inc., unless the student successfully completes the first 12 units of engineering work attempted at this university. At that time, and upon recommendation of the department, credit will be given for the unaccredited work.

**General Education**

Students will complete a minimum of 50 units in General Education, to include a minimum of nine upper division units taken after attaining junior class standing. At least three of the nine upper division units must be taken from Explorations; the remaining six units may be taken from Explorations or from specifically approved upper division course substitutions for Foundations areas B and C (Social and Behavioral Sciences and Humanities). No more than twelve units may be used for General Education credit from any one department or academic unit.

**I. Communication and Analytical Reasoning: 15 units**

- A. Written Communication (6 units to include):
  - 1. Composition (3 units)
  - 2. Intermediate Composition (3 units)
- B. Oral Communication (3 units)
- C. Mathematics (6 units) applicable to General Education
  - Mathematics 150
  - Mathematics 151

**II. Foundations: 29 units**

- A. Natural Science (17 units to include):
  - 1. Life Science (3 units)
  - 2. Physical Science (14 units)
    - Chemistry 200
    - Physics 195
    - Physics 196
    - Physics 197
- B. Social and Behavioral Sciences (3 units)
- C. Humanities (9 units to include three of the four areas 1, 2, 3, 4.)

**III. Explorations: 6 units**

- A. Three units of upper division cultural diversity Explorations coursework from the area in Humanities not selected in Foundations.
- B. Three units of upper division social sciences coursework. Three units of a six-unit upper division American Institutions sequence from any department but History may be counted toward the Explorations requirement.

**The Major**

Mechanical engineers invent solutions to material problems, questioning how things work, making things work better, and creating ideas for doing things in new and different ways. A newer focus for mechanical engineers is in the area of biomedical engineering, which is the application of quantitative engineering methods to the understanding and solution of biological and physiological problems. Another focus is the design of manufacturing systems. This involves improving quality and speed of manufacture through implementation of computer technology via robots and other automation equipment. Thus, Computer Aided Design (CAD), Computer Aided Manufacturing (CAM), and Computer Integrated Manufacturing (CIM) are all newer aspects of mechanical engineering education.

Jobs in mechanical engineering include developing products to improve air and water quality, inventing more efficient energy sources, designing farm equipment to improve crop yield throughout the world, and developing systems for biological research as well as life-saving medical equipment. A mechanical engineer, now more than ever, is someone who can translate scientific theories into the real products and processes to improve the quality of life.

A number of factors indicate that employment opportunities for mechanical engineering graduates will increase. Engineers now comprise nearly 40 percent of the top management of U.S. industrial firms. As in other fields, engineering job openings for women are increasing dramatically.

The future depends on solving the worldwide problems of energy shortages, environmental pollution, world health, and inadequate food production. Mechanical engineers are heavily involved in finding those solutions.

**Mechanical Engineering Major**  
With the B.S. Degree (Major Code: 09101)

All students in mechanical engineering pursue a common program of basic sciences, engineering, and mechanical engineering fundamentals. In addition, students are provided with the opportunity to select a pattern of study to satisfy their areas of interest. This pattern of study is indicated in the sequence below as "professional electives" and may be selected from available courses in controls, energy conversion, gas dynamics, heat transfer, machine design, materials, thermodynamics, vibrations, and other areas. *The students' choice of elective courses must be made in consultation with their adviser and documented by the filing of an approved master plan during the second semester of their freshman year.*

All mechanical engineering students are required to file a master plan. The purpose of the plan is to facilitate proper academic advice. The plan is to be filed after consultation with a faculty member of the department. Once filed, the plan must be reviewed each semester with the assigned adviser before advanced registration. Filing the master plan will normally occur in Mechanical Engineering 195. Transfer students must comply with this requirement prior to enrollment in ME 310.

*Students must complete all upper division courses in the major within seven years prior to graduation. Students who will have completed any of those courses more than seven years before the projected date of graduation must contact the department chair for information about ways to certify knowledge of current course content.*

**Upper Division Writing Requirement.** Passing the departmental screening examination, a part of Mechanical Engineering 310, or passing the University Writing Examination or English 503W with a grade of C (2.0) or better.

**NOTE:** See following page for recommended sequence of courses for the major in mechanical engineering.



FRESHMAN YEAR			
Fall Semester	Units	Spring Semester	Units
Chem. 200, General Chemistry .....	5	Math. 151, Calc. and Anal. Geom. ....	4
Math. 150, Single Variable Calculus .....	5	ME 195, Graphics and Processes .....	3
Engr. 120, Engr. Problem Analysis .....	2	Phys. 195, Principles of Physics .....	3
General Education .....	3	General Education .....	6
	15		16
SOPHOMORE YEAR			
Fall Semester	Units	Spring Semester	Units
Math. 252, Multivariable Calculus .....	4	Phys. 197, Principles of Physics .....	3
EM 200, Statics .....	3	EE 203, Principles of Elec. Engr. ....	3
ME 260, Engineering Materials .....	3	EM 220, Dynamics .....	3
Phys. 196, Principles of Physics .....	3	Engr. 280, Methods of Analysis .....	3
General Education .....	3	ME 296, Elem. of Therm. & Mech. Sys. ....	3
	16	General Education .....	3
			18
JUNIOR YEAR			
Fall Semester	Units	Spring Semester	Units
CE 301, Intro. to Solid Mechanics .....	3	EE 303, Electronics, Instrum., and .....	
ME 310, Engr. Design Introduction .....	3	Electrical Energy Conversion .....	3
ME 340, Metallic Materials .....	3	EM 340, Fluid Mechanics .....	3
ME 350, Thermodynamics .....	3	ME 314, Engr. Design: Mech. Comp. ....	3
ME 390, Engr. Systems Lab. Intro. ....	2	ME 395, Engr. Sys. Lab. Applic. ....	2
General Education .....	3	ME 450, Engr. Thermodynamics .....	3
	17	General Education .....	3
			17
SENIOR YEAR			
Fall Semester	Units	Spring Semester	Units
ME 470, Principles of Heat Transfer .....	3	ME 490B, Engr. Design: Project .....	2
ME 490A, Engr. Des.: Project .....	2	# Professional Electives .....	6
ME 510, Adv. Machine Design .....	3	General Education .....	6
ME 512, Simulation of Engr. Sys. ....	3	American Institutions .....	3
# Professional Electives .....	3		
American Institutions .....	3		
	17		17

# Approved as part of student's master plan by the department chair.

## Courses

### LOWER DIVISION COURSES

- 190. Engineering Drawing (2) I, II**  
Six hours of laboratory.  
Development of drawing skills and techniques for engineers. Elementary orthographic and pictorial drawing, sections, dimensioning, instrument and free-hand drawing. Drawing as an aid to visualization and design.
- 195. Engineering Design: Graphics and Processes (3) I, II**  
One lecture and six hours of laboratory.  
Prerequisite: One year of high school drafting or Mechanical Engineering 190.  
Graphic communication for engineers. Presentation and interpretation of engineering drawings using instruments and freehand sketches. Manufacturing processes and their influence on design decisions.
- 260. Engineering Materials (3) I, II (CAN ENGR 4)**  
Prerequisites: Chemistry 200 and credit or concurrent registration in Engineering Mechanics 200 or 202.  
Atomic and molecular structure of materials utilized in engineering. Analysis of the relationships between structure of materials and their mechanical, thermal, electrical, corrosion and radiation properties, together with examples of specific application to engineering problems.

### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 310. Engineering Design: Introduction (3) I, II

Two lectures and three hours of guided design activities.  
Prerequisites: Mechanical Engineering majors—English 200 or Linguistics 200 with a grade of C or better, Engineering 120, Mechanical Engineering 195, and Engineering Mechanics 220; non-Mechanical Engineering majors—English 200 with a grade of C or better. To be eligible for the departmental upper division writing test in this class, students must have completed 60 units, fulfilled the Writing Competency requirement, and completed the General Education requirement in Written Communication. Every mechanical engineering student must have a master plan on file before enrolling in Mechanical Engineering 310.

Professional approach to engineering design problems. Problem definition, information gathering, feasibility studies, analysis, final design and communication. Several design studies are completed.

#### 314. Engineering Design: Mechanical Components (3) I, II

Prerequisites: Mechanical Engineering 310 and Civil Engineering 301.  
Application of mechanics, physical properties of materials, and solid mechanics to the design of machine elements. Student design projects.

#### 340. Metallic Materials (3) I, II

Prerequisite: Mechanical Engineering 260.  
Physical metallurgy and properties of metals. Influence of processing on the properties of metals. Design criteria for selection of materials.

#### 350. Thermodynamics (3) I, II

Prerequisites: Mathematics 252 and Engineering Mechanics 200, both with a grade of C or better.  
Development of the basic laws of thermodynamics and their application to engineering systems.

#### 352. Thermodynamics and Heat Transfer (3) I, II

Prerequisites: Mathematics 252 with a grade of C or better, and Engineering Mechanics 202 or 220.  
First and second laws of thermodynamics; heat conduction, convection and radiation. Not acceptable for mechanical engineering majors.

#### 390. Engineering Systems Laboratory: Introduction (2) I, II

One lecture and three hours of laboratory.  
Prerequisites: English 200 or Linguistics 200, Electrical Engineering 203, Engineering 280, all with a grade of C or better; and credit or concurrent registration in Civil Engineering 301.  
Engineering experimentation. Instrumentation theory, data analysis, technical communication and experiment design. Principles of experimentation taught in lecture and applied in experiments selected from subdisciplines in mechanical engineering.

#### 395. Engineering Systems Laboratory: Applications (2) I, II

One lecture and three hours of laboratory.  
Prerequisites: Mechanical Engineering 350 and 390.  
Advanced experiment design, data acquisition theory and data analysis. Experience in designing, conducting and reporting on experiments to acquire knowledge about engineering systems.

#### 410. Creativity in Design (3)

Methods to stimulate creativity in design. Investigation of hidden blocks to creative thought. Emphasis on placing students in a design situation requiring an inventive or creative solution.

#### 450. Engineering Thermodynamics (3) I, II

Prerequisites: Mechanical Engineering 350 and credit or concurrent registration in Engineering Mechanics 340.  
Further development of the laws of classical thermodynamics. Applications to the analysis and design of energy conversion systems.

#### 470. Principles of Heat Transfer (3) I, II

Prerequisites: Engineering 280 with a grade of C or better, Engineering Mechanics 340, and Mechanical Engineering 350.  
Heat transfer by conduction, convection, radiation, and combinations thereof.

#### 490A-490B. Engineering Design: Senior Project (2-2) I, II

Six hours of guided design activities.  
Prerequisites for 490A: Mechanical Engineering 314, 395, and credit or concurrent registration in Mechanical Engineering 470, 512, and Electrical Engineering 303.  
Prerequisites for 490B: Mechanical Engineering 450, 490A.  
Applications of engineering principles and design techniques to the designing, building, and testing of an engineering system. A single project is completed in this two-course sequence and is judged completed upon presentation of an oral and a written report.

#### 496. Advanced Mechanical Engineering Topics (1-3) I, II

Prerequisite: Consent of instructor.  
Modern developments in mechanical engineering. See Class Schedule for specific content. Maximum credit six units for any combination of Mechanical Engineering 496, 499 and 596.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units for any combination of Mechanical Engineering 496, 499 and 596.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 510. Advanced Machine Design (3) I, II

Prerequisites: Mechanical Engineering 314 and 340.  
Application of advanced topics in strength of materials to the design of mechanical elements. Energy methods, stress concentrations, curved beams, and thick-walled cylinders. Practical application of principles through case studies or design projects.

#### 512. Simulation of Engineering Systems (3) I, II

Two lectures and three hours of laboratory.  
Prerequisites: Mechanical Engineering 314 and 395.  
Analysis and design of engineering systems using modern analog and digital computers. Simulation of dynamic systems. Application to problems in mechanics, heat transfer, thermodynamics, and control systems.

#### 516. Engineering Design: Mechanisms (3)

Prerequisite: Mechanical Engineering 512.  
Design of linkages, cams, and gears wherein displacement, velocity and acceleration are paramount considerations.

#### 520. Introduction to Mechanical Vibrations (3)

Prerequisites: Mechanical Engineering 512 and Civil Engineering 301.  
Analysis of mechanical vibration; single- and multi-degree of freedom systems; free and forced vibrations; vibration isolation; vibration absorbers. Theory of vibration measuring instruments.

#### 521. Vibration, Shock and Noise Measurements (3)

Prerequisites: Mechanical Engineering 512 and Civil Engineering 301.  
Experimental problems utilizing vibration excitation equipment, recording systems, transducers, sound analysis systems and analog computers.

#### 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)

Prerequisite: Mechanical Engineering 340.  
Fundamentals of plastics; reinforced plastics, and ceramics. Analysis of effect of physical properties upon selection of a material for use in design.

#### 542. Production Engineering (3)

Prerequisites: Mechanical Engineering 340 and Engineering 280 with a grade of C or better.  
Quantitative techniques including regression analysis, linear programming, network and simulation methods as applied to planning, forecasting, scheduling, and maintaining of modern production and manufacturing systems.

#### 544. Advanced Manufacturing Processes (3)

Prerequisites: Mechanical Engineering 195, 314, 340, 350, and Engineering 280 with a grade of C or better.  
Theory and techniques of metal cutting, forming, non-cutting metal removal, computer controlled machining.



**546. Computer Aided Manufacturing (3)**

Prerequisites: Mechanical Engineering 195, 340; Engineering 120 and 280, both with a grade of C or better.

Computer controlled manufacturing and assembly techniques and devices. Data bases and special languages.

**570. Thermal Systems Analysis and Design (3)**

Prerequisite: Mechanical Engineering 470.

Analysis, design, and optimization of thermal systems using micro-computers. 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 the analysis of a broad spectrum of energy conversion devices from an engineering point of view.

**582. Thermal Environmental Engineering (3)**

Prerequisite: Mechanical Engineering 470.

Psychrometrics. Mass transfer. Two-phase flow. Heat transfer. Thermoelectric refrigeration. Change of phase.

**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.

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**  
Refer to the Graduate Bulletin.



# Mexican American Studies

In the College of Arts and Letters

OFFICE: Adams Humanities 3160  
TELEPHONE: (619) 594-6452

**Faculty**

Chair: Ortiz

Professors: Griswold del Castillo, Herzog, Rodriguez

Associate Professors: Ortiz, Villarino

Assistant Professor: Del Castillo

**Offered by the Department**

Major in Mexican American studies with the B.A. degree in liberal arts and sciences.

Minor in Mexican American studies.

Certificate in United States-Mexico Border studies.

**The Major**

The Mexican American studies major emphasizes the unique cultural experience of the Mexican American. The program is open to all students who wish to study in an academic environment that recognizes the richness of the Mexican American past and present.

Mexican American studies majors may choose one of two areas: *Humanities*, which includes courses designed to increase the student's awareness of the Chicano culture, as well as intellectual, aesthetic, literary, historical, ethical, and human values; and *Social Science*, including courses which analyze social institutions and how they affect the individual and also emphasize contemporary Mexican American issues as they relate to the larger society. Areas of study include political science, anthropology, economics, sociology, and history.

Bilingual/bicultural graduates are sought after more than ever before. A student with a major or minor in Mexican American studies has a good possibility of securing a position and advancing. Although employment opportunities in regular classroom teaching and other careers have remained fairly constant, the number of positions for bilingual/bicultural graduates has continued to increase.

Mexican American studies is also an excellent major as preparation for postgraduate study in various professional schools. For example, students can continue their studies for advanced degrees in law, with positions specializing in minority or barrio problems; social work, as a medical or psychiatric social worker in a minority community; public administration; librarianship; and business administration, with careers in accounting, marketing, bank management, and insurance.

**Advising**

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

**Mexican American Studies Major**

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 22131)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in Mexican American studies courses can apply to the degree.

A double major is strongly recommended for students majoring in Mexican American studies.

Students majoring in Mexican American studies must complete a minor in another field approved by the adviser in Mexican American studies.

**Preparation for the Major.** Mexican American Studies 110A-110B, (6 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Students are encouraged to satisfy this language requirement in Spanish. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units to include Mexican American Studies 301 and 21 units selected from one area of specialization: (social sciences) Mexican American Studies 303, 304, 306, 320, 324, 350A-350B, 355, 480, 498; or (humanities) Mexican American Studies 310, 314A, 314B, 324, 335, 357, 375, 376, 380, 396W, 464, 597; or (border studies) Mexican American Studies 306, 355, 375, 380, 498, Economics 565, History 551B, Political Science 568. Up to six units, with appropriate content, can be applied to each area of specialization from Mexican American Studies 496, 499, and 596.

**Mexican American Studies Minor**

The minor in Mexican American studies consists of a minimum of 18 units in Mexican American studies to include Mexican American Studies 110A-110B and 12 units of upper division courses selected from one area of specialization: (social sciences) Mexican American Studies 301, 303, 304, 306, 320, 324, 350A-350B, 355, 498; or (humanities) Mexican American Studies 310, 314A, 314B, 335, 357, 375, 376, 380, 396W, 464, 597; or (border studies) Mexican American Studies 306, 355, 375, 380, 498, Economics 565, History 551B, Political Science 568. Up to six units, with appropriate content, can be applied to each area of specialization from Mexican American Studies 496, 499, and 596.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

**United States-Mexico Border Studies Certificate**

The United States-Mexico Border Studies Certificate program is an interdisciplinary program integrating border studies courses from academic units throughout the campus. The objective of the program is to train students from diverse academic backgrounds within a multidisciplinary border studies curriculum that provides direct experience in border institutions and policy issues in both the public and private sectors. The program requires 21 units and a level of Spanish proficiency, 3 on a scale of 5, as indicated on the Foreign Service Language Examination. Students must apply for admission to the program before the completion of nine certificate units and are required to plan their program with an adviser. Contact the Department of Mexican American Studies.

Required courses: Mexican American Studies 355 and three units of an internship, either Mexican American Studies 498 or an internship from the student's major if it is carried out as a border-oriented internship.

Fifteen units selected from the following areas, at least three units from each area. In addition to the courses listed and with the approval of the adviser, students may take border-related courses from other areas, but no more than six units can be from a single department. Courses in the certificate may not be counted toward the minor.

**Evolution of Social and Environmental Regions:** Mexican American Studies 375; Geography 496; History 551B.



*Political and Economic Systems:* Mexican American Studies 306, Economics 458, 496, 565; Political Science 568.

*Cultural and Social Institutions:* Mexican American Studies 376; Education 451.

*Special Problems/Human Services:* Mexican American Studies 496, Border Research Topics; Journalism 496, Latin America and the Media; Political Science 390, Dynamics of Modern International Crises.

## Courses

### LOWER DIVISION COURSES

#### 100. The Mexican American Heritage (3)

Cultural achievements and thought of Spanish speaking peoples of North America; development of aesthetic and ethical values. North American intellectual history and influence of philosophical orientations of native and Mestizo peoples. Implications for social change.

#### 110A-110B. Introduction to Mexican American Studies (3-3)

Introduction to the culture and the civilization of the Mexican American. Semester I: History; Mexican and US roots; the new identity. Semester II: Contemporary social conditions, public policy, and politics affecting Mexican Americans.

#### 111A. Oral Communication (3)

Training in the process of oral (speech) expression: addressing the barrio; formal delivery.

Mexican American Studies 111A is equivalent to Speech Communication 103. Not open to students with credit in Africana Studies 140 or Speech Communication 103 or 204.

#### 111B. Written Communication (3)

Prerequisites: Satisfaction of the English Placement Test and Writing Competency requirements. (See Graduation Requirements section of catalog.) **Proof of completion of prerequisites required:** Copy of EPT or competency scores or verification of exemption; or proof of Cr in Academic Skills 92A or 92B or 97A or 97B.

Training for students from Hispanic backgrounds in the process of written expression. English grammar and composition; the essay, the term paper. Mexican American Studies 111B is equivalent to English 100. Not open to students with credit in English 100 or higher-numbered composition or creative writing course or Africana Studies 120 or Linguistics 100.

#### 120A-120B. The Mexican American Role in the American Political System (3-3)

Semester I: Relationship between the Mexican American community and the American political system. Semester II: The Mexican American in relation to his city, county, and state institutions in California. Meets the graduation requirement in American Institutions.

#### 140. History and Sociology of Racism (3)

Survey and analysis of majority group racism and its effects upon minority ethnic groups and society.

#### 141A-141B. History of the United States (3-3)

Spanish, Mexican, and Chicano influences on US history. Semester I: Comparative development of US and Mexico to 1865. Semester II: Mexican Americans in US history; US and Mexican national histories compared from 1865 to the present. Meets the graduation requirement in American Institutions.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 301. Political Economy of the Chicano People (3)

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors. Recommended: Mexican American Studies 110A-110B.

Political and economic roots of the oppression and exploitation of the Chicano from historical, institutional and theoretical points of view. Parallels between the experience of the Chicano and other Hispanic groups.

#### 303. Mexican American Community Studies (3) II

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors. Recommended: Mexican American Studies 110A or 110B.

Mexican American communities from a comparative perspective. Systematic inquiry into methods and issues in community studies. Contemporary social, institutional, and political affairs.

#### 304. Drug Abuse in the Mexican American Community (3) I

Substance abuse among segments of the Mexican American population. Theoretical and practical issues and solutions.

#### 306. Mexican Immigration (3) II

Immigration from Mexico in the context of US immigration history and policies. Comparative study of political, economic, and cultural factors. Undocumented immigration and current US law.

#### 310. Mexican and Chicano Music (3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Music of Mexico and the Southwest including folk dances appropriate for children and adults. Emphasis on the corrido, its history and development in Mexico and the US. Course will be taught bilingually.

#### 314A. Rondalla I (3) I

Six hours of activity.  
Prerequisites: Upper division standing; Mexican American Studies 301 and consent of instructor.

Music of pre-Columbian and various Mexican romantic historical genres, i.e. corridos (ballads), musica Jarocha (music of Veracruz), boleros (romantic music), musica Nortena (music of Northern Mexico). Emphasis on cultural context, style, and techniques. (Formerly numbered Mexican American Studies 314.)

#### 314B. Rondalla II (3) II

Six hours per week.  
Prerequisite: Mexican American Studies 314A.  
Development of intermediate skills in Rondalla music, instruments, and their use. Three-voice harmony, guitar, requinto, and guitarron.

#### 320. Mexican American Life Styles (3)

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Social relations and cultural evolution in the Mexican American community, female-male relationships, and family. Influence of Spanish-Mexican feudal cultural heritage and US industrial-capitalist society. Comparative cross-cultural social science methodology. Includes interview techniques.

#### 324. Gramatica Cantada (Pedagogia, Musica y Cultura) (3)

Methods and materials of Spanish instruction through music of Mexico and the Southwest.

#### 335. Mexican American Literature (3)

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
Ideas, forms, history of significant Mexican American prose, poetry and other literary genres.

#### 340. Mexican Women in Historical Perspective: Pre-Columbian to 1848 (3)

Prerequisites recommended: Mexican American Studies 111B and upper division standing.

US-Mexican history or Mexican women from Pre-Columbian Mexican era to annexation of Mexico's northern territories by US. Theoretical and methodological issues appraised as are gender-based norms, class and racial distinctions, and significance of female historical figures to Mexican identity.

#### 350A-350B. Chicano History (3-3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Semester I: Review of indigenous origins; Hispanic institutions and northward expansion; the Mexican Republic. Semester II: Early US encroachment and the Mexican American War; Chicano influences and contributions; the multilingual and multicultural Southwest.

#### 355. The United States-Mexico International Border (3) I

Prerequisites: Upper division standing; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

History, culture, economics, and politics of US/Mexico border region. Theories and policy issues surrounding development of region; local regional problems and major agencies, institutions, organizations addressing these problems.

#### 357. US/Mexico Border: Urbanism and Architecture (3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors. Recommended: Mexican American Studies 355.

Study of international border architecture by surveying urban design and architecture traditions in Mexico and the United States. Focus on pre-colonial and colonial urban design, nineteenth century traditions, modern architecture, economic forces shaping urban design, Hispanic architecture in the US sunbelt.

#### 375. US/Mexico Border History (3) II

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors. Recommended: Mexican American Studies 110A.

Historical problems and movements in the US/Mexico border region, in particular those impacting Spanish-speaking populations on both sides of the border. Contemporary border issues from a historical perspective.

#### 376. Mexican American Culture and Thought (3)

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Intellectual history of the Mexican American as a synthesis of different cultural traditions and perspectives. Philosophical concepts from pre-Cortesian times to the present.

#### 380. US/Mexico Borderlands Folklore (3) I

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors. Recommended: Mexican American Studies 110A or 110B.

Border folklore; myths, rituals, legends, sayings, and songs of Chicanos and Mexicanos in the US.

#### 396W. Chicano Prose: Creative Writing (3)

Prerequisite: Satisfies University Upper Division Writing requirement for students who have completed 60 units, fulfilled the Writing Competency requirement, and completed the General Education requirement in Written Communication. **Proof of completion of prerequisites required:** Test scores or verification of exemption; grade report or copy of transcript.

A writing workshop. Mutual criticism. Exploration of new form and content in Mexican American prose. Maximum credit six units.

#### 464. Literature for the Chicano Bilingual Student (3)

Chicano literature for the preschool, elementary, and junior high bilingual Chicano student.

#### 480. The Mexican American and the Schools (3) I, II

Prerequisite recommended: Mexican American Studies 110A or 110B.

The Mexican American child's experience in the school system from preschool through high school with emphasis on social, intellectual and emotional growth and development.

#### 496. Selected Topics in Mexican American Studies (1-3)

Intensive exploration of selected topics in the area of Mexican American 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 six units.

#### 498. Internship in US-Mexico Border (3)

Nine to twelve hours per week plus four class meetings.  
Prerequisites: Upper division standing, Mexican American Studies 355, and consent of instructor.

Internship in public or private sector institution, agency, or organization engaged in US-Mexico binational relations or border-related issues. Meets requirements for United States-Mexico Border Studies certificate program.

#### 499. Special Study (1-3)

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 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, 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.



# Military Science

In the College of Professional Studies and Fine Arts

OFFICE: Athletics 451  
TELEPHONE: (619) 594-4943

## Faculty

Chair: Williams  
Professor: Williams  
Assistant Professors: Dutchyshyn, Sargent, Spiece, Wickham

## Offered by the Department

Army ROTC curriculum leading to a commission as a Second Lieutenant in the US Army.  
Minor in Military Science.

## Curriculum

The Department of Military Science offers both a four-year and a two-year Army Reserve Officers Training Corps (ROTC) program designed to develop future officers in the areas of leadership, management, foreign policy, national security, military history, and military skills. The Army ROTC program also offers a series of optional adventure outings and on-campus activities during the school year. These include orienteering, rappelling, mountaineering, sports programs and social activities. Enrollment in the Army ROTC program is not a requirement for taking military science courses. The Military Science Department offers a varied class schedule to meet students' requirements.

The Army ROTC program consists of one course per semester along with scheduled leadership laboratories and field training. The four-year program is divided into two parts: the basic course and the advanced course. The basic course is usually taken in the freshman and sophomore years. No military commitment is incurred during this time, and students may withdraw at any time through the end of the second year. The first year consists of two-unit introductory courses each semester. The second year consists of two-unit courses with instruction on organizational leadership theories. Uniforms, necessary military science textbooks, and materials are furnished without cost.

After completing the basic course, students who have demonstrated officer potential, have met physical and scholastic standards and agree to contract are eligible to enroll in the advanced course. This course is normally taken in the final two years of college and consists of outlined military science and designated enrichment courses that include written communication skills, human behavior, military history, computer literacy, and math reasoning. In addition, the advanced course consists of a paid six-week Advanced Camp held during the summer between the junior and senior years. This camp permits students to put into practice the principles and theories acquired in the classroom. All students in the advanced course receive uniforms, necessary military science textbooks, pay for the Advanced Camp, and a living allowance of up to \$1,000 each school year.

Upon completion of the advanced course, students are commissioned Second Lieutenants in the US Army. The available options after commissioning are active duty for a minimum of three years or three months active duty for training followed by part-time participation in the US Army Reserve or US Army National Guard.

Several special programs are available for students who have previous ROTC training or active military service. These programs allow for part- or full-placement credit for the basic course. In addition, a program is available for simultaneous participation in both Army ROTC and the Army Reserve or Army National Guard.

## Two-Year Commissioning Program

This program offers students the opportunity to be commissioned officers after two years of Army ROTC instead of four years. The two-year program is designed for community and junior college graduates and students who did not take Army ROTC during their first two years or who have prior military experience. The six-week summer basic camp course of instruction (MS 221) provides the military skills and leadership training normally taught during the freshman and sophomore on-campus courses. The basic camp is conducted at Fort Knox, Kentucky, and a paid salary, transportation, meals, and lodging will be furnished. Basic camp graduates enroll in MS 301 to enter the advanced course.

## Cross Enrollment

Students can participate in Army ROTC while attending any area college or university. For further information concerning cross enrollment, contact the Department of Military Science at (619) 594-4943.

## Applying for the Program

SDSU students enroll in military science courses by signing up during registration in the same manner as for other University classes. There is no advance application needed for the freshman or sophomore classes. Students need to contact the Department of Military Science to enroll in the Army ROTC program and to receive information on lab schedules and activities.

Students enrolling in other area colleges and universities need to contact the Department of Military Science at SDSU for curriculum requirements and application procedures at (619) 594-4943.

## Financial Assistance

All students have the opportunity to compete for three- and two-year scholarships. These scholarships cover all tuition, laboratory, and book fees, and a \$100 monthly subsistence allowance during the school year. Scholarship applications are processed by the Department of Military Science. In addition, two-year scholarships are available at the basic camp at Fort Knox, Kentucky, where you will be in competition only with the students attending the basic camp. Contact the department chair for details. Paid positions (part-time) are available through simultaneous membership in local reserve and National Guard units.

## Military Science Minor

The minor in military science consists of a minimum of 15 units to include Military Science 301, 302, 411; and six units selected from Military Science 401, 410, 499, and Sociology 499.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

#### 100A-100B. Introduction to the US Army (2-2) I, II

Semester I: Structure, organization, and missions of the US Army. Preparation and development for officer status. Semester II: Officer leadership, development, and functions. Emphasizing command responsibilities for a basic foundation of military fundamentals.

#### 201. Civil-Military Relations (2) I, II

Theories of civil-military relations as developed by Huntington and Perlmutter; analysis of governmental and military sector interrelationship, focus of power and manner of control.

#### 210. Contemporary Military Leadership Theories: Individuals and Groups (2) I

Scientific approach to leadership theory and its applicability to military settings through study of human behavior and leadership models at individual and group levels using simulations, case studies, and diagnostic instruments.

#### 211. Contemporary Military Leadership Theories: Organizations (2) II

Leadership at the organizational level with application to military settings with emphasis on developing leader skills and examination of theories and concepts of civil-military relations, using simulations, case studies, and diagnostic instruments.

#### 221-S. Cadet Basic Field Training (3) Extension Offered only in Extension.

Prerequisite: Sophomore standing.  
Six-week field training through Extension with training in structure, organization, and missions of the US Army; officer leadership, development, and responsibilities; basic military skills; personal conditioning, oral and written military communications. Not open to students with military experience.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 301. Skills of Military Leadership (3) I

Techniques and skills required of military leaders. Military methods of instruction, review of essential map reading skills and case studies of military leadership techniques.

#### 302. Theory and Dynamics of the Military Organization (3) II

Current tactical doctrine and military techniques of planning and coordination required to apply doctrine to small unit operations.

#### 401. American Military History (3) I, II

Prerequisite: Senior level standing for Army ROTC students. Open to non-ROTC students with consent of instructor.  
Military history from colonial times to present within framework of the nine principles of war, with focus on leadership, weapons, and tactics of US Army.

#### 410. Senior Leadership Seminar (3) I, II

Prerequisites: Military Science 301 and 302.  
Leadership and management problems encountered in a company-sized military unit. Role of the junior officer. Designed to prepare senior cadets for positions as leaders and managers of resources at the platoon/company level.

#### 411. Contemporary Military Policy (3) II

Prerequisites: Military Science 301 and 302.  
The military justice system as it has evolved from international law principles and established national security policies. History of military law, the philosophy and structure of the system to include court-martial and alternatives to court-martial.

#### 496. Experimental Topics (1-4)

Selected topics. 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.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of department chair.  
Individual study. Maximum credit six units.





# Music

In the College of Professional Studies and Fine Arts

OFFICE: Music 111  
TELEPHONE: (619) 594-6031

Accredited by the National Association of Schools of Music.

## Faculty

Emeritus: Anderson, Biggs, Brunson, Blyth, Forman, Genzlinger, Hurd, Lambert, Loomis, Moe, Mracek, Rohlfleisch, Rost, Smith, Snider, Springston

Chair: Chambers

Professors: Almond, Barra, Brown, Bruderer, Chambers, Dutton, Estes, Hogg, Kolar, Logan, Meadows, Mitchell, O'Donnell, Sheldon, Ward-Steinman, Yates, Yeager

Associate Professors: Follingstad, Hill, Liebowitz, Peterman, Stauffer

Lecturers: Friedrichs, Helzer, McDonald, Warman,

## Applied Music Instruction

Piano: Bruderer, Follingstad, Kolar

Harpichord: Paul

Organ: Fall, Spelman

Voice: Allman, Chambers, Chase, MacKenzie, Westbrook

Flute: Buckley, Bursill-Hall, Lukas, Walker

Oboe: Michel

Clarinet: Liebowitz

Saxophone: Rekevics, Rotter

Early Instruments: Peterman

Bassoon: Michel

French Horn: Cable, Lorge

Trumpet: Price

Trombone: Friedrichs, Hogg, Yeager

Baritone Horn: Dutton

Tuba: Dutton

Percussion: Carter, Mitchell

Violin: Hill

Viola: Elaine

Cello: Stauffer

Contrabass: G. Biggs

Harp: Hays

Classical Guitar: Benedetti, Kilmer, Romero

Composition: Dutton, Hogg, Stauffer, Ward-Steinman, D.

Non-Western Instruments: Specialists from specific cultures as available each semester

Jazz Studies: Helzer, Yeager

Opera: Chambers, Eaton, O'Donnell

## Offered by the Department

Master of Arts degree in music.

Master of Music degree.

Major in music with the B.A. degree in applied arts and sciences.

Bachelor of Music degree in applied arts and sciences.

Teaching major in music for the single subject teaching credential.

Minor in music.

## The Major

Music serves to enhance the lives of all peoples and provides a challenging avenue of creative expression for those who wish to pursue its serious study. The Department of Music offers an innovative and comprehensive musicianship program as part of the curriculum of all music majors. This program is designed to ensure that every student learns to function as a conductor, performer, coach, editor or arranger. The student receives instruction in sight-reading, sight-singing, improvisation and music composition.

The Bachelor of Music program is for those students who have professional ambitions in music performance or seek a foundation for graduate study leading to college or university teaching. This program strongly emphasizes the performance aspects of music. The Bachelor of Arts degree is similar to a liberal arts degree. The coursework has a slightly lesser emphasis on the rigorous demands of performance and enables students to obtain a broad understanding of music.

For those students who are interested in teaching music, the department offers a major leading to the Single Subject Teaching Credential. A minor is available for students interested in music, yet whose primary interest is with another department.

The performance of music is the most obvious and frequent use of the musician's skill. However, graduates may also teach, compose, review, sell, and record music. In addition, inventing, constructing, tuning, and repairing instruments requires skills which are based on understanding the fundamentals of music. Some of the positions that a music graduate might hold include studio instructor, teacher in public or private schools; researcher for libraries, publishers, and museums; music therapist; recording artist, composer, arranger, or calligrapher; professional musician with an orchestra, band, or opera company.

## Music Curricula

The music curricula are designed to fulfill the needs of all students: (1) those who have professional ambitions in music performance; or seek a foundation for graduate study leading to college or university teaching; (2) those who are preparing for one of the several state teaching credentials; (3) those whose major professional interest is in another department, and are seeking musical study as a minor; and (4) those who are interested in music as an elective study area for the enrichment of their cultural background.

## General Basic Requirements

General basic requirements for the B.M. degree in applied arts and sciences, the B.A. degree with a major in music in applied arts and sciences or in teacher education are as follows:

1. All new students and transfer students who wish to enroll as music majors or minors are given placement examinations in music theory and auditions on their major instrument and piano. On the basis of these exams and auditions, recommendations of specific courses will be made by the department adviser. The specific courses are Music 158A-158B, 258A-258B, 358A-358B; Music 251 and 451 with the appropriate letter suffix; and Music 110A-110B, 110C-110D.

2. Each semester of private instruction concludes with a solo performance before a faculty jury. The jury grade accounts for one-third of the final semester grade; the teacher's grade accounts for the remaining two-thirds.

3. To qualify for upper division study, music majors must pass a Junior Level Examination. This is a more intensive solo performance before a faculty jury at the close of the fourth semester of study in Music 251. If it is not passed, a grade of "I" (Incomplete) is recorded. This must be resolved before enrollment in upper division study is permitted.

4. The Comprehensive Musicianship Aural Skills Examination is a requirement for graduation. It is given at the end of each semester and may be retaken until passed. The exam includes sight-singing, melodic and harmonic dictation, error detection, chromatic and modern harmony. A final grade of C (minimum) is required in each semester of the CM courses in order to advance to the next higher course.

5. Students must participate in at least one ensemble each semester of enrollment and must register for credit up to a total of nine units for the B.A. degree, eight units for the B.A. degree with credential, and twelve units for the B.M. degree. At least one-half of the requirement must be met by participation in a "large" ensemble in which the major instrument is used. See the Music Department Student Handbook for more details.

6. Attendance at and performance in recitals is a requirement of all music majors as set forth in the department recital regulations.

Refer to the Music Department Student Handbook for detailed information.

## Electives in Music – Non-Majors

The Music Department offers certain courses for students who are interested in music as an elective study area for the enrichment of their cultural background. Courses particularly suited for these needs are Music 151, 345, and 351 and the music courses numbered 170 to 189 and from 369 to 389. Some students will be musically prepared to elect courses which may or may not be included in this group. Enrollment by qualified students who wish to elect these courses is encouraged.

Opportunities to participate in instrumental and vocal ensembles are also available to non-music majors. Music ensemble courses may be repeated. A maximum credit of eight units of ensemble courses (Music 170-189, 369-389, 569-589, and 153, 353 and 553) may be counted toward a bachelor's degree for non-majors.

## Music Major

With the B.A. Degree in Applied Arts and Sciences  
(Major Code: 10052)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

**Preparation for the Major.** Music 110A-110B, 110C-110D (may be waived in full or in part by examination); 115A; seven units to include Music 220A, 220B, 225A, 225B, 230, 235, and 240; 158A-158B; four units selected from courses numbered 170 through 189; four units of Music 251; 258A-258B. (28-32 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 26 upper division units to include Music 347, 358A-358B; five units selected from courses numbered 369 through 389; four units of Music 451; six units selected from Music 452A, 452B, or 452C.

## Music Major

With the B.M. Degree in Applied Arts and Sciences  
(Major Code: 10041)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

**Preparation for the Major.** Music 110A-110B, 110C-110D (may be waived in full or in part by examination; not required of students specializing in jazz studies); Music 158A-158B, 258A-258B; six units selected from courses numbered 170 through 189; four to eight units of Music 251. In addition, students specializing in composition must take two units of Music 207. Students specializing in jazz studies must take Music 166 and 266. (22-32 units)

**Foreign Language Requirement.** Equivalent knowledge demonstrated in a test of reading knowledge administered by the foreign language department concerned in consultation with the Department of Music, as follows:

1. Vocalists—one semester each of French, German, and Italian.
2. Music History and Literature students—three semesters of one foreign language chosen from French, German, or Italian.
3. Jazz Studies—no foreign language equivalency required.
4. All others—two semesters of one foreign language chosen from French, German, or Italian (except that classical guitar students may substitute Spanish).

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** Thirty-six to forty-two upper division units to include Music 347; one unit selected from Music 348, 349 (not required for jazz studies); Music 358A-358B (358B not required of students specializing in jazz studies); six units selected from Music 452A, 452B, or 452C; six units selected from courses numbered 369 through 389; four to eight units in Music 451. Students specializing in jazz studies must include Music 366, 466, 566A-566B. All majors must fulfill the requirements in one of the following areas of specialization:

(a) **Performance.** Ten units to include Music 367 and 497 and the remaining seven units selected with the aid of the departmental adviser. (Pianists and string performers must include Music 541 and 542; Vocalists must include Music 541 and 554.)

Students specializing in performance must appear in a joint recital during the junior year and must present a solo recital during the senior year. The student must pass an audition of the program to be performed before the music faculty no less than one month in advance of the recitals.

(b) **Music History and Literature.** Sixteen units to include Music 367; three units of Music 452A, 452B, or 452C; 497; 555; 558; and four units of electives to be selected with the aid of the music history adviser.

During the senior year, the student specializing in music history and literature is required to organize, prepare program notes, and present two recitals consisting of recorded or "live" performances. Each will deal with representative works of a certain period, composers, or styles to be compared. Such students must pass an audition of the lecture and the music to be performed no less than one month in advance of the recitals.

(c) **Composition.** Fourteen units to include two units of Music 497; two units of 507; 558; and the remaining seven units selected with the aid of the departmental adviser.

The specialization may not be formalized until completion of Music 158B, or waiver by examination.

The student specializing in composition is required to present a concert of his compositions during the senior year and present the scores of works to be performed to the music faculty no less than one month in advance of the performance.

(d) **Jazz Studies.** Nine units to include Music 364A-364B, 367, 497. The remaining two units to be selected with the approval of the director of jazz studies.

## Music Major

For the Single Subject Teaching Credential  
With the B.A. Degree in Applied Arts and Sciences  
(Major Code: 10052)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under Policy Studies or Teacher Education.

This major may be used by students in policy studies or teacher education as an undergraduate major for the B.A. degree in applied arts and sciences.

Admission to teacher education is required prior to graduation with this major.

**Preparation for the Major.** Music 110A-110B, 110C-110D (may be waived in full or in part by examination); 115A; seven units to include Music 220A, 220B, 225A, 225B, 230, 235, and 240; 158A-158B; four



units selected from courses numbered 170 through 189; 146, 246; four units of Music 251; 258A-258B. (32-36 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 33 upper division units to include Music 351E or 351F; 358A-358B; four units selected from courses numbered 369 through 389; Music 346, 347, 446; one unit of advanced conducting selected from Music 348, 349; four units of Music 451; six units selected from Music 452A, 452B, or 452C.

## Performance Studies for Credit

Credit may be allowed for performance studies under the following conditions:

1. Properly enrolled music majors may enroll for performance studies with resident faculty without an additional fee.
2. Students may under no circumstances change teachers in the middle of a semester without first securing the permission of the chair of the Department of Music.
3. Prior to the start of performance studies at San Diego State University, students are required to take a preliminary audition conducted by Department of Music faculty which will indicate status at the beginning of their studies.
4. Students who have dropped out of school or have stopped taking performance studies for credit for one semester or more, upon resumption of that instruction for credit are required to present another preliminary audition.



5. At the end of each semester, the Department of Music will sponsor a jury examination to satisfy itself that its standards have been met.

6. Students enrolled in performance studies must be concurrently enrolled in the Comprehensive Musicianship program until such time as the CM requirements are fulfilled.

## Music Minor

To be admitted to the minor program, the student must audition to demonstrate vocal or instrumental performing ability.

The minor in music consists of 24 units in music selected from one of the following areas:

**Music (Classical).** To be admitted to this area students must take a placement examination in comprehensive musicianship. Requirements include Music 110A-110B; 158A-158B; 258A-258B; two units selected from Music 170-189 and 369-389; and eight units of upper division electives selected with the approval of the adviser.

**Jazz (Instrumental).** Requirements include four units of Music 170 or 370; four units of Music 189 or 389; Music 166, 266, 364A-364B, 366, 466, 566A\*, 566B\*.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

\* Additional prerequisites required.

## Courses

### LOWER DIVISION COURSES

#### 101. Recitals (1) I, II Cr/NC

Preparation for individual solo performances and attendance at a minimum of 12 concerts or recitals in accordance with departmental requirements. Maximum credit four units.

#### 102. Basic Musicianship for Non-Music Majors (3) I, II

Two lectures and two hours of activity.  
 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. Not open to students with credit in Music 104.

#### 103. Basic Aural Skills (1) Cr/NC

Three hours of laboratory.  
 Prerequisite: Ability to read music.  
 Preparation for the Junior Level Aural Skills Examination for music majors only.

- A. Melodic Dictation, Sight Singing
- B. Two-Part Contrapuntal and Four-Part Harmonic Dictation
- C. Error Detection and Chromatic and Modern Harmonic Idioms

#### 104. Fundamentals of Music Theory (2)

One lecture and two hours of activity.  
 Develop an understanding of notation, rhythm, pitch, keys, meters, scales, intervals, chords, and music terminology. Not open to students with credit in Music 102.

#### 110A-110B. Piano—Elementary Class Instruction (1-1) I, II

Two hours.  
 Prerequisite: For 110B: Music 110A with a grade of C (2.0) or better.  
 Basic keyboard experience through study of music reading, notation, scales, chords, and sight-reading covering a repertoire of beginning and intermediate songs and piano literature, with emphasis on keyboard harmony. Required of music majors and minors and credential candidates for teaching at the kindergarten-primary level.

#### 110C-110D. Piano—Elementary Class Instruction (1-1) I, II

Two hours.  
 Prerequisites: For 110C: Music 110B with a grade of C (2.0) or better. For 110D: Music 110C with a grade of C (2.0) or better.  
 Continuation of Music 110A-110B.

#### 115A. Voice—Elementary Class Instruction (1) I, II

Two hours.  
 Prerequisite: Concurrent registration in Music 185.  
 Mastery of the fundamentals of voice. Not open to voice majors.

#### 115B. Voice—Elementary Class Instruction (1) I, II

Two hours.  
 Prerequisite: Music 115A with a grade of C (2.0) or better and concurrent registration in Music 185.  
 Observation of individual or group lessons; critiques and discussion; performance in class.

#### 120A. Violin and Viola Class Instruction for the Non-Music Major (1) I, II

Two hours.  
 Prerequisite: Consent of instructor.  
 Performance studies class in a group lesson environment. Opportunity for observation, instruction, and performance in class situation.

#### 120B. Cello Class Instruction for the Non-Music Major (1) I, II

Two hours.  
 Prerequisite: Consent of instructor.  
 Performance studies class in a group lesson environment. Opportunity for observation, instruction, and performance in class situation.

#### 146. Practicum in Music I (2) I

One lecture and two hours of activity.  
 Prerequisite: Music 158B.  
 Introduction to music education. Exposure to music teaching profession at all grade levels before choosing an area of specialization.

#### 151. Introduction to Music (3) I, II

Practical approach to hearing music with understanding and pleasure, through study of representative compositions of various styles and performance media, great musicians and their art. Music correlated with other arts through lectures, recordings, concerts. No credit awarded to music majors and minors.

#### 153. Opera Theatre (2) I, II

Six or more hours per week.  
 The interpretation and characterization of light and grand opera. Specific work in coordination of operatic ensemble. Maximum credit eight units.

#### 158A-158B. Comprehensive Musicianship (3-3) I, II

Two lectures and two hours of activity.  
 Prerequisites: For 158A: Music 104 or passing placement examination. For 158B: Music 158A with a grade of C (2.0) or better or passing placement examination.

Direct analysis of musical styles and forms as they have evolved historically; composition, improvisation, performance, and instrumentation; sight-singing, dictation, harmony. Parallel developments in related arts; comparisons with non-Western musical systems.

#### 166. Elements of Jazz I (2)

Fundamental harmonic analysis of basic jazz progressions, common modes and blues scale variations, solo transcription analysis, and ear-training.

### Performance Organization Courses (Music 170 through 189)

The performance organization courses are devoted to the study in detail and the public performance of a wide range of representative literature for each type of ensemble and designed to provide students with practical experience in rehearsal techniques.

#### 170. Chamber Music (1) I, II

Three hours. Four hours for opera.  
 Prerequisite: Consent of instructor.  
 Sections for string, woodwind, brass, piano, vocal, and mixed ensemble groups. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

#### 174. Concert Band (1) II

Five hours.  
 Prerequisite: Consent of instructor.  
 Study and public performance of representative literature for ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

#### 175. Marching Band (2) I

More than six hours.  
 Prerequisite: Consent of instructor.  
 Study and public performance of literature for the ensemble. Practical experience in rehearsal techniques. Maximum combined credit for Music 175 and 375 eight units.

#### 176. Symphonic Band (1) I, II

Five hours.  
 Prerequisite: Consent of instructor.  
 Study and performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

#### 180. Symphony Orchestra (1) I, II

Five hours.  
 Prerequisite: Consent of instructor.  
 Maximum credit four units.

#### 185. Concert Choir (1) I, II

Five hours.  
 Prerequisite: Consent of instructor.  
 Maximum credit four units.



**186. 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.

**189. Jazz Ensemble (1) I, II**

More than 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.

**207. Composition Laboratory (1)**

Three hours of laboratory.  
Prerequisite: Consent of instructor.  
Original writing in different homophonic and polyphonic forms for various media. Maximum credit two units.

**210. Computing in Music (2)**

Two hours.  
Prerequisite: Music 158B.  
Use of computers in teaching, study, composition, and performance of music.

**220A. Strings—Elementary Class Instruction (1)**

Two hours.  
Fundamentals of violin and viola by lecture and acquisition of elementary skills for purpose of gaining teaching and conducting skills in working with strings. Primarily for music education majors.

**220B. Strings—Elementary Class Instruction (1)**

Two hours.  
Prerequisite: Music 220A.  
Fundamentals of cello and bass by lecture and acquisition of elementary skills for purpose of gaining teaching and conducting skills for working with strings. Primarily for music education majors.

**225A. Clarinet and Flute—Elementary Class Instruction (1)**

Two hours.  
Fundamentals of the clarinet and flute by lecture and acquisition of elementary skills.

**225B. Oboe and Bassoon—Elementary Class Instruction (1)**

Two hours.  
Fundamentals of oboe and bassoon by lecture and acquisition of elementary skills.

**230. Brass—Elementary Class Instruction (1)**

Two hours.  
Fundamentals of brass instruments by lecture and acquisition of elementary skills.

**235. Percussion—Elementary Class Instruction (1)**

Two hours.  
Fundamentals of percussion through acquisition of elementary skill on the snare drum and by demonstration and lecture regarding all commonly used percussion instruments of definite and indefinite pitch.

**240. Guitar-Elementary Class Instruction (1) I, II**

Two hours.  
Open to all students interested in fundamentals of guitar and elementary music skills. (Formerly numbered Music 140.)

**246. Practicum in Music II (2) II**

One lecture and two hours of activity.  
Prerequisite: Music 146 with a grade of C (2.0) or better.  
Methods and materials. Development of lesson plans and selection of appropriate materials and methods. Rehearsal techniques for elementary, junior high, and high school. Observations of public school master teachers.

**251. Performance Studies (1-2) I, II**

Prerequisite: Open only to music majors. Audition and approval by departmental faculty.

Fifteen one-half hour private lessons or thirty one-hour group sessions for one unit; fifteen one-hour private lessons for two units.

Studies in technical, stylistic, and aesthetic elements of artistic performance. Candidates for the B.M. degree with performance emphasis enroll for two units of credit per semester. Candidates for the B.A. degree and for the B.M. degree in composition and in music history and literature enroll for one unit of credit per semester. For conditions under which credit is given, see "Performance Studies for Credit" in the section of the music major. Maximum credit for Music 251 is eight units. (Formerly numbered Music 250.)

- |                     |                                        |
|---------------------|----------------------------------------|
| A. Keyboard         | H. Harp                                |
| B. Voice            | I. Jazz Instruments                    |
| C. Woodwinds        | J. Medieval or Renaissance Instruments |
| D. Brass            | K. Non-Western Instruments             |
| E. Percussion       | L. Composition                         |
| F. Strings          |                                        |
| G. Classical Guitar |                                        |

**258A-258B. Comprehensive Musicianship (3-3) I, II**

Two lectures and two hours of activity.  
Prerequisites: For 258A: Music 158B with a grade of C (2.0) or better or passing placement examination. For 258B: Music 258A with a grade of C (2.0) or better or passing placement examination.  
Continuation of Music 158A and 158B. Harmony in the eighteenth to twentieth centuries as exemplified in works from the classic, romantic, impressionist, and modern periods.

**260. Introduction to the Alexander Technique (2)**

One lecture and two hours of activity.  
Class instruction and individual laboratory work in neuromuscular balance and coordination in artistic performance. Maximum credit four units.

**266. Elements of Jazz II (2)**

Prerequisite: Music 166.  
Harmonic analysis of standard and bebop repertoire, less common modes and dominant scales, solo transcription, analysis, and ear-training.

**296. Experimental Topics (1-4)**

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

**301. Recitals (1) I, II Cr/NC**

Preparation for individual solo performances and attendance at a minimum of 12 concerts or recitals in accordance with department requirements. Maximum credit four units.

**310. Electronic Music (2)**

One lecture and three hours of laboratory.  
Prerequisite: Consent of instructor.  
Principles and techniques of electronic sound synthesis; musique concrete, and multimedia application in live performance.

**311. Electronic Music Composition Laboratory (1) I, II**

Three hours of laboratory.  
Prerequisites: Music 310 and consent of instructor.  
Discussion and presentation of independent electronic music works in progress. Maximum credit four units.

**340. Guitar—Intermediate Class Instruction (1) I, II**

Two hours.  
Prerequisite: Music 240 with a grade of C (2.0) or better.  
Playing styles of folk, popular, and jazz with emphasis on classical music and technique. Theory, reading music, transcription and performance. Group instruction.

**343. Music Literature for Children (3) I, II**

Prerequisite: Music 102 or 158B.  
Analytical study of music suitable for children of all ages. Background information, musical structure and functions of this music in the lives of children are included.

**344. Folk Music (3)**

The origin and development of folk music; the social instruments and their use. Participation in singing and playing folk music.

**345. Music in Contemporary Life (3) I, II**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.  
Functional music in society to include its psychological, physical and recreational uses; music as communication; the composer, the musician, and the audience.

**346. Practicum in Music III (2) I**

One lecture and two hours of activity.  
Prerequisite: Music 246 with a grade of C (2.0) or better.  
Practical teaching applications. Students will develop and teach model lessons evaluated by students, faculty, and master teachers. Students choose a primary area of specialization and a master teacher in preparation for the final semester of the practicum series. (Formerly numbered Music 446A.)

**347. Conducting (1)**

Prerequisite: Music 258B with a grade of C (2.0) or better.  
Basic techniques of conducting. Baton technique, conducting patterns, score reading, elements of performance and interpretation. Practical experience in typical conducting situations. Not open to students with credit in Music 448A and 449A.

**348. Choral Conducting (1)**

Prerequisite: Music 347 with a grade of C (2.0) or better.  
Elements of baton technique and development of skills common to choral conducting. Representative literature and techniques for choral organizations studied and performed. Practical experience in typical conducting situations. (Formerly numbered Music 448B.)

**349. Instrumental Conducting (1)**

Prerequisite: Music 347 with a grade of C (2.0) or better.  
Elements of baton technique and development of skills common to instrumental conducting. Representative literature and techniques for instrumental organizations studied and performed. Practical experience in typical conducting situations. (Formerly numbered Music 449B.)

**351. Great Music (3) I, II**

Prerequisite for Music 351A-D: Completion of the General Education requirement in Foundations II.C., Humanities.  
Significant music literature of the various historical periods with emphasis on the stylistic characteristics through directed listening.

- |                                                                    |
|--------------------------------------------------------------------|
| A. Musical Masterpieces of the Eighteenth and Nineteenth Centuries |
| B. Musical Masterpieces of the Twentieth Century                   |
| C. Masterpieces of Grand Opera                                     |
| D. Jazz History and Appreciation                                   |
| E. Music of Africa and the Americas                                |
| F. Music of Asia and the Pacific                                   |

**353. Opera Theatre (2) I, II**

Six or more hours per week.  
Interpretation and characterization of light and grand opera. Specific work in coordination of opera ensemble. Maximum credit eight units.

**358A-358B. Comprehensive Musicianship (5-5) I, II**

Four lectures and two hours of activity.  
Prerequisites: For 358A: Music 258B with a grade of C (2.0) or better. For 358B: Music 347 and 358A with a grade of C (2.0) or better.  
Continuation of Music 258A-258B. Counterpoint from eighteenth to twentieth centuries, serial techniques, jazz, electronic music. Individual projects in instrumentation, composition, analysis, non-Western music.

**364A-364B. History of Jazz (2-2)**

Jazz style and forms as they have evolved historically. Classroom playing experience in jazz styles as a part of study. Designed for music majors and minors.

**366. Elements of Jazz III (2)**

Prerequisite: Music 266.  
Post bop repertoire, altered modes and scales, solo transcription, analysis, and ear-training.

**367. Junior Recital (1) I, II**

Prerequisite: Junior standing in music.  
Selection of literature for recital program not to exceed 30 minutes in length; theoretical analysis and historical study of scores chosen; preparation and public performance; and examination before committee of music department faculty.

### Performance Organization Courses (Music 369 through 389)

The performance group courses are devoted to the study in detail and the public performance of a wide range of representative literature for each type of ensemble, and designed to provide students with practical experience in rehearsal techniques.

**369. Collegium Musicum (1) I, II**

Prerequisite: Consent of instructor.  
Performance of medieval and renaissance music on reproductions of historical instruments. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

**370. Chamber Music (1) I, II**

Three hours. Four hours for opera.  
Prerequisite: Consent of instructor.  
Section for string, woodwind, brass, piano, vocal, and mixed ensemble groups. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

**374. Concert Band (1) II**

Five hours.  
Prerequisite: Consent of instructor.  
Study and public performance of representative literature for ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

**375. Marching Band (2) I**

More than six hours.  
Prerequisite: Consent of instructor.  
Study and public performance of representative literature for the ensemble. Practical experience in rehearsal technique. Maximum combined credit for Music 175 and 375 eight units.

**376. Symphonic Band (1) I, II**

Five hours per week.  
Prerequisite: Consent of instructor.  
Study and public performance of representative literature for ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

**380. Symphony Orchestra (1) I, II**

Five hours.  
Prerequisite: Consent of instructor.  
Maximum credit four units.

**385. Concert Choir (1) I, II**

Five hours.  
Prerequisite: Consent of instructor.  
Maximum credit four units.

**386. 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.



**389. Jazz Ensemble (1) I, II**

More than three hours.

Prerequisite: Consent of instructor.

Study and public performance of representative literature for ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

**397. Issues in Music Education (Credit to be arranged) Offered only in Extension.**

Prerequisites: Consent of instructor and bachelor's degree.

Study of specially selected issues in music education. Does not apply to undergraduate degrees or completion of teaching credential.

**420. Indonesian Instruments Class for the Non-Music Major (1)**

Two hours.

Prerequisite: Concurrent registration in Music 345.

Observation, instruction, and performance of Indonesian elaborating instruments in a group lesson environment.

**446. Practicum in Music IV (2) II**

One lecture and two hours of activity.

Prerequisite: Music 346 with a grade of C (2.0) or better.

Early field experience. Students will complete 20 hours of public school teaching in their area of specialization. Master teachers will provide on-site guidance and evaluation. Field experience and increased effectiveness will be discussed. (Formerly numbered Music 446B.)

**451. Performance Studies (1-2) I, II**

Prerequisite: Open only to music majors. Audition and approval by departmental faculty.

Fifteen one-half hour private lessons or thirty one-hour group sessions for one unit; fifteen one-hour private lessons for two units.

Studies in technical, stylistic, and aesthetic elements of artistic performance. Candidates for the B.M. degree with performance emphasis enroll for two units of credit per semester. Candidates for the B.A. degree and for the B.M. degree in composition and in music history and literature enroll for one unit of credit per semester. For conditions under which credit is given, see "Performance Studies for Credit" in the section of the music major. Maximum credit for Music 451 is eight units. (Formerly numbered Music 450.)

- |                     |                                        |
|---------------------|----------------------------------------|
| A. Keyboard         | H. Harp                                |
| B. Voice            | I. Jazz Instruments                    |
| C. Woodwinds        | J. Medieval or Renaissance Instruments |
| D. Brass            | K. Non-Western Instruments             |
| E. Percussion       | L. Composition                         |
| F. Strings          |                                        |
| G. Classical Guitar |                                        |

**452A-452B-452C. History of Music (3-3-3) I, II**

Prerequisites: Music 158B is prerequisite to 452A and 452B. Music 258B is prerequisite to 452C.

Chronological development of musical art and forms from Middle Ages to present. Analytical score study and assigned recordings. Familiarity with musicological resources through individual assignments.

- |                                                                                                   |
|---------------------------------------------------------------------------------------------------|
| A. Music from antiquity to 1600<br>(Formerly numbered Music 552A.)                                |
| B. Music of the Baroque Era and Classical Period:<br>1600 to 1800 (Formerly numbered Music 552B.) |
| C. Music of the Romantic Period and Twentieth Century:<br>1800 to present                         |

**458. Comprehensive Musicianship Pedagogy (3)**

One lecture and four hours of activity.

Personalized System of Instruction (PSI) or the Keller Plan as used in a music theory class. Experience as a tutor-proctor in Music 158A-158B, Comprehensive Musicianship, PSI section.

**461. Rhythmic Skills (1)**

Two hours of activity.

Systematic refinement of rhythmic skills based mainly on exercises and techniques developed in teaching classical music of India. Multiple patterns, cross rhythms, and a variety of meters through spoken syllables and hand clapping.

**466. Elements of Jazz IV (2)**

Prerequisite: Music 366.

Atonal and harmelodic theories and philosophy, research paper, solo transcription, analysis, and ear-training.

**468. Stylistic Interpretation (2)**

One lecture and two hours of activity.

Prerequisite: Music 369.

Individual and group projects in period musical styles. Application of original treatises and manuscripts to performance on historical and modern instruments. May be repeated with new content. Maximum credit six units.

**475. Band Pageantry (2)**

One lecture and two hours of activity.

Prerequisite: At least one semester of college marching band.

Marching band drill styles and techniques. Practical experience in marching band techniques.

**496. Experimental Topics (1-4)**

Selected topics. 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.

**497. Senior Recital (2) I, II**

Prerequisite: Senior standing in music.

Selection of literature for recital program not to exceed one hour in length; theoretical analysis and historical study of scores chosen; preparation and public performance; and examination before committee of music department faculty.

**499. Special Study (1-3) I, II**

Prerequisite: Consent of the department chair.

Individual study. Maximum credit six units.

**UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)**

**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.

**510. Advanced Electronic Music (3)**

Two lectures and three hours of laboratory.

Prerequisite: Music 310 with a grade of C (2.0) or better.

Complex waveform generation, remote voltage control generation, and historic aspects of electronic music.

**511. Advanced Electronic Music Composition Laboratory (1) I, II**

Three hours of laboratory.

Prerequisites: Music 510 and consent of instructor.

Discussion and presentation of independent electronic music works in progress. Maximum credit four units.

**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   |
| B. Strings |
| 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 542B: Music 541B 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   |
| B. Strings |
| C. Voice   |

**543. Diction (1)**

Principles of pronunciation and enunciation. Application to song and opera in English, Italian, German, and French.

**553. 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.

**554. Music Literature (2) I, II**

Prerequisite: Music 258B.

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. Symphonic Literature                                                                        |
| D. Song Literature                                                                             |
| E. Choral Literature (Cantata, Mass, Oratorio)                                                 |
| F. Opera Literature                                                                            |
| G. Keyboard Literature (Seventeenth Century through Beethoven (Formerly numbered Music 554C.)) |
| H. Keyboard Literature (Schubert to the Present)                                               |

**555. Proseminar in Music History (3)**

Prerequisite: Six units from Music 452A-452B-452C.

Research in music history. Problems presented in specific historical style periods.

**556. Proseminar in Ethnomusicology (3)**

Prerequisite: Music 258B.

Ethnomusicological theory and methodology, including history of the field and its relation to such disciplines as anthropology and linguistics. (Formerly numbered Music 553.)

**558. Modal Counterpoint (3)**

Prerequisite: Music 258A.

Modal counterpoint in the Renaissance. Composition in liturgical and secular forms. Origins and evolution traced with reference to contemporary uses of modal or pandiatonic counterpoint.

**561. Area Studies: Ethnomusicology (3)**

Prerequisites: Music 351E and 351F.

Music of a specific culture. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**562. World Music in Context (2)**

One lecture and two hours of activity.

Prerequisites: Music 351E or 351F and consent of instructor.

Practical experience in the performance of specialized traditional genres of world music, 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 258B.

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. Symphonic Band (1) I, II**

Five hours.

Prerequisite: Consent of instructor.

Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

**581. Symphony Orchestra (1) I, II**

Five hours.

Prerequisite: Consent of instructor.

Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

**585. Concert Choir (1) I, II**

Five hours.

Prerequisite: Consent of instructor.

Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

**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.

**591. Theory and Practice of Musical Expression and Interpretation (2)**

Prerequisite: Music 258B.

Musical perception as it pertains to expressive aspects of performance. Theories of interpretation and ways in which performers can create the impulse to shape its inherent 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. (Formerly numbered Music 580.)

**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  
Refer to the Graduate Bulletin.**



# Natural Science

In the College of Sciences

## Faculty

Emeritus: Merzbacher, Shull, Thompson  
Chair: Metzger  
Professors: Dessel, Dowler, Feher, Fisher, Goldberg, Ingmanson, Metzger, Phleger  
Associate Professors: May, Springer, Wallace  
Lecturer: Hood

## Offered by the Department

Teaching major in the physical sciences for the single subject teaching credential.  
Minor in history of science and technology.

## The Major

The Department of Natural Science specializes in teaching science to nonscience majors at all levels. The lower division classes have no mathematics or science prerequisites. The upper division classes, for the most part, are designed for nonscience majors. They emphasize conceptual understanding, historical developments, and philosophical implications of complex scientific topics such as quantum mechanics, relativity, the origin of life, and the ways in which the world is interpreted by scientists.

The physical science major is offered as an interdisciplinary approach to the study of science. It stresses the interrelationship of chemistry and physics, as well as geology, astronomy, and mathematics. The major is designed primarily for students who intend to become high school teachers of both physics and chemistry. The State of California does not offer separate credentials in either chemistry or physics.

Upon completing the physical science major and other requirements for a single subject credential, graduates will be able to teach the following subjects in California high schools: chemistry, general science, physics, and physical science. Accreditation by the California State Commission of Teacher Preparation and Licensing allows students to waive the State examination for the teaching credential in physical science.

Jobs for physical science teachers are becoming more plentiful. An increasing need for physical science teachers in high schools during the next ten years is predicted. Minority students or those proficient in Spanish are particularly in demand.

## Physical Science Major

For the Single Subject Teaching Credential  
With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 19011)

All candidates for a teaching credential must complete all requirements outlined in this section of the catalog under Policy Studies or Teacher Education.

This major may be used by students in policy studies or teacher education as an undergraduate major for the B.S. degree in applied arts and sciences; it prepares students for certification to teach chemistry and physics in secondary schools.

**Preparation for the Major.** Astronomy 101; Chemistry 200, 201, 230; Computer Science 107; Geological Sciences 100; Mathematics 150 and 151, or 155 and 156 and 157, and 252; Physics 195, 195L, 196, 196L, 197, 197L. (48 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

OFFICE: Campanile Drive 164  
TELEPHONE: (619) 594-5157

**Major.** A minimum of 37 upper division units to include Chemistry 361A, 410A; Physics 311; Natural Science 315, 316, 430, 500; Oceanography 541; Teacher Education 453 and nine units of upper division electives in mathematics or the sciences.

## Minor in History of Science and Technology

The minor in the history of science and technology consists of a minimum of 18 units to include Natural Science 315 and 316, and 12 units selected from Natural Science 314, 317; Astronomy 305; History 484, 485; Mathematics 303; Philosophy 537.

Courses in the minor may not be counted toward the major, but may be used to satisfy requirements for preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

#### 100. Physical Science (3) I, II

Introduction to concepts and processes in science intended to show why science is essential to a liberal education by recognizing relationship with other areas of knowledge such as philosophy, literature, fine arts, economics. Emphasis varies with instructor. Natural Science 100 not open to students with credit in Natural Science 102 or 210A.

#### 102. Physical Science with Laboratory (4) I, II

Three hours of lecture and three hours of laboratory. Introduction to the physical sciences. Emphasis varies with instructor. Laboratory activity is fully integrated with lecture material. Experiments and observations are done when relevant to the subject discussed. Not open to students with credit in Natural Science 100.

#### 110A-110B. Energy in Nature with Laboratory (4-4)

Three lectures and three hours of laboratory. An integrated introduction to the natural sciences covering selected topics from physics, chemistry and biology focused on the themes of energy and the relationships between processes and structures in nature. Weekly laboratory sessions include demonstrations, discussions, problem exercises and experiments.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 301. Field Experiences in Secondary School Science (1) I, II Cr/NC

Three hours per week of classroom experience under supervision of certified science teacher.

Prerequisites: Upper division standing; life or physical science major.

Supervised field experiences in secondary school science classrooms or community science institutions. May be biology, chemistry, physics, physical science, or earth science classes depending on major.

#### 305. Modern Physical Science (3) I, II

Prerequisites: A college-level course in the physical sciences or life sciences, and completion of the General Education requirement in Foundations II.A., Natural Sciences.

Development of scientific models and allied technologies and their influence on the development of societal attitudes and public policy. Discussion of contemporary problems such as environmental degradation and energy utilization, climatic change, uses of computers, and armaments.

#### 314. Personalities in Science (1) I, II

Case study in the life and work of individual scientists from the history of science. See Class Schedule for specific content.

#### 315. History of Science I (3) I, II

Prerequisites: Completion of the General Education requirement in Foundations II.A., Natural Sciences and one of the following courses: Humanities 101, History 100, 101, 105, 106. Recommended: Astronomy 101. General Education prerequisite not required for Physical Science majors.

The growth and development of science from antiquity to the fifteenth century. Emphasis on man's cognitive reactions to his environment through the coalescence of the occult arts, empirical practices and rational thought associated with early scientific theory.

#### 316. History of Science II (3) I, II

Prerequisites: Completion of the General Education requirement in Foundations II.A., Natural Sciences and one of the following courses: Humanities 101, History 100, 101, 105, 106. Recommended: Astronomy 101 and a course in chemistry. General Education prerequisite not required for Physical Science majors.

The major developments during the sixteenth through nineteenth centuries of the scientific revolution, the rise of empiricism, the emerging role of scientific societies. Histories of particular theories in both the life sciences and physical sciences.

#### 317. Development of Scientific Thought (3) I, II

Prerequisites: Completion of the General Education requirement in Foundations II.A., Natural Sciences. Recommended: Mathematics 121.

Basic scientific concepts and their historical development with emphasis on the problem of theory construction. The relationship between disciplined imagination and observational fact, as illustrated by selected case histories. Limitations of scientific inquiry.

#### 333. Technology and Human Values (3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.A., Natural Sciences. Recommended: Natural Science 100 or 102.

Technologies such as solar and fusion power, lasers, computer services, transport, synthetic food and their impact on values and lifestyles of developed countries. Characteristics of post-industrial society, future shock and biological revolution. Curve extrapolation and simulation by games and computer.

#### 351. Solar Energy (3) I, II

Prerequisites: Completion of a lower division course in the physical sciences and the mathematics competency requirement or Academic Skills 90A or 90B.

Principles and practical aspects of solar energy including radiation transfer, optics, solar spectrum, heat transfer and storage, active solar and passive solar devices and systems, and design of passive solar buildings and shelters.

#### 400. Seminar (1-3) I, II

A directed study of a topic to be chosen by instructor and announced in Class Schedule. Maximum credit six units.

#### 412A-412B-412C. Processes and Inquiry in the Natural Sciences (4-4-4) I, II

Three lectures and two hours of activity.

Prerequisite: Completion of the General Education requirement in Foundations II.A., Natural Sciences.

Investigation of processes of inquiry and rational thinking skills characteristic of the sciences.

- A. Physical Sciences
- B. Earth Sciences
- C. Life Sciences

#### 430. Interpretation of Quantum Mechanics (3) I, II

Identity, causality, questions of reality; the uncertainty principle. Especially intended for upper division students in the humanities who are curious about modern science.

#### 431. The Origins of Life (3) II

Prerequisite: Completion of the General Education requirement in Foundations II.A., Natural Sciences. Recommended: Natural Science 102 or a course in chemistry.

Theories of chemical evolution with emphasis on multidisciplinary aspects involving geology, geochemistry, cosmochemistry and molecular biology.

#### 496. Topics in Natural Science (1-4) I, II

Prerequisite: Consent of instructor.

Selected topics in classical and modern natural science. 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 six units.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor.

Individual study or laboratory work on a special problem in physical science selected by the student. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 500. Seminar in Curriculum and Instruction in Science (3)

Prerequisite: Teacher Education 453.

Factors directing the changing science curriculum in secondary schools; recent trends and current research in the teaching of science in secondary schools and in science curriculum development; current practices in science teaching in secondary schools.

#### 520. History of Technology (3)

Prerequisites: Completion of lower division physical science requirements for a major in the physical sciences, life sciences, or engineering.

History of technology from ancient to modern times, tracing society, circumstances and invention in development of technology.

#### 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 Refer to the Graduate Bulletin.



# Naval Science

In the College of Professional Studies and Fine Arts

OFFICE: Physical Education 141  
TELEPHONE: (619) 594-3730

## Faculty

Chair: Love  
Professor: Love  
Assistant Professors: Atchason, Donovan, Fox, Geidel, Kershaw, Walker, Wilson

## Offered by the Department

Minor in naval science.

## NROTC Curriculum

The Department of Naval Science offers two programs, a scholarship and a nonscholarship program leading to a commission in the United States Navy or United States Marine Corps. Scholarship Program students receive tuition, fees, books and a stipend of \$100 per month while nonscholarship or college program students receive a \$100 per month stipend during their final two years of college. All students receive instruction in essential naval science subjects which, in conjunction with a baccalaureate degree in the field of their major, qualifies them for commissions as Ensign, United States Navy or Second Lieutenant, United States Marine Corps.

Naval science courses are open to all students having an interest in history, national security, foreign policy, organizational leadership, management and the military services. Enrollment in the Naval Reserve Officer Training Corps (NROTC) is not a requirement for taking naval science courses.

## Naval Science Minor

The minor in naval science consists of a minimum of fifteen units in naval science, nine of which must be upper division.

Courses in the minor may not be counted toward the major, but may be used to satisfy requirements for preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

#### 101. Introduction to Naval Science (2) I

Structure, principles, and practices; lines of command and control; logistical organizations; functions and services of major components of the Navy and Marine Corps; shipboard organization.

#### 102. Naval Ships Systems I (3) II

Types, structure, and purpose of naval ships; compartmentation, propulsion systems, auxiliary power systems, interior communications, ship control, ship design and stability.

#### 201. Naval Ships Systems II (3) I

Theory and principles of operation of naval weapons systems including types of weapons and control systems, capabilities and limitations, theory of target acquisition, identification and tracking, trajectory principles, and the basics of naval ordnance.

#### 202. Sea Power and Maritime Affairs (3) II

Sea power and maritime affairs; general concept of sea power (including Merchant Marine); role of naval warfare components used to support the Navy's mission; sea power as an instrument of national policy; comparative study of US and Soviet strategies.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 301. Navigation and Naval Operations I (3) I

Theory, principles, and procedures of ship navigation. Topics include mathematical analysis, spherical triangulation, practical work involving sight reduction, sextants, publications, required logs/reports, piloting, celestial and electronic navigation techniques.

#### 302. Navigation and Naval Operations II (3) II

Prerequisite: Naval Science 301.

Principles and procedures of ship movement and employment including tactical formations and dispositions, relative motion, communications, sonar-radar search and screening theory, rules of the road, lights, signals, and navigational aids.

#### 310. Evolution of Military Conflict (3) II

Forms of warfare through history to formulate the sense of historical continuity in the evolution of warfare, to develop a basic sense of strategy and alternative military actions, and to explore impact of historical precedent on military thought and actions.

#### 401. Naval Leadership I (3) I

Principles of leadership and management. Development of skills in the areas of communications, counseling, control, direction, management, and leadership.

#### 402. Naval Leadership II (3) II

Prerequisite: Naval Science 401.

Human resource management, naval personnel management, material management, and the administration of discipline.

#### 410. Amphibious Operations (3) I

Concept of amphibious warfare, doctrinal origins, and its evolution as an element of naval policy during the twentieth century.

# Nursing

In the College of Health and Human Services

OFFICE: Hardy Tower 58  
TELEPHONE: (619) 594-5357

Agency Member of the National League for Nursing and the American Association of Colleges of Nursing. Accredited by the California Board of Registered Nursing and by the National League for Nursing.

## Faculty

Emeritus: Black, Gulino, Hines, Laiho, Leslie, Thomas  
Director: Wahl  
Associate Director: Freitas  
Professors: Heineken, Lantz, Salerno, Wahl, Wozniak  
Associate Professors: Blenner, Fitzsimmons, Flagg, Freitas, Hadley, Loveridge, Morris, Novak, Reed, Shively, Verderber, Walker  
Assistant Professors: La Monica, Moffett, Saarmann  
Lecturers: Broom, Burt, Carson, Colwell, Gilbert, Lischke, Long, Rapps, Szafran

## Offered by the School of Nursing

Master of Science degree in nursing.  
Major in nursing with the B.S. degree in applied arts and sciences.  
Health services credential.

## The Major

The nursing profession is concerned with the total health care of the individual and the family. It is a profession which believes in the prevention of illness, caring for those who are acutely ill, and helping people with long-term rehabilitative problems to live in the healthiest way possible. Nursing is both a science and an art. It has its foundation in biophysical and behavioral humanistic sciences, as well as in specific practice skills and techniques.

Students in the nursing program are provided opportunities to acquire knowledge from the natural and social sciences; to develop critical thinking and professional decision-making abilities; to utilize current research in the application of the nursing process; to develop leadership potential and accountability in professional practice; to become aware of the emerging roles of the professional nurse and of the social forces and trends affecting health and health care systems; and to learn to balance professional and personal growth and values.

Nurses are in demand throughout the country and are needed in such settings as acute care hospitals, community health agencies, homes, outreach programs, public schools, health maintenance organizations, and clinics which serve underprivileged, minority, and rural populations. Career opportunities are particularly good for minority, bilingual/bicultural persons.

## Standards for Admission

### Admission to the University

Applicants must be eligible for admission to the University. See "Regulations: Admission and Registration" section of this catalog. Students accepted as nursing majors are subject to further screening to determine their eligibility to be admitted into the professional coursework.

### Admission to the Professional Program in Nursing

1. **Declaration of Major.** Students who are declared nursing majors at SDSU will have first consideration of their application. Students desiring to change their major to nursing will be considered on a space available basis.



2. **Prerequisite Courses.** The following courses, or their equivalents, and course grades are required for admission to the nursing program:

- Course grade requirement (C or better) in each of these required university courses: Biology 210, Chemistry 130, Psychology 101, Sociology 101
- Course grade requirement (B or better) in each of these required university courses: Biology 150, Biology 261

3. **Minimum Grade Point Average.** Applicants must complete the six prerequisite courses with a minimum overall grade point average of 2.5.

4. **Writing Competency Requirement.** All students must demonstrate their writing competence on one of the following tests:

- By a score of 470 on the verbal portion of the Scholastic Aptitude Test
- By a score of 22 on the American College Tests
- By a score of 150 on the English Placement Test with score of 7 on essay portion



d. By a score of 8 on the SDSU Writing Competency Examination. Students who have not achieved the minimum score on the writing competency test must register in Academic Skills 97A and/or 97B prior to admission to the nursing program.

**5. Additional Point System.** Applicants requesting admission to the professional coursework will be ranked and evaluated on the basis of a point system. A maximum of 94 points can be earned in meeting the prerequisite courses, writing competency, recognition of outstanding achievement, health care experience and bilingual ability requirements, and applicants will be ranked in accordance with points earned. Letters of reference will be required to verify specific achievements, leadership, participation and work experience. For specific additional point system allocation, consult the School of Nursing office.

**6. Health Requirement.** To meet the specific health requirements, a medical examination and immunizations must be completed. The medical examination is in addition to the one required for admission to the University. For specific information concerning medical examination and immunization series, consult the School of Nursing office.

**7. Academic Credit Through Examination.** Academic credit by examination may be obtained by those whose prior education and/or experience provides the knowledge and skills required to meet the objectives of one or more courses. Students who believe they may be eligible for credit by examination should contact the School of Nursing office for an appointment for special advising prior to submitting their application for admission. For University policy regarding credit-by-examination, consult "Academic Credit Through Examination" in the "General Regulations" section of this catalog.

**8. Registered Nurse – Bachelor of Science, Major in Nursing Program.** A registered nurse—Bachelor of Science in nursing program is available for registered nurses with either an Associate Degree in Nursing or a Diploma in Nursing. This program gives credit for previous coursework and is designed with flexible class scheduling and innovative teaching strategies for the working nurse. Students eligible for this option should contact the School of Nursing office for special advising and program planning.

**9. Formal Application.** Applicants must make an application to the University according to deadlines for impacted programs. In addition, application to the nursing program must be made during the semester that the student is completing prerequisite non-nursing courses (21 units). Application forms may be obtained at the School of Nursing office. Consult the School of Nursing for the deadline date.

### Special Instructions

- 1. Change of Major.** Requests for change of major will be granted only on a space available basis.
- 2. Full-Time/Part-Time Study.** Students are encouraged to enroll in all of the nursing courses scheduled each semester. However, part-time enrollment can be arranged by contacting the undergraduate adviser within the school.
- 3. Liability Insurance and Transportation.** Students enrolled in the nursing program are required to provide their own professional liability insurance and transportation to off-campus clinical agencies and for home visits.
- 4. Impacted Program.** The nursing major is designated as an impacted program and specific regulations related to admissions are imposed. Consult "Impacted Programs" in the "Admissions" section of this catalog for regulations.
- 5. Honors Program.** The honors program is available to students in the senior level who meet the criteria. Four units of honors courses constitute the honors program and will be validated as such on the official transcript. Less than four units completed will not be validated as "honors," but may be credited as a special studies program.

**6. Health Insurance.** All students are advised to obtain health insurance coverage. Students are responsible for health care cost when services are rendered by a health care agency.

**7. CPR Certification.** Students are required to be certified prior to entrance into any clinical setting. American Heart Association (AHA) certification is highly recommended.

**8. Option Open to L.V.N.'s** for eligibility to the R.N. license examination. THIS OPTION HAS NO RELATION TO DEGREE REQUIREMENTS AND DEGREE COMPLETION.

### Course Requirements

	Units
BIOL 210 Fundamentals of Microbiology .....	4
BIOL 261 Human Physiology .....	4
NURS 202 Client Assessment .....	4
*NURS 308 Adult Health Nursing .....	6
*NURS 416 Psychiatric-Mental Health Nursing .....	5
*NURS 460 Professional Development .....	2
<b>Total</b>	<b>25</b>

\* Includes management/evaluation of patient care.

\* Includes geriatric nursing.

**9. Licensure and Credit-By-Examination.** Students should request consultation with the undergraduate adviser regarding problems of license by endorsement with other states if the R.N. license examination is taken prior to degree completion, and the greater flexibility created by using the advanced standing policy with academic credit-by-examination.

## General Education Requirements

Students will complete a minimum of 50 units in General Education to include a minimum of nine upper division units. No more than 12 units may be used for General Education credit from any one department or academic unit.

### I. Communication and Analytical Reasoning: 12 units

- A. Written Communication (6 units)
- B. Oral Communication (3 units)
- C. Statistics (3 units)

### II. Foundations: 26 units

- A. Natural Science (11 units)
  1. Life Sciences (8 units) to be satisfied by:
    - Biology 150 (4 units)
    - Biology 210 (4 units)
  2. Physical Sciences (3 units) to be satisfied by:
    - Chemistry 130 (3 units) *or*
    - Chemistry 160 (3 units)
- B. Social and Behavioral Sciences (6 units) to be satisfied by:
  - Psychology 101 (3 units)
  - Sociology 101 (3 units)

- C. Humanities (9 units)
 

At least three units must be taken from three of the four areas (1. Literature; 2. Art, Classics, Drama, Humanities, and Music; 3. History; 4. Philosophy and Religious Studies) in the Humanities section of the Foundations component of the regular General Education program. Refer to General Education requirements in the Graduation Requirements section of the catalog.

**III. Explorations:** Twelve units to include Psychology 351 and at least one course from the Humanities area of Explorations *not* selected in the Foundations component. At least nine of the twelve units must be upper division and three must be of cultural diversity. Refer to General Education requirements in the Graduation Requirements section of the catalog.

## Sequence of Courses in the Nursing Curriculum

First Year			
First Semester	Units	Second Semester	Units
Chemistry 130 .....	3	Biology 210 .....	4
Biology 150 .....	4	Biology 261 .....	4
Sociology 101 .....	3	Psychology 101 .....	3
G.E. (Written Communication) .....	3	G.E. (Written Communication) .....	3
G.E. (Oral Communication) .....	3	General Education .....	3
	16		17

Second Year			
First Semester	Units	Second Semester	Units
Chemistry 160 .....	3	FSCS 270 or Psych. 330 .....	3
American Institutions .....	3	Nursing 252 .....	5
Nursing 202 .....	4	Nursing 254 .....	4
Nursing 206 .....	5	GE (Statistics) .....	3
	15		15

Third Year			
First Semester	Units	Second Semester	Units
Psychology 351 .....	3	Nursing 354 .....	5
Nursing 307 .....	3	Nursing 356 .....	5
Nursing 308 .....	6	General Education .....	6
Nursing 314 .....	3		
Elective .....	2		
	17		16

Fourth Year			
First Semester	Units	Second Semester	Units
Nursing 414 .....	6	Nursing 458 .....	5
Nursing 416 .....	5	Nursing 460 .....	2
General Education .....	6	Nursing 452, or 454, or 462 .....	5
	17	American Institutions .....	3
			15

## Nursing Major

With the B.S. Degree in Applied Arts and Sciences  
(Premajor Code: 12030) (Major Code: 12031)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

Nursing majors are eligible to take the State Board Registered Nurse license examination after completing seven semesters of the prescribed curriculum. Graduates are eligible to apply for the California Certificate of Public Health Nursing.

Nursing majors may be part-time students in the curriculum. Consultation with the undergraduate adviser is mandatory.

**Preparation for the Major.** Upon acceptance into the program, Nursing 202, 206, 252, 254; Chemistry 160; three units in statistics should be selected from the requirement in Communication and Analytical Reasoning list of Logic, Mathematics, Statistics; three units in growth and development selected from Family Studies and Consumer Sciences 270 or Psychology 330; three units of American Institutions must be successfully completed before continuation in the upper division courses required for the major. (27 units)

**NOTE:** A grade of C (2.0) or better is *required* in all nursing courses except Nursing 453 and 456 which, as electives, are exempt from this requirement. No nursing course may be repeated more than once. A grade of C (2.0) or better or Cr is required in corequisite courses. (Chemistry 160 and Psychology 351).

Progress in the nursing program is dependent upon completion of nursing courses in the prescribed sequence as outlined above. Students will not be permitted to progress to the next semester until nursing courses are completed from the previous semester.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 45 upper division units in nursing to include Nursing 307, 308, 314, 354, 356, 414, 416, 458, 460; and 452 or 454 or 462.

## 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.

### 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)

	Units
NURS 500 Client Assessment .....	4
NURS 670 School Nursing Management Practices .....	3
NURS 672 Primary Health Care of the School-Aged Child .....	3
NURS 900 Current Concepts in Community Health Nursing .....	3
NURS 901 Family Health Theory and Nursing Practice .....	3
NURS 902 Primary Health Care of School-Aged Child Practicum .....	3
HS 521 Health Education for School Nurses .....	3
C DIS 540 Hearing Conservation and Audiometry for School Nurses .....	3
SPED 500 Human Exceptionality .....	3
Electives: Three units selected from Nursing 684; Health Science 574, 575*; Special Education 501	

\* Prerequisites waived for students in this program.

## Courses

## LOWER DIVISION COURSES

**202. Client Assessment (4)**

Two lectures and six hours of laboratory.  
Prerequisites: Admission to nursing program; concurrent registration in Nursing 206.  
Determining and measuring variables relevant to assessment of psychosocial and physical functioning.

**206. Nursing Practice I (5)**

Three lectures and six hours of laboratory.  
Prerequisites: Admission to nursing program; concurrent registration in Nursing 202.  
Basic nursing skills and integration of diagnosis, planning, and implementation of nursing care. Application of nursing process. Not open to students with credit in Nursing 250.

**250. Nursing Science II (4) I, II**

Two lectures and six hours of laboratory.  
Prerequisites: Nursing 202, 254; course in growth and development; and concurrent registration in Nursing 252.  
Differentiation of assessment variables and their impact on diagnosis, planning and implementation of care. Laboratory includes experiences with clients having a variety of nursing diagnoses requiring determination of differential priorities in planning and implementing care. Nursing 250 to be offered for the last time in Fall 1992.

**252. Nursing Practice II (5) I, II**

Three lectures and six hours of laboratory.  
Prerequisites: Nursing 202 and 206; concurrent registration in Nursing 254.  
Focus on psychological, social and biological stressors affecting man's health status and the modalities of nursing intervention which promote health. Emphasis on developmental and situational stressors commonly experienced in modern society and man's adaptive and maladaptive behavioral and biological responses from birth through senescence.

**254. Nurse-Client Relationships: Cultural and Mental Health Concepts (4)**

Prerequisite: Concurrent registration in Nursing 252.  
Nurse-client communication and application to clinical nursing practice. Origins of a variety of communication styles. Cultural and mental health concepts related to communication. (Formerly numbered Nursing 204.)

UPPER DIVISION COURSES  
(Intended for Undergraduates)**307. Nursing Research (3)**

Prerequisites: Nursing 252 and 254; concurrent registration in Nursing 308 and 314.  
Nursing research process. Emphasis on identification of researchable questions and beginning critiquing ability. (Formerly numbered Nursing 350.)

**308. Adult Health Nursing (6) I, II**

Three lectures and nine hours of laboratory.  
Prerequisites: Nursing 206 or 250, 252; concurrent registration in Nursing 307, 314.  
Application of theories of stressors and/or biological responses specifically affecting the adult on the health-illness continuum. Laboratory focuses on the application of the nursing process in implementing preventive, supportive, and restorative therapeutic modalities which assist the adult client to reestablish, maintain, or develop new adaptive responses.

**312. Concepts in Professional Nursing (3) I, II**

Prerequisite: R.N., with Associate Degree or Diploma in nursing.  
Concepts in professional nursing. Differentiation of professional practice with emphasis on stress theory, therapeutic communication, values clarification, and legal aspects. Not open to generic students.

**314. Gerontological Nursing (3)**

Two lectures and three hours of laboratory.  
Prerequisites: Nursing 254; concurrent registration in Nursing 307 and 308.  
Theory and selected laboratory experience focusing on stressors affecting elderly on health-illness continuum. Gerontologic nursing in a variety of settings.

**354. Nursing Care of the Childbearing Family (5-6) I, II**

For five units: Three lectures and six hours of laboratory. For six units: Three lectures and nine units of laboratory.  
Prerequisite: Concurrent registration in Nursing 356.  
Family-centered focus encompassing adaptive and maladaptive responses to stressors in the maternity cycle and their effect on the neonate. Clinical laboratory focuses on the application of nursing theory and process in providing preventive, supportive and restorative care to mothers and neonates.

**356. Parent-Child Nursing (5-6) I, II**

For five units: Two lectures and nine hours of laboratory. For six units: Three lectures and nine hours of laboratory.  
Prerequisite: Concurrent registration in Nursing 354.  
Stressors affecting the child on health-illness continuum. Nursing theory and laboratory focuses on application of nursing process in providing preventive, supportive and restorative therapeutic modalities in a variety of settings. Emphasis on the child in the family and the necessary intervention to promote adaptation of the child to attain, maintain or regain an optimum level of health.

**414. Community Health Nursing (6) I, II**

Three lectures and nine hours of laboratory.  
Prerequisite: Concurrent registration in Nursing 416.  
Assessment and utilization of community health care concepts and delivery with emphasis on promotion of health, prevention of illness and individual and group teaching techniques. Consideration given to cultural aspects of health care.

**416. Psychiatric-Mental Health Nursing (5)**

Three lectures and six hours of laboratory.  
Prerequisites: Nursing 354 and 356; concurrent registration in Nursing 414.  
Theory and clinical laboratory in application of nursing process to care of clients evidencing maladaptive responses to psychosocial stressors. Presentation of theories describing and explaining maladaptive behaviors and application of nursing interventions in a variety of treatment modalities. (Formerly numbered Nursing 310.)

**452. Basic Concepts in Critical Care Nursing (5) I, II**

Three lectures and six hours of laboratory.  
Prerequisites: Nursing 414 and 416; concurrent registration in Nursing 453, 458, and 460.  
Theory and selected laboratory experience in care of clients with complex health problems requiring intensive nursing care. Consideration given to student's preference for specific clinical area of concentration.

**453. Basic EKG Monitoring (1) I, II Cr/NC**

Prerequisite recommended: Concurrent registration in Nursing 452.  
Basic electrophysiological and interpretive concepts necessary for identification and management of supraventricular and ventricular rhythms.

**454. Primary Health Care Nursing (5)**

Three lectures and six hours of laboratory.  
Prerequisites: Concurrent registration in Nursing 458 and 460.  
Theory and selected laboratory experiences in primary health care settings. Implementation of expanded role of professional nurse in primary care. Major primary care health problems. Health monitoring, continuity of care, epidemiological concepts, risk appraisal, health teaching, counseling, motivation.

**456. Clinical Pharmacology in Nursing Practice (3) I, II**

Prerequisites: Biology 150 and 261.  
Major classifications of drugs; pharmacological and toxicological activity; clinical applications. Role of nurse in assessment, intervention, and patient education.

**458. Nursing Management and Leadership (5)**

Three lectures and six hours of laboratory.  
Prerequisites: Concurrent registration in Nursing 460 and Nursing 452 or 454 or 462.  
Theories and functions of nursing management and leadership within health care system. Economics of health care. (Formerly numbered Nursing 412.)

**460. Professional Development (2)**

Prerequisites: Concurrent registration in Nursing 458 and Nursing 452 or 454 or 462.  
Preparation for professional role in nursing. Emphasis in socioeconomic, political, and legal aspects of nursing. Discussions of advocacy, ethics, and current issues. (Formerly numbered Nursing 306.)

**462. Acute Care Nursing (5)**

Three lectures and six hours of laboratory.  
Prerequisites: Concurrent registration in Nursing 458 and 460.  
Advanced problems in medical and surgical nursing and dimensions of professional nursing role.

**496. Experimental Topics (1-4)**

Selected topics. 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.

**498. Cooperative Education Supervised Practice (2-6) Cr/NC**

Seminar. Two hours biweekly. Clinical hours arranged by student and employer.  
Prerequisites: Level 1: Nursing 252. Level 2: Nursing 356.  
Supervised practice in application of previously learned knowledge and skills in selected clinical agencies. Professional interaction with other health care workers to strengthen professional nursing identity. Work under supervision of registered nurse preceptor and faculty coordinator. May be repeated. Maximum credit three units applicable to a bachelor's degree.

**499. Special Study (1-3) I, II**

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)**500. Client Assessment (4)**

Three lectures and three hours of laboratory.  
Prerequisite: Consent of graduate adviser.  
Physical diagnosis and psychosocial assessment of clients with health problems. Nursing process emphasis to include biopsychosocial health history and nursing diagnosis.

**590. Physiologic Basis for Critical Care Nursing (3)**

Prerequisite: Consent of graduate adviser.  
Physiological alterations in human responses to illness as a basis for prevention, assessment, and nursing interventions in critical care settings.

**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  
Refer to the Graduate Bulletin.



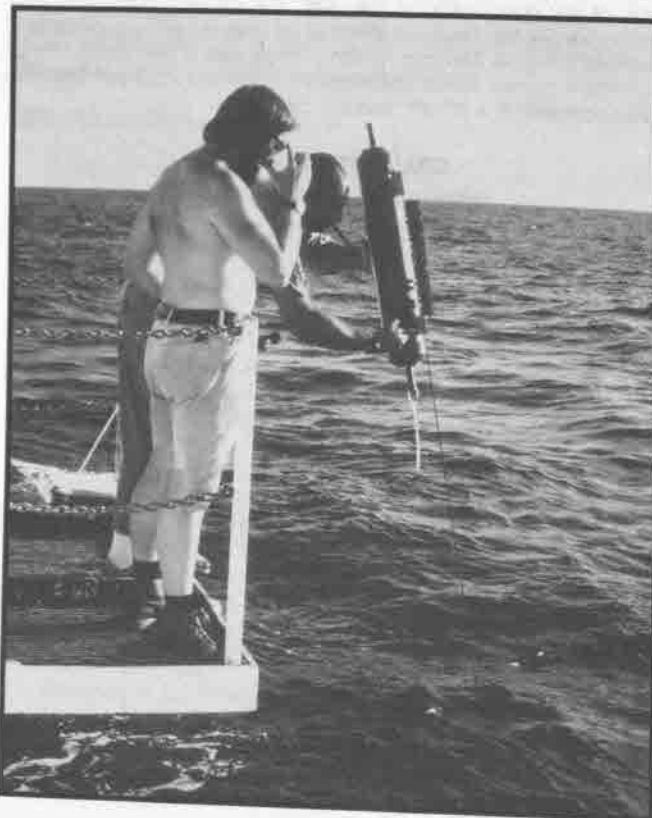
# Oceanography

Administered by the Dean of the College of Sciences

OFFICE: Life Sciences Annex  
TELEPHONE: (619) 594-5142

San Diego State University provides preparation for ocean-oriented careers by offering marine-related coursework and oceanographic experience within regular degree programs in the Departments of Biology, Chemistry, Economics, Civil and Mechanical Engineering, Geography, Geological Sciences, Natural Science, and Physics. Master's degrees with specialization in marine problems may also be earned in these departments. The Ph.D. degree is offered in biology, chemistry, and ecology, jointly with the University of California. Degrees in general oceanography or marine studies are not offered by the University. The Coastal and Marine Institute coordinates work in the area of marine studies and provides special supporting services to the faculty, staff and students, including student advising, assistance in research and publication, operation of the University's marine laboratory at Mission Bay, and a boat operations program.

Courses in general oceanography are offered by faculty from the Departments of Biology, Chemistry, Geological Sciences, and Natural Science. Advanced coursework and research in geological and physical oceanography are conducted in the Geological Sciences Department. An option in marine geology is offered as part of the undergraduate major in geological sciences, and the Chemistry Department offers work in chemical oceanography. Advanced courses and research in biological oceanography, marine biology, marine botany, and marine zoology are conducted in the Department of Biology. Similar marine-related coursework and research are offered in the Departments of Economics and Geography and in the College of Engineering. Students who require advising in these areas should inquire at the Coastal and Marine Institute (See section of this catalog on Academic Organization, College of Sciences Research Centers).



## Oceanography Minor

Offered for undergraduate science students by the Department of Geological Sciences, the minor in oceanography consists of a minimum of 19 upper division units to include Biology 515 or 517; Chemistry 501; Geological Sciences 540, 545, 548; Oceanography 541.

The oceanography minor is intended for students with extensive background in the sciences. Oceanography 320 is not applicable toward the oceanography minor.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### UPPER DIVISION COURSE (Intended for Undergraduates)

#### 320. The Oceans (3) I, II

Prerequisites: One introductory college course in a life science and one in a physical science, and completion of the General Education requirement in Foundations II.A., Natural Sciences.

Biological and physical aspects of the oceans and their significance to man; problems of modern oceanography.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 541. Oceanography (3) I, II

Prerequisites: Chemistry 200; Mathematics 121 and 122 or 150; Physics 180A or 195, 195L.

Multidisciplinary examination of the physical, chemical, biological and geological aspects of the marine environment and the relationship of man with the sea. Intended for science majors only.

#### 561. Deep Sea Oceanography (3) I, II

Prerequisites: Biology 515 and Chemistry 361A.

Concepts of deep sea oceanography including abyssal biology, physics and chemistry, instruments and methods of deep sea research, biogeochemistry of oceanic ridges, and high-pressure biochemistry.

#### For additional courses in Marine Studies see:

Biology 513. Marine Microbiology  
Biology 514. Marine Plant Biology  
Biology 515. Marine Invertebrate Zoology  
Biology 517. Biological Oceanography  
Biology 518. Fisheries Biology  
Biology 519. Aquaculture  
Biology 520. Ichthyology  
Chemistry 501. Chemical Oceanography  
Economics 454. Economics of the Ocean  
Geography 504. Coastal and Submarine Physiography  
Geography 510. Advanced Meteorology  
Geography 576. Geography of Marine Resources  
Geography 588. Intermediate Remote Sensing of Environment  
Geological Sciences 540. Marine Geology  
Geological Sciences 545. Descriptive Physical Oceanography  
Geological Sciences 548. Coastal and Estuarine Physical Oceanography

# Philosophy

In the College of Arts and Letters

OFFICE: Adams Humanities 4142  
TELEPHONE: (619) 594-5263

## Faculty

Emeritus: Friedman, Howard, McClurg, Nelson, O'Reilly, Ruja, Shields, Snyder, Warren, Weissman

Chair: Weston

Professors: Carella, Feenberg, Gregor, Rosenstein, Weston

Associate Professors: Chaffin, Troxell

Assistant Professor: Zupko

## Offered by the Department

Master of Arts degree in philosophy.

Major in philosophy with the B.A. degree in liberal arts and sciences.

Minor in philosophy.

## The Major

The philosophy major explores and seeks to understand values and the nature of reality. Through the study of philosophy, questions are asked about existence and experience: What is truth? What is morally right? What kind of life is best? What kind of society? Is there an ultimate reality? Philosophy studies the types of questions that most other subject areas are unable to address fully.

There are three different ways these questions are characteristically investigated in the philosophy major at San Diego State University. They are approached historically, by studying the history of philosophy from the ancient Greeks to the present; analytically, by carefully examining the meanings and interrelationships of ideas; and critically, by training students in the art of evaluating various claims and the arguments for and against them.

While the analytical and critical approach are part of every course in philosophy, the philosophy curriculum at San Diego State University emphasizes the historical approach. The aim is to provide the philosophy major with a thorough grounding in the development of philosophy so that the student is well prepared to participate in the discussion of contemporary issues.

The education of a philosophy major, along with providing the satisfaction of dealing with fundamental issues which have concerned serious thinkers for many centuries, also provides the student with skills that may be used in a variety of careers. Some students begin graduate work after their B.A., either in philosophy, with the expectation of teaching or writing in the field, or in law, education, or other professional programs. Some enter new fields of research, working on computer problems or artificial intelligence. Other students find that the special skills they have developed as philosophy majors — the ability to read complex material with comprehension, to analyze problems, to find relevant sources, to evaluate evidence, to propose solutions and to examine them self-critically, and to report the results of their inquiries with clarity and coherence — are valued by employers in many different fields. Such students may find career opportunities in government, industry, finance, and social services.

## Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

## Philosophy Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 15091)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in philosophy courses can apply to the degree.

A minor is not required with this major.

**Preparation for the Major.** Six lower division units in philosophy including Philosophy 120.

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 305W or 500W or 508W with a grade of C (2.0) or better.

**Major.** A minimum of 30 upper division units in philosophy at the 400 and 500 level to include Philosophy 411, 412, 413, 414, and 521; completion of the requirements in any one of the four areas of specialization listed below and three to six units of electives in philosophy. Students intending to go on to graduate work in philosophy are strongly urged to select "Current Issues" as their area of specialization.

**A. Current Issues:** Twelve units to include three units from each of the following groups, with an additional three units from either Group I or Group II.

Group I: Philosophy 523, 525, 537  
Group II: Philosophy 512, 528, 541  
Group III: Philosophy 506, 507, 508

**B. Legal and Political Philosophy:** Philosophy 510, 512, and three units selected from 523, 527, 528, and 532.

**C. Aesthetics and Philosophy of Literature:** Nine units selected from Philosophy 508, 541, 542, and 543.

**D. Philosophy of Science:** Philosophy 537 and six units selected from Philosophy 522, 527, 531, and 536.

## Philosophy Minor

The minor in philosophy consists of a minimum of 15-18 upper division units in philosophy. The student must complete the requirements in one of the following areas of specialization:

**A. Aesthetics and Philosophy of Literature:** Fifteen units to include 12 units selected from Philosophy 334, 508, 541, 542, 543, and three units of electives.

**B. Applied Ethics:** Eighteen units to include Philosophy 528 and 12 units selected from Philosophy 329, 330, 332, 333, 510, 512, and three units selected from any upper division course in Philosophy or from Economics 370, General Studies 310, Journalism 500, Management 356, Natural Science 333, or Speech Communication 589.

**C. History of Philosophy:** Fifteen units to include Philosophy 411 and nine units selected from Philosophy 412, 413, 414, 506, 507, 575, and three units of electives.



**D. Legal and Political Philosophy:** Fifteen units to include Philosophy 510, 512, and six units selected from Philosophy 527, 528, 532; and three units of electives.

**E. Philosophy and Cognitive Science:** Fifteen units to include Philosophy 521, 523, 531, 536; and three units of electives.

**F. Philosophy of Science:** Fifteen units to include Philosophy 537 and nine units selected from Philosophy 521, 522, 523, 527; and three units of electives.

## Courses

### LOWER DIVISION COURSES

**101. Introduction to Philosophy: Values (3) I, II (CAN PHIL 4)**  
Introduction to philosophical inquiry, with emphasis on problems of value. Students are encouraged to think independently and formulate their own tentative conclusions.

**102. Introduction to Philosophy: Knowledge and Reality (3) I, II**  
Introduction to philosophical inquiry with emphasis on problems of knowledge and reality. Students are encouraged to think independently and formulate their own tentative conclusions.

**103. Historical Introduction to Philosophy (3) I, II**  
Introduction to philosophical inquiry through study of the works of major philosophers in their historical contexts.

**120. Logic (3) I, II (CAN PHIL 6)**  
Introduction to deductive and inductive logic. Logic and language. Analysis of fallacies. Uses of logic in science and in daily life.

**296. Experimental Topics (1-4)**  
Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

**305. Classics of Western Philosophy (3)**  
Prerequisites: Upper division standing, and completion of the General Education requirement in Foundations II.C., Humanities.  
Analysis of major texts selected from diverse historical periods in western philosophy. Texts will illustrate different world views (e.g., Platonism, Stoicism, Skepticism) and their relationship to other disciplines and to present world views.

**310. Philosophy and Human Nature (3)**  
Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.  
Concept of human nature. Descriptive and normative aspects of major theories of human nature.

**329. Social Ethics (3)**  
Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.  
Ethical issues of contemporary life. Individualism vs. collectivism; democracy vs. dictatorship; ethical problems arising in law, medicine, business, government and interpersonal relationships.

**330. Medical Ethics (3)**  
Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.  
Value judgments upon which medicine is based and the ethical issues which medicine faces.

**332. Environmental Ethics (3)**  
Prerequisite: Completion of General Education requirement in Foundations II.C., Humanities.  
Development of traditional values concerning the natural environment. Reasons for altering values in light of modern changes in relationship of human beings to the environment. Application of ethical principles to actions affecting the environment.

**333. Philosophy of Technology (3)**  
Prerequisite: Completion of General Education requirement in Foundations II.C., Humanities.  
Nature of technology. Ethical aspects of social, political, and environmental problems associated with rapid development of technology over the last century. Responses to these problems by contemporary philosophers.

**334. Philosophy of Literature (3)**  
Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.  
Study of literature of philosophical significance, and of philosophical problems of literature.

**351. Chinese Philosophy (3)**  
Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.  
Philosophical traditions which have shaped the intellectual life and culture of China. Emphasis on foundational texts surviving from pre-Han China.

**411. Ancient Western Philosophy (3) I**  
Prerequisite: Three units in philosophy.  
Ancient western philosophy through the third century A.D. (Formerly numbered Philosophy 401.)

**412. Medieval and Renaissance Philosophy (3) I**  
Prerequisite: Three units in philosophy.  
European philosophy from the fourth century through the sixteenth century. (Formerly numbered Philosophy 402.)

**413. Seventeenth and Eighteenth Century European Philosophy (3) I**  
Prerequisite: Three units in philosophy.  
European philosophy in the seventeenth and eighteenth centuries. (Formerly numbered Philosophy 404.)

**414. Nineteenth Century European Philosophy (3) II**  
Prerequisite: Three units in philosophy.  
European philosophy in the nineteenth century. (Formerly numbered Philosophy 405.)

**496. Experimental Topics (1-4)**  
Selected topics. 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.

**499. Special Study (1-3) I, II**  
Prerequisites: Six upper division units in philosophy and prior arrangements with a supervising instructor.  
Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

**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.

**522. Inductive Logic (3)**  
Prerequisite: Philosophy 120.  
Definition, classification and division. The logic of experimentation and statistics. Formation and validation of hypotheses. Probability theories.

**523. Theory of Knowledge (3)**  
Prerequisite: Six units 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. Developments 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.

### GRADUATE COURSES Refer to the Graduate Bulletin.



# Physical Education

In the College of Professional Studies and Fine Arts

OFFICE: Physical Education 351  
TELEPHONE: (619) 594-5541

## Faculty

Emeritus: Andrus, Benton, Broadbent, Cave, Cullen, Fox, Friedman, Grawunder, Gutowski, Kasch, Landis, Olsen, A., Olsen, L., Phillips, Schutte, Schwob, Sportsman, Tollefsen, Wilhelm, Williamson, Ziegenfuss

Chair: Carlson

Professors: Aufesser, Buono, Carlson, Carter, Francis, P., King, McKenzie, T., Moore, Rushall, Selder, Simmons, Sucec

Associate Professors: Barone, Franz, Hempel, Mechikoff, Nichols-Bernhard, Patterson, Verity, Wells

Assistant Professors: Johnson, Quinn, Smith, Whitby  
Lecturers: Francis, L.I., Hammond, McKenzie, R.,

## Offered by the Department

Master of Arts degree in physical education.

Major in physical education with the B.A. degree in liberal arts and sciences.

Major in physical education with the B.S. degree in applied arts and sciences.

Teaching major in physical education for the single subject teaching credential.

Adapted physical education credential.

Minor in physical education.

## The Major

Physical education is a study of the processes through which individuals obtain optimal health, physical skill, and fitness. The physical educator, whether in a laboratory, school, medical or business setting, is ultimately concerned with improving the health and well-being of people.

The uniqueness of the academic area known as physical education is the study of human movement. The academic foundation for the study of human movement is covered by courses that explore movement as it affects and is affected by physiological, psychological, developmental, sociocultural, and mechanical parameters. Application of movement concepts evolves from an academic foundation and is covered by courses that study how movement is quantified, how learning experiences are sequenced to modify movement behaviors, and how movement is modified for special needs.

While many students think of physical education only as preparation for coaching and teaching, today's physical educator is prepared for a wide range of exciting career opportunities beyond the traditional paths. Some of the typical fields open to physical education majors include:

**Athletic Training.** The purpose of this specialization is to prepare students to meet the academic requirements necessary for (1) a career in athletic training and completion of the degree requirements for national certification in athletic training, and (2) entry to postgraduate education for physical therapy, chiropractic, podiatry, and medicine. Students find employment in a broad range of medical, commercial, and educational environments. Athletic training specialists work in such diverse areas as injury prevention and rehabilitation, fitness testing, and as athletic trainers for sports teams. Students wishing to meet all requirements for national certification by the National Athletic Trainers Association must also complete a minimum two years clinical internship under the direct supervision of a certified athletic trainer. Students interested in completing this requirement at SDSU must make application for clinical internship to the Undergraduate Adviser in the Department. Selection is competitive and limited in number. Applications are accepted in spring for fall selections.

Students completing this specialization also find their preparation beneficial for post-graduate study leading to careers in physical therapy and medicine. Students wishing to meet all requirements for postgraduate education for a professional degree should meet with the Undergraduate Adviser as well as contact potential postgraduate education sites to obtain specific entry requirements.

**Fitness and Health.** Persons majoring in physical education often find employment in the private and public sectors concerned with the fitness and health of employees. This specialization prepares students to meet the academic requirements necessary to: (1) evaluate and program exercises for apparently healthy persons in diverse fitness and health settings, and (2) pursue certifications that reflect knowledge of the scientific principles that govern leadership in exercise and health enhancement programs. Physical education graduates work as fitness experts and managers in adult and corporate fitness programs of business, industry, public agencies, and schools. There are also career opportunities for employment in the business sector to include fitness clubs, cardiac rehabilitation, and human efficiency research.

**Movement Studies.** This program may be used by students as an undergraduate major for the B.S. degree in physical education when their degree objective is best served by an individualized program composed of courses from more than one specialization. The breadth of courses available to students in this program requires that each student meet with the Undergraduate Adviser to identify specific courses that best meet the program objectives.

**Teaching.** The graduate in physical education may find employment in public and private schools, specializing at either the elementary or secondary level. Physical education majors teach activities and sports skills, health and fitness classes, and act as physical education resource specialists. Students may also prepare for careers in athletic coaching. The athletic coach works to improve individual and team sports skills, enhance opportunities for social and personal development of team members, develop the health and fitness of participants, and promote public awareness concerning the benefits of sports participation. Opportunities for both men and women exist at the interscholastic level as well as with community and commercial sports clubs.

## Physical Education Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 08351)

No new students are being admitted to this program.

All candidates for a degree in liberal arts and sciences must complete the requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in physical education courses can apply to the degree.

**Preparation for the Major.** Biology 150, 336; Physical Education 210; Psychology 101; four units of activity classes. (16 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 305W or 503W with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units in physical education to include 12 units from Physical Education 301, 302, 303, 304, 305, 307, and 12 units selected with the approval of the adviser.

## Physical Education Major

With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 08351)

All candidates for a degree in applied arts and sciences must complete the requirements listed in the section of this catalog on "Graduation Requirements."

### Specialization in Athletic Training

**Preparation for the Major.** Physical Education activities (2 units), 104A or 104B, 210, 265, 265L; Biology 150, 202, 336; Chemistry 130, 200; Computer Science 101; Family Studies and Consumer Sciences 204; Physics 180A, 180B; Psychology 101, 270; Sociology 101; Speech Communication 103. (49 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 49 upper division units to include Physical Education 301, 302, 303, 304, 305, 306, 307, 314, 363, 365, 366, 366L, 388 (1 unit), 401A, 401B, 461, 462, 463, 463L, 464; Sociology 355. (49 units)

### Specialization in Fitness and Health

**Preparation for the Major.** Physical Education activities (2 units), Physical Education 104A or 104B, 210, 265, 265L; Biology 100, 100L, 150, 336; Chemistry 100; Gerontology 101; Psychology 101, 270; Sociology 101; Speech Communication 103. (36 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 52 upper division units to include Physical Education 301, 302, 303, 304, 305, 306, 307, 314, 347A, 347B, 363, 365, 388 (1 unit), 401A, 401B, 412, 431, 432, 432L, 433; Family Studies and Consumer Sciences 311; Health Science 301; Sociology 355.

### Specialization in Movement Studies

**Preparation for the Major.** Physical Education activities (2 units), Physical Education 104A or 104B, 210, 265, 265L; Biology 150, 336; Psychology 101, 270; Sociology 101; Speech Communication 103. (25 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 48 upper division units to include Physical Education 301, 302, 303, 304, 305, 306, 307, 314, 347A, 347B, 401A, 401B; Sociology 355 plus 18 upper division units selected from the following: Physical Education 348, 352A, 352B, 352C, 352D, 352E, 352F, 363, 365, 388 (1 unit), 412, 431, 432, 432L, 433, 441A, 441B, 441C, 441D, 442A, 442B, 443, 444, 445, 461.

## Physical Education Major

For the Single Subject Teaching Credential  
With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 08351)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under Policy Studies or Teacher Education.

This major may be used by students in policy studies or teacher education as an undergraduate major for the B.A. degree in applied arts and sciences.

### Elementary/Secondary

**Preparation for the Major.** Physical Education activity courses with consent of the department adviser (6 units), Physical Education 104A or 104B, 210, 265, 265L; Biology 150, 336; Psychology 101, 270; Sociology 101; Speech Communication 103. (30 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 54 upper division units to include Physical Education 301, 302, 303, 304, 305, 306, 307, 314, 341, 347A, 347B, 348, 352, 401A, 401B, 412, 441A, 441B, 441C, 441D, 442A, 442B, 443, 444, 445; Sociology 355.

## 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 GPA 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 Physical Education 301, 303, 304, 348, 363 and at least two units of Physical Education 388, 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 15 units: Physical Education 348, 363, 398\*\* (1 unit), 667, and 672, and Special Education 501.
2. Practical Experience and Student Teaching: The candidate must complete four units of Physical Education 388 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 of 15 units: Physical Education 348, 363, 398\*\* (1 unit), 667, 672, and 684.
2. Practical Experience and Student Teaching: The candidate must complete four units of Physical Education 388 and a full-time student teaching experience in adapted physical education or equivalent experience.

\* Additional prerequisites required for this credential.  
\*\* Approved by Coordinator, Adapted Physical Education.

## Physical Education Minor

**Coaching:** The coaching of athletic teams is an integral part of the field of physical education. The physical education minor has been created for the purpose of allowing undergraduate students to study the scientific and technical bases of sport coaching. Completion of the minor will provide students with the qualifications for coaching in public and private schools, community athletic/sport programs, club



sport programs, or other areas where coaching knowledge and experience is needed.

A minimum of 24 units to include Physical Education 265, 265L, 301\*, 307\*, 352 (4 units), 398 (5 units), Biology 150, and Psychology 101.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

\* Additional prerequisites required.

## Types of Activity Courses

The department offers a wide variety of physical activity courses ranging from adapted physical education through intermediate level classes. The purpose of the physical activity program is to:

1. Provide quality physical activity skill instruction at the beginning and intermediate levels in a wide variety of sport and dance activities.
2. Provide a vehicle for vigorous physical activity in an instructional setting.
3. Provide knowledge about various sport and dance activities.
4. Provide knowledge about the value of physical activity as it relates to an improved quality of life.
5. Provide opportunity for physical activity instruction to all segments of the student population, including those with temporary or permanent disabilities.

## Courses

### LOWER DIVISION COURSES

Courses offered for one unit credit meet two hours per week or equivalent. "A" signifies a beginning class, "B" intermediate.

#### 100. Exercise and Health (3) I, II

Two lectures and two hours of activity.  
Scientific bases of relationships between exercise and health and application of these principles to individual fitness appraisal and regimen.

#### 102. Conditioning (1) I, II

(Formerly numbered Physical Education 102A.)

#### 103. Jogging (1) I, II

(Formerly numbered Physical Education 103A.)

#### 104A-104B. Weight Training (1-1) I, II, S

**105. Individual Adaptives (1) I, II**  
Prerequisite: Consent of instructor.  
A health history record is required of each student.  
Individual exercise programs for those who are handicapped in some respect, or who have functional defects or deficiencies amenable to improvement through exercise. May be repeated for credit.

#### 108A-108B. Basketball (1-1) I, II

#### 109A-109B. Soccer (1-1) I, II

#### 110A-110B. Volleyball (1-1) I, II

#### 111A-111B. Softball (1-1) I, II

#### 115A. Track and Field (1) I, II

#### 116A-116B. Golf (1-1) I, II

#### 117. Archery (1) I, II

(Formerly numbered Physical Education 117A.)

#### 118A-118B. Tennis (1-1) I, II, S

#### 119A-119B. Bowling (1-1) I, II

#### 120A-120B. Badminton (1-1) I, II

#### 122A-122B. Fencing (1-1) I, II

#### 123A-123B. Racquetball (1-1) I, II, S

#### 124. Sailing (1)

#### 125. Men's Gymnastics Apparatus (1)

#### 127A-127B. Women's Gymnastics Apparatus (1-1) I, II

#### 129A-129B. Swimming (1-1) I, II, S

#### 131. Water Exercise (1) I, II

Two hours of activity.  
Individual and group participation in stretching, muscular endurance, and cardiovascular exercises in the water; swim fitness/endurance training; and fitness related water games and relays.

#### 132A-132B. Ballroom Dance (1-1) I, II

#### 134A-134B. Modern Dance (1-1) I, II

#### 135A-135B. Ballet (1-1) I, II

#### 136A-136B. Jazz (1-1) I, II

#### 137A. Aerobic Dance (1) I, II, S

#### 138. Selected Activities (1) I, II, S

May be repeated with new activity for additional credit. See Class Schedule for specific content.

#### 139. Competition Fitness (1) II Cr/NC

Two hours of activity.  
Fitness program for student wishing to prepare for high-level competitive athletics. Theoretical aspects included. Maximum credit one unit applicable to a bachelor's degree and athletic eligibility.

#### 141A-141B. Martial Arts (1-1) I, II

Physical Education 141A is prerequisite to 141B.

#### 145. Waterskiing (1) I, II, S

#### 146. Surfing (1) I, II, S

#### 147. Windsurfing (1) I, II, S

#### 150A-150B. Horseback Riding (1-1) I, II

Physical Education 150A is prerequisite to 150B.

#### 171. Intercollegiate Practicum in Athletics (1) Cr/NC

Maximum combined credit for any combination of 171 series is four units. (Formerly numbered Physical Education 339.)

##### Offered in Fall

- A. Basketball
- B. Cross Country
- C. Football
- F. Soccer
- G. Volleyball (women)

##### Offered in Spring

- G. Volleyball (men)
- H. Baseball
- I. Golf
- J. Softball
- K. Tennis
- L. Track

#### 210. Introduction to Sport and Physical Education (2)

Overview of discipline of physical education. Development of a basic philosophy and background for entering profession. (Formerly numbered Physical Education 276.)

#### 241A. Physical Education of Children—Theory (1)

Prerequisite: Concurrent registration in Physical Education 241B.  
Physical education of elementary school-aged children: Theoretical and scientific bases. Not open to physical education majors (Formerly numbered Physical Education 241.)

#### 241B. Physical Education of Children—Activities (1)

Two hours of activity.  
Prerequisite: Concurrent registration in Physical Education 241A.  
Physical education of elementary school-aged children: Activities and instruction. Not open to physical education majors. (Formerly numbered Physical Education 241.)

#### 265. Techniques in Athletic Training (1)

Prerequisite: Biology 150.  
Athletic training techniques and emergency field care of athletic injuries. Theory and techniques of basic athletic first aid, emergency procedures including CPR, bandaging and taping.

#### 265L. Techniques in Athletic Training Laboratory (1)

Three hours of laboratory.  
Prerequisite: Concurrent registration in Physical Education 265.  
(Formerly numbered Physical Education 265.)

#### 296. Experimental Topics (1-4) I, II

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 301. Physical Growth and Development (3)

Prerequisite: Physical Education 210.  
Principles of human growth; performance as affected by developmental levels and individual differences in structure and function. (Formerly numbered Physical Education 371.)

#### 302. History and Philosophy: Physical Education and Sport (3)

Prerequisite: Physical Education 210.  
Integrated approach to understanding of historical, philosophical, and sociological forces shaping development of physical education and sport. (Formerly numbered Physical Education 376 and 376A.)

#### 303. Applied Kinesiology (3)

Prerequisites: Physical Education 210, Biology 150 and 336.  
Arthrology, syndesmology and myology, with emphasis on movement analysis. Muscle groups and their functional relationships. Application of simple mechanical principles to movement analysis. (Formerly numbered Physical Education 560.)

#### 304. Physiology of Exercise (3)

Prerequisites: Physical Education 210, Biology 150 and 336.  
Effects of physical activities on the physiological functions of the body. (Formerly numbered Physical Education 561.)

#### 305. Measurement and Evaluation in Physical Education (3)

Prerequisites: Physical Education 210, Psychology 270.  
Testing and measurement for assessment and understanding of physical performance and for planning and evaluation of instruction in physical activity settings. Planning, implementation, and evaluation of tests. (Formerly numbered Physical Education 385.)

#### 306. Biomechanics of Human Movement (3)

Prerequisites: Physical Education 210, Biology 150 and 336.  
Mechanical principles as applied to movement; analysis and application to selected motor skills. (Formerly numbered Physical Education 563.)

#### 307. Motor Learning and Performance (3)

Prerequisites: Physical Education 210, Psychology 101 and 270.  
Psychological parameters related to physical performance and the acquisition of motor skills. (Formerly numbered Physical Education 570.)

#### 314. Exercise Physiology Laboratory (1)

Three hours of laboratory.  
Prerequisites: Credit or concurrent registration in Physical Education 304.  
Laboratory experiences in the application of exercises and the analysis of the results. (Formerly numbered Physical Education 362.)

#### 315. Theory of Teaching Aerobic Dance (1)

Prerequisite: Concurrent registration in Physical Education 412.  
Theory of teaching aerobic dance to include science of flexibility, strength and aerobic conditioning; programming for special populations; weight management; common injuries; legal issues and certification. Not open to physical education majors.

#### 320. Skin and Scuba Diving (2)

Prerequisites: Medical examination, waiver for hazardous procedures, pass swimming competency test. Concurrent registration in Physical Education 320L.  
Function and knowledge of underwater diving to include diving physiology, hyperbaric conditions, medical hazards, safety procedures associated with scuba diving, proper care and operation of equipment. (Formerly numbered Physical Education 310.)

#### 320L. Skin and Scuba Diving Laboratory (1)

Three hours of laboratory.  
Prerequisite: Concurrent registration in Physical Education 320.  
(Formerly numbered Physical Education 310L.)

#### 321. Intermediate Scuba Diving (2)

One lecture and three hours of laboratory.  
Prerequisites: Physical Education 320 or Openwater Scuba Diving Certification, medical examination, and acceptable openwater diving equipment.  
Development of practical openwater diving skills and techniques, for divers who have successfully completed an openwater diving course. (Formerly numbered Physical Education 311.)

#### 323. Advanced Scuba Diving (2)

Prerequisites: Physical Education 321 or Openwater Scuba Certification, medical examination, and acceptable openwater diving equipment. Concurrent registration in Physical Education 323L.  
Theory, skills, and technique including underwater navigation, diving physics, diving physiology, diving medicine, diving safety. Qualifies for Advanced Diving Certificate from the National Association of Underwater Instructors. (Formerly numbered Physical Education 312.)

#### 323L. Advanced Scuba Diving Laboratory (1)

Three hours of laboratory.  
Prerequisite: Concurrent registration in Physical Education 323.  
(Formerly numbered Physical Education 312.)

#### 324. Assistant Scuba Instructor (2)

Prerequisites: Physical Education 323 or Advanced Openwater Certification, medical examination, and acceptable openwater diving equipment. Concurrent registration in Physical Education 324L.  
Qualifies for Assistant Scuba Instructor Certificate from the National Association of Underwater Instructors. (Formerly numbered Physical Education 313.)

#### 324L. Assistant Scuba Instructor Laboratory (1)

Three hours of laboratory.  
Prerequisite: Concurrent registration in Physical Education 324.  
(Formerly numbered Physical Education 313.)

#### 341. Skill Competency in Physical Education (2) Cr/NC

Four hours of activity.  
Prerequisite: Physical Education 306.  
Skill and knowledge tests in basketball, volleyball, softball, tennis, badminton, soccer, and football. (Formerly numbered Physical Education 190.)

#### 347A. Leadership for Physical Education (2)

Prerequisites: Physical Education 301, 305, 306; Concurrent registration in Physical Education 347B.  
Theory and development of leadership behavior of physical educators, emphasizing leadership qualities unique to diverse physical activity settings. (Formerly numbered Physical Education 347.)

#### 347B. Leadership for Physical Education Activity (1)

Two hours of activity.  
Prerequisite: Concurrent registration in Physical Education 347A.  
(Formerly numbered Physical Education 347.)



**348. Special Physical Education (3)**

Prerequisites: Physical Education 347A, 347B, and Psychology 101.

Etiologies, characteristics, education programs, and activities for individuals with non-physical disabilities (e.g. mentally retarded, learning disabled, etc.). (Formerly numbered Physical Education 568.)

**352. Theory and Analysis of Coaching Competitive Sports (2)**

Mechanical analysis, tactics, and strategy, scouting, officiating, and rules and daily-seasonal practice planning in one of the sports listed below.

- A. Basketball  
(Formerly numbered Physical Education 332A.)
- B. Football  
(Formerly numbered Physical Education 332B.)
- C. Baseball  
(Formerly numbered Physical Education 332C.)
- D. Track and Field  
(Formerly numbered Physical Education 332D.)
- E. Volleyball
- F. Additional sports (May be repeated with new content.)  
(Formerly numbered Physical Education 331F and 332E.)

**363. Corrective Physical Education (3)**

Prerequisites: Physical Education 301, 303, 304, 305, 307.

Etiology, characteristics, and programs for children with corrective and/or physically handicapping conditions. Includes evaluating and implementing prescribed activities for individuals with these types of conditions. (Formerly numbered Physical Education 567.)

**365. Mechanisms of Sports Injuries (3)**

Prerequisites: Physical Education 265, 265L, 303, 304, 306.

Pathomechanics and pathophysiology of soft tissue and bone injury as it relates to the identification and management of sport related injuries. (Formerly numbered Physical Education 564.)

**366. Clinical Evaluation of Sports Injuries (2)**

Prerequisites: Physical Education 365. Concurrent registration in Physical Education 366L.

Theoretical and practical experiences in the clinical evaluation of sports injuries with emphasis on techniques and procedures. (Formerly numbered Physical Education 565.)

**366L. Clinical Evaluation of Sports Injuries Laboratory (1)**

Three hours of laboratory.

Prerequisite: Concurrent registration in Physical Education 366.

Theoretical and practical experiences in the clinical evaluation of sports injuries with emphasis on techniques and procedures. (Formerly numbered Physical Education 565.)

**388. Adapted and Special Physical Education Practicum (1-4)**

Three hours of laboratory per unit.

Prerequisite: Credit or concurrent registration in Physical Education 348 or 363.

Supervised laboratory of practicum experience in adapted or special physical education programs. Maximum credit four units. (Formerly numbered Physical Education 368.)

**389. Practicum in Athletic Training (1-3)**

Three hours of laboratory per unit.

Prerequisites: Physical Education 265 and 265L.

Practical training and clinical applications of basic and advanced techniques of athletic training and sports medicine. Athletic first aid, emergency procedures, bandaging, taping, use of physical therapy modalities, and application of therapeutic exercises to be performed in actual athletic medicine clinics. Maximum credit six units. (Formerly numbered Physical Education 369.)

**397. Contemporary Topics in Physical Education (Credit to be arranged) Offered only in Extension**

Prerequisites: Consent of instructor; bachelor's degree.

Study of specially selected problems in physical education and sport. Does not apply to undergraduate degrees or credentials.

**398. Supervised Field Experience (1-3) I, II, S Cr/NC**

Prerequisite: Consent of department chair.

Supervised practical experience in the area of physical education. Maximum credit six units.

**401A. Musculo-Skeletal Fitness (1)**

Prerequisites: Physical Education 104A, 303, 304, 305, 306, 314.

Concurrent registration in Physical Education 401B.

Training techniques in areas of strength and flexibility. Examination of facilities and equipment, mechanics of strength and flexibility techniques, development of training program, basic physiology and review of current research in areas of strength and flexibility. (Formerly numbered Physical Education 361.)

**401B. Musculo-Skeletal Fitness Activity (1)**

Two hours of activity.

Prerequisites: Concurrent registration in Physical Education 401A.

Circulorespiratory endurance, muscular strength and endurance, selection and care of equipment and facilities, and programs in the areas of flexibility, weight training and aerobics. (Formerly numbered Physical Education 361.)

**412. Aerobic Dance Instructor Training (1)**

Two hours of activity.

Prerequisites: Physical Education 303, 304, 314. Concurrent registration in Physical Education 315.

Basic preparation in practice of teaching aerobic dance. Topics include fitness assessment, choreography of aerobic, strength and flexibility routines, and music selection. Students required to teach a complete aerobic dance class.

**431. Administration of Exercise and Fitness Program (2)**

Prerequisites: Physical Education 303, 304, 314.

Administration and management of corporate, private, university-based, and hospital-based exercise programs.

**432. Exercise, Fitness, and Health (2)**

Prerequisites: Physical Education 303, 304, 305, 314, Health Science 301. Concurrent registration in Physical Education 432L.

Exercise testing, programming and leadership for healthy persons of different ages, capacities, and needs.

**432L. Exercise, Fitness, and Health (1)**

Three hours of laboratory.

Prerequisite: Concurrent registration in Physical Education 432.

Practicum in exercise testing, programming and leadership for healthy persons of different capacities, and needs.

**433. Exercise, Sport, and Aging (3)**

Prerequisites: Physical Education 301 and 304.

Relationships between exercise, sport and human aging including physiological, psychological, sociological, health and program considerations. Aging is viewed developmentally with emphasis on the middle and later years. (Formerly numbered Physical Education 569.)

**441. Practicum: Physical Education Activities (2)**

Four hours of activity.

Prerequisites: Physical Education 306, 341.

Selection and care of equipment and facilities; analysis of skill; progression for skills, drills and the game; lead-up activities; safety; performance cues; terminologies; skill evaluations; tactics and strategies.

- A. Racquet Sports  
(Formerly numbered Physical Education 345G.)
- B. Indoor Sports  
(Formerly numbered Physical Education 345A.)
- C. Field Games  
(Formerly numbered Physical Education 345H.)
- D. Gymnastics  
(Formerly numbered Physical Education 345F.)

**442A. Physical Education for Elementary Schools (2)**

Prerequisites: Physical Education 307, 347A and 347B.

Objectives, curricula, activities, and application of basic scientific principles for the conduct of elementary school physical education. (Formerly numbered Physical Education 340.)

**442B. Physical Education for Elementary Schools Activity (1)**

Two hours of activity.

Prerequisite: Concurrent registration in Physical Education 442A. (Formerly numbered Physical Education 340.)

**443. Educational Games (1)**

Two hours of activity.

Prerequisites: Physical Education 442A and 442B.

Analysis, development, and implementation of physically active games designed to reach selected educational objectives.

**444. Educational Gymnastics and Dance (1)**

Two hours of activity.

Prerequisites: Physical Education 442A and 442B.

Educational gymnastics and dance for elementary school children.

**445. Organization and Administration of Physical Education (3)**

Two lectures and two hours of activity.

Prerequisite: Physical Education 347A.

Organization of physical education programs in the public schools. Includes curriculum development, program content, legal bases, materials, facilities and constraints in the discipline of physical education. (Formerly numbered Physical Education 380.)

**461. Sport Psychology (3)**

Prerequisite: Physical Education 307.

Psychological factors underlying behavior in sport and physical activity. Emphasis on personality and motivational factors. (Formerly numbered Physical Education 571.)

**462. Therapeutic Modalities for Sports Injuries (3)**

Prerequisite: Physical Education 365.

Theories and techniques for the design, implementation, evaluation, and application of rehabilitation modalities. (Formerly numbered Physical Education 574.)

**463. Principles and Techniques in Therapeutic Exercise (2)**

Prerequisites: Physical Education 365. Concurrent registration in Physical Education 463L.

Design and application of therapeutic exercise programs for athletic injuries. (Formerly numbered Physical Education 575.)

**463L. Principles and Techniques in Therapeutic Exercise Laboratory (1)**

Three hours of laboratory.

Prerequisites: Physical Education 365. Concurrent registration in Physical Education 463.

(Formerly numbered Physical Education 575.)

**464. Pathomechanics of Athletic Injuries (3)**

Prerequisite: Physical Education 365.

Pathology and mechanics associated with common sports injuries. Signs and symptoms related to cause of injury. Common treatment and interventions.

**496. Experimental Topics (1-4) I, II**

Selected topics. 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.

**499. Special Study (1-3) I, II, S**

Prerequisite: Consent of department chair.

Individual study. Maximum credit six units.

**UPPER DIVISION COURSES**  
(Also Acceptable for Advanced Degrees)

**562. Cardiopulmonary Laboratory (2) I, II**

One lecture and three hours of laboratory.

Prerequisites: Physical Education 304 and 314.

Cardiopulmonary evaluation of human subjects for rehabilitative and preventive cardiology including electrocardiography, blood chemistry, ergometry, central and peripheral vascular assessment, body composition, and lifestyle change.

**585. Quantitative and Computer Methods in Physical Education (2)**

Prerequisites: Physical Education 305 and Psychology 270.

Analysis of large physical education and exercise science data sets. Methods for understanding characteristics of data sets.

**586. Experimental Methods in Physical Education (2)**

Prerequisite: Credit or concurrent registration in Physical Education 585.

Experimental methods and designs in research literature of physical education.

**596. Selected Topics in Physical Education (1-3) I, II**

Selected topics in physical education. 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.

**Dance**

(See this section of catalog under Dance.)

**GRADUATE COURSES**  
Refer to the Graduate Bulletin.



# Physics

In the College of Sciences

## Faculty

Emeritus: Garrison, Moe, Smith, Teasdale, Wolter  
Chair: Roeder  
Professors: Burnett, Cottrell, Davis, Day, Lilly, Morris, Nichols,  
Oseroff, Papin, Piserchio, Rehfuess, Roeder, Shore, Sweedler, Templin  
Associate Professor: Tonkachvili  
Lecturers: Ferguson, Shackelford  
Adjunct: Kaufmann, Mueller

## Offered by the Department

Master of Arts degree in physics.  
Master of Science degree in physics.  
Master of Science degree in radiological health physics.  
Major in chemical physics with the B.S. degree in applied arts and sciences.  
Major in physics with the B.A. degree in liberal arts and sciences.  
Major in physics with the B.S. degree in applied arts and sciences.  
Minor in physics.

## The Major

The study of physics is considered the center of modern science. It has fascinated the finest minds of every age — from Newton to Maxwell, Einstein, Bohr, Schroedinger, Oppenheimer and Schwinger. The study of this diverse field encompasses such areas as optics, electricity, magnetism, the properties of the solid state, atomic structure, nuclear structure, motion, relativity, space and time. Physics also plays a significant role in chemistry, biology, astronomy, and geology, and in the applied sciences of engineering and technology.

Students who become physics majors will be selecting a rewarding and vital career. The great burst of activity during the last 20 years has instilled a new excitement in physics. For example, the invention of the laser in the late 1950s revolutionized the field of optics. These advances stimulated whole new areas in physics applications. Superconductivity has led to the search for a high-temperature superconductor so that electrical power might be transmitted without loss; quantum mechanical tunneling has led to the tunnel diode; and solid state physics brought about the transistor and its successors.

The career opportunities for physics graduates are as diverse as the field itself. They include research and development; management or administration in industrial laboratories or government agencies; technical sales; electronic design; laser instrument research; and secondary teaching.

Physics graduates may also enter a wide variety of graduate programs. For example, a radiological health physics master's degree qualifies students for employment with the Environmental Protection Agency, nuclear power stations, government laboratories, hospitals, Department of Energy, and the Nuclear Regulatory Commission.

## Chemical Physics Major

With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 19081)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." Individual master plans for each student are filed with the physics and chemistry undergraduate advisers and the Evaluations Office.

A minor is not required with this major.

OFFICE: Physics 132  
TELEPHONE: (619) 594-6240

**Preparation for the Major.** Physics 195, 195L, 196, 196L, 197, 197L; Chemistry 200, 201, 231, 251; Mathematics 150 and 151, or 155 and 156 and 157, and 252. (44 units)

Recommended: A course in computer programming.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 45 upper division units to include Physics 311, 350, 354A-354B, 357, 400A-400B; Chemistry 410A-410B, 431, 457, 520A, 550; Mathematics 342A-342B. Recommended: Mathematics 342C.

## Physics Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 19021)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." Individual master plans for each student are filed with both the physics undergraduate adviser and the Evaluations Office. No more than 48 units in physics courses can apply to the degree.

A minor is not required with this major.

**Preparation for the Major.** Physics 195, 195L, 196, 196L, 197, 197L; Chemistry 200, 201; Computer Science 106 or 107; Mathematics 150, 151, 252. (38 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to the section of this catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units to include Physics 311, 313, 350, 354A-354B, 357, 400A-400B, 460; Mathematics 342A, 342B, 342C.

## Physics Major

With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 19021)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." Individual master plans for each student are filed with both the physics undergraduate adviser and the Evaluations Office.

A minor is not required with this major.

Preparation for the major and the major consist of basic requirements in the lower and upper division for all students plus additional upper division requirements in one of the following areas: (a) Foundations; (b) Scientific Instrumentation; (c) Modern Optics; (d) Radiological Health Physics; (e) Condensed Matter.

## Basic Requirements for all Students

**Preparation for the Major.** Physics 195, 195L, 196, 196L, 197, 197L; Chemistry 200, 201; Computer Science 106; Mathematics 150 and 151; or 155 and 156 and 157; and 252. (38 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 47-48 upper division units to include Physics 311, 313, 350, 354A-354B, 357, 400A-400B, 460, 498A, 498B; Mathematics 342A, 342B, 342C.

## Areas of Specialization

In addition to the basic requirements, the student must complete the requirements in one of the following areas:

### (a) Foundations

**Required:** A minimum of nine units selected from Physics 406, 510, 532, 542, 552, 564, 570, or Mathematics 524, 532, 533, 541, 542.

### (b) Scientific Instrumentation

**Required:** Physics 513, 516A, 520.

**Recommended:** Physics 516B.

### (c) Modern Optics

**Required:** Physics 406, 552, 553.

**Recommended:** Physics 516A, 532, 554.

### (d) Radiological Health Physics

This specialization is intended for students planning to pursue the M.S. degree in radiological health physics.

**Required:** Physics 560, 561, Biology 561.

**Recommended:** Biology 336 or 341.

### (e) Condensed Matter

**Required:** Physics 510, 532, 533.

**Recommended:** Physics 534.

## Physics Minor

The minor in physics consists of a minimum of 12 upper division units in physics (excluding Physics 301 and 305). Courses selected must follow an integrated and coherent pattern of coursework. Courses must be approved by the Physics Department undergraduate adviser and be selected from one of the following areas:

Foundations of Physics  
Scientific Instrumentation  
Modern Optics  
Radiological Health Physics  
Condensed Matter

## Courses

### LOWER DIVISION COURSES

Maximum credit 15 units for any combination of Physics 107, 180A-180B, 182A-182B, 195, 195L, 196, 196L, 197, 197L.

### 103. Conceptual Physics (3)

Physics as natural philosophy. How physical theories grow and change through interaction with experiment. Holography, black holes, fusion, acoustics, lasers, and other topics form a framework through which the laws of physics and their philosophical and historical foundations are explored.

### 107. Introductory Physics with Laboratory (4) I, II

Three lectures and three hours of laboratory.  
Prerequisite: Fulfillment of the SDSU Mathematics Competency requirement.

How physics concepts describe everyday events, and frontier phenomena. Classical mechanics, thermodynamics, electromagnetism, and selected topics from atomic, relativistic, and radioactivity physics. Not open to students with credit in Physics 180A-180B, 190, 195, 195L, 196, 196L, 197, 197L.

### 149. Special Study (1-2) I, II

Prerequisite: Consent of supervising instructor.

Individual study and laboratory work in the area of the student's major interest. Each student will be assigned a member of the staff who will supervise his work. Maximum credit two units.

### 180A-180B. Fundamentals of Physics (3-3) I, II

Prerequisite: Credit or concurrent registration in Mathematics 121 or 150 or 156. Physics 180A is prerequisite to 180B.

**Recommended:** For Physics 180A, concurrent registration in Physics 182A; for Physics 180B, concurrent registration in Physics 182B.

Course provides a thorough basis in mechanics, electricity, magnetism, optics, and modern physics in a two-semester calculus-based sequence. Intended mainly for life science majors. Physics 180A not open to students with credit in Physics 195. Physics 180B not open to students with credit in Physics 196.

### 182A-182B. Physical Measurements (1-1) I, II

Three hours of laboratory.

Prerequisite for 182A: Credit or concurrent registration in Physics 180A.

Prerequisite for 182B: Credit or concurrent registration in Physics 180B.

A laboratory course to accompany Physics 180A-180B. Semester I. Properties of matter, mechanics, sound, and wave motion. Semester II. Electricity, DC circuits, oscilloscope measurement techniques, electric and magnetic fields, and optics. 182A. Not open to students with credit in Physics 195L. 182B. Not open to students with credit in Physics 196L.

### 190. Preparation for Physics (3)

Prerequisite: Two years of high school algebra.

Elemental principles of physics approached from problem-solving and critical thinking perspective necessary for success in Physics 195, 196, and 197. Not open to students with credit in Physics 107.

### 195. Principles of Physics (3) I, II

(195 + 195L: CAN PHYS 8)

Prerequisites: High school physics or a grade of C or better in Physics 190. Credit or concurrent registration in Mathematics 150 or 156.

This course is designed to give a thorough understanding of the fundamental principles of physics in the areas of mechanics and wave motion.

### 195L. Principles of Physics Laboratory (1) I, II

(195 + 195L: CAN PHYS 8)

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Physics 195.  
Experiments in mechanics, wave motion, resonance phenomena using precision air tracks. Not open to students with credit in Physics 182A.

### 195P. Principles of Physics Problem Solving (1) Cr/NC I, II

Prerequisite: Credit or concurrent registration in Physics 195.  
Student participation in techniques of problem solving in the areas of mechanics and wave motion.

### 196. Principles of Physics (3) I, II

(196 + 196L: CAN PHYS 12)

Prerequisites: Physics 195; credit or concurrent registration in Mathematics 151 or 157.

This course is designed to give a thorough understanding of the fundamental principles of physics in the areas of electricity and electric and magnetic fields.

### 196L. Principles of Physics Laboratory (1) I, II

(196 + 196L: CAN PHYS 12)

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Physics 196.  
Experiments in DC circuits, AC circuits, electrical resonance, oscilloscope measurement techniques, and electric and magnetic fields. Not open to students with credit in Physics 182B.



**196P. Principles of Physics Problem Solving (1) Cr/NC I, II**  
Prerequisite: Credit or concurrent registration in Physics 196.  
Student participation in techniques of problem solving in the areas of electricity and magnetism.

**197. Principles of Physics (3) I, II**  
(197 + 197L: CAN PHYS 14)

Prerequisites: Physics 196; credit or concurrent registration in Mathematics 252.

This course is designed to give a thorough understanding of the fundamental principles of physics in the areas of wave motion, electromagnetic waves, optics, special relativity and atomic and nuclear physics.

**197L. Principles of Physics Laboratory (1) I, II**  
(197 + 197L: CAN PHYS 14)

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Physics 197.

Experiments in optics, lasers, holography, and nuclear counting.

**197P. Principles of Physics Problem Solving (1) Cr/NC I, II**

Prerequisite: Credit or concurrent registration in Physics 197.

Student participation in techniques of problem solving in the areas of waves, optics, relativity and modern physics.

**201. Physics of Sound, Hearing and Speech (4)**

Three lectures and three hours of laboratory.

Prerequisite: Qualification on the Mathematics Departmental Placement Examination, Part IA.

Fundamental nature of sound and applications to hearing and speech.

**204. Light, Vision, and Color (3) II**

Phenomena involving light, color, and vision. Topics include mirrors, lenses, mirages, rainbows, process of vision, color specification and mixing and perception.

**296. Experimental Topics (1-4)**

Selected topics. 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.

**UPPER DIVISION COURSES**  
(Intended for Undergraduates)

**301. Energy and Conservation (3)**

Prerequisite: Completion of the General Education requirements in Communication and Analytical Reasoning and Foundations II.A., Natural Sciences.

Course devoted to the fundamental physical concepts underlying energy, its conversion, utilization and conservation. Not open to physics majors.

**305. Quantum Reality - From Quarks to Quasars (3)**

Prerequisite: Completion of the General Education requirements in Communication and Analytical Reasoning and Foundations II.A., Natural Sciences.

Universe viewed from small (elementary particles) to very large (cosmology) with emphasis on structural aspects of physical theories of universe and how they came to be formed.

**311. Electronics for Scientists (3) I, II**

Two lectures and three hours of laboratory.

Prerequisites: Physics 180B and 182B, or 196 and 196L.

AC and DC circuits, diodes, transistors, conventional and operational amplifiers. Designed to introduce science majors to modern electronic devices and their utilization in scientific instrumentation.

**313. Advanced Electronics (3) I, II**

Two lectures and three hours of laboratory.

Prerequisite: Physics 311 with minimum grade of C.

Conventional and operational amplifiers, oscillators, analog to digital conversion, pulse and digital electronics. Emphasis is on applications to modern scientific instrumentation.

**350. Classical Mechanics (3) I, II**

Prerequisites: Physics 197, 197L and credit or concurrent registration in Mathematics 342A.

Newtonian mechanics, wave motion, Lagrange's equations, Hamilton's equations, generalized coordinates, normal coordinates, small oscillations, special theory of relativity. (Formerly numbered Physics 350A.)

**354A-354B. Modern Physics (3-3) I, II**

Prerequisites: Physics 354A: Physics 197, 197L and credit or concurrent registration in Mathematics 342A. Physics 354B: Physics 354A and credit or concurrent registration in Mathematics 342B.

Semester I: Atomic theory of matter, introduction to quantum theory with applications to atomic structure. Semester II: Atomic theory, periodic table, techniques of quantum mechanics. Applications of quantum mechanics to solid state and nuclear physics.

**357. Advanced Physical Measurements (3) I, II**

One lecture and six hours of laboratory.

Prerequisites: Physics 197, 197L and Physics 311.

A course which stresses both laboratory experiments and techniques of data and error analysis. The experiments are taken from several of the major areas of physics.

**400A-400B. Classical Electromagnetism (3-3)**

Prerequisites: Physics 400A: Physics 197, 197L and credit or concurrent registration in Mathematics 342B. Physics 400B: Physics 400A.

Electrostatics, magnetostatics, electromagnetic induction, Maxwell's equations, radiation and wave propagation.

**406. Optics (3)**

Prerequisites: Physics 197, 197L; Mathematics 342A.

Reflection, refraction, matrix methods, dispersion, polarization, double refraction, interference, diffraction, Fourier optics, coherence theory, lasers, and holography with applications to optical instruments, wave propagation, and the nature of light.

**460. Thermal Physics (3)**

Prerequisite: Physics 354A.

Classical thermodynamics and statistical mechanics. Applications of equilibrium thermodynamics. Introduction to statistical mechanics, including concepts from probability and statistics. Maxwell-Boltzmann, Fermi-Dirac, and Bose-Einstein statistics. Applications of statistical mechanics in calculating macroscopic properties of simple systems.

**496. Selected Topics in Physics (1-4) I, II**

Prerequisite: Consent of instructor.

Selected topics in classical and modern physics. 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 six units.

**498A. Senior Research (1) I, II Cr/NC**

One discussion period and two additional hours per week to be arranged.

Prerequisite: Senior standing in physics and an acceptable plan for graduation within one year.

Selection and design of individual research project. Oral and written progress reports.

**498B. Senior Research (2) I, II**

Two discussion periods and four additional hours per week to be arranged.

Prerequisite: Physics 498A.

Laboratory work, progress reports, oral and written final reports.

**499. Special Study (1-3) I, II**

Individual study or laboratory work on a special problem in physics selected by the student. Each student will be assigned a member of the staff who will supervise his/her work. Credit, hours and topics to be arranged in each case. Maximum credit six units.

**UPPER DIVISION COURSES**  
(Also Acceptable for Advanced Degrees)

**510. Quantum Mechanics (3)**

Prerequisites: Physics 350, 354B; credit or concurrent registration in Mathematics 342C.

The mathematical and physical foundations of the quantum theory in terms of Schrodinger's wave mechanics. Applications to the properties of atoms, quantum chemistry, and nuclei.

**513. Electronic Instrumentation (3)**

One lecture and six hours of laboratory.

Prerequisite: Physics 313 with minimum grade of C.

Transducer principles and applications; theory and design of active filters, modern signal detection and enhancement techniques, instrumentation design.

**516A-516B. Theory of Scientific Instrumentation (3-3)**

Prerequisites: Physics 313; Mathematics 342A. Physics 516A is prerequisite to 516B.

Linear system analysis using Fourier techniques. Introduction to the stochastic treatment of signals and noise, using concepts from probability and statistics. Optimization of detection systems with respect to signal-to-noise ratio. Applications to spectroscopy.

**520. Microprocessor Instrumentation (3)**

Two lectures and three hours of laboratory.

Prerequisite: Physics 313.

The electronics of microprocessor-based computer and control systems. Assembly language programming. Interfacing of analog inputs and outputs. The microcomputer as a multipurpose signal processing instrument.

**524. Physical Principles of Remote Sensing (3) I**

Prerequisites: Physics 197, 197L, and 311.

Physical principles of electromagnetic techniques in remote sensing. Topics include electromagnetic scattering, optical and radar image acquisition problems.

**525. Colloquium in Nuclear Magnetic Resonance (1) Cr/NC**

Prerequisites: Credit or concurrent registration in Physics 516A.

Student and faculty research project presentations. Maximum credit three units.

**532. Solid State Physics (3)**

Prerequisites: Physics 350, 354B; credit or concurrent registration in Mathematics 342C.

Elastic, thermal, electric, magnetic and optical properties of solids. Introduction to the energy band theory of solids, with applications to semiconductors and metals.

**533. Experimental Techniques in Condensed Matter Physics (3)**

One lecture and six hours of laboratory.

Prerequisite: Credit or concurrent registration in Physics 532.

Experiments in various fields of condensed matter such as x-ray diffraction, Hall effect, superconductivity, and electron paramagnetic resonance.

**534. 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 342C.

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 Health Physics (3)**

Prerequisites: Physics 180B or 197; senior standing in a physical or biological science, mathematics, or engineering major.

Atomic and nuclear structure, radioactivity, interactions of radiation in matter, radiation dosimetry. (Formerly numbered Physics 660A.)

**561. Radiological Instrumentation (2)**

Six hours of laboratory.

Prerequisite: Credit or concurrent registration in Physics 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. (Formerly numbered Physics 661A.)

**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 credit or concurrent registration in Mathematics 342C.

Relative coordinates, Lorentz transformation, covariant formulation of the laws of physics, applications of special relativity, introduction to curved space time, cosmology.

**596. Special Topics in Physics (1-4) I, II**

Prerequisite: Consent of instructor.

Selected topics in classical and modern physics. May be repeated with the consent of the instructor. See Class Schedule for specific content. 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**  
Refer to the Graduate Bulletin.



# Policy Studies in Language and Cross-Cultural Education

In the College of Education

OFFICE: Education 152  
TELEPHONE: (619) 594-5155

Accredited by the California Commission on Teacher Credentialing.

## Faculty

Chair: Kuhlman  
Professors: Espinosa, Ochoa, Pacheco  
Associate Professor: Kuhlman  
Assistant Professors: Bartolome, Moheno, Young  
Lecturer: Moss

## Offered by the Department

Master of Arts degree in education.  
Bilingual/cross-cultural specialist credential.  
Multiple subject with bilingual emphasis credential.  
Single subject with bilingual emphasis credential.  
Language development specialist certificate.

## The Major

Policy studies offers programs leading toward the Multiple Subject with Bilingual Emphasis credential (for elementary teachers) and Single Subject with Bilingual Emphasis (for secondary teachers), as well as the more advanced Bilingual/Cross-Cultural Specialist credential (for K-12).

For students who want to teach English as a Second Language (ESL), SDSU offers the Language Development Specialist certificate, a 24-unit program. This is a California State Department of Education approved program. It is appropriate for anyone who wishes to teach English, literacy, or language development in a classroom to ethnolinguistic populations. This program is offered jointly by the Policy Studies and Linguistics departments. Students take courses in curriculum development, teaching methods, and linguistics — all applied to classroom teaching. Field experience is also included in the program. After completing the certification program, the prospective LDS teacher must pass an examination offered by the Commission on Teacher Credentialing. SDSU provides the only such certificate program in San Diego County.

The Bilingual/Cross-Cultural Specialist credential program builds practicum into every course. Students conduct training workshops for teachers. The program offers instruction in how language is acquired and how learning is influenced by sociocultural background; language assessment; and methods of teaching where delivery is in the primary language of the pupils, including the content areas of mathematics, science, social studies, language arts, reading, and writing. Candidates must pass the Spanish Language Proficiency and Cultural Awareness Examination given by the department and a comprehensive examination.

## Multiple Subject with Bilingual Emphasis Credential

(Credential Code: 00200)

The Multiple Subject with Bilingual Emphasis credential 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. Because courses on methods of teaching subject areas are taught in Spanish as well as English, candidates must pass the Spanish Language Proficiency and Cultural Awareness Examination given by the department.

Candidates who will pursue this credential need to specify "Multiple Subject with *Bilingual Emphasis*" in the application for admission.

## Standards for Admission

1. **CBEST.** Students must pass the California Basic Educational Skills Test prior to admission to the Multiple Subject with 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 LE-560 (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 National Teacher Examination (NTE) core battery section. Information may be obtained through the Test Office (LE-560) or through advisers in the Policy Studies in Language and Cross-Cultural Education Department, ED-152.

## 3. Prerequisite Courses.

Policy Studies in Language and Cross-Cultural Education 515	3 units
Education 451	3 units
Health Science 101 or 320	3 units
Mathematics 210*	3 units
Physical Education 241	2 units
Art or Drama or Music — Art 100, 101, 157; Drama 105; Music 102	3 units

\* 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.** Students must have a grade point average (GPA) within the top half of students having a similar major. For CSU graduates completing 30 units or more at the graduating campus, the GPA is calculated on units completed at that institution only. For CSU graduates with fewer than 30 units at the graduating campus, the GPA is calculated on the cumulative units completed at all schools attended. The GPA for non-CSU graduates is computed on overall college units completed. CSU graduates' minimum GPA must be at or above the median GPA as posted by major and by campus. Non-CSU graduates must meet or exceed the CSU system average as posted by major. A "B" (3.0) GPA must be maintained throughout the credential program once a student is admitted.

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. **U.S. Constitution.** Knowledge of U.S. Constitution, as demonstrated by successful completion of an approved course. (See the section of this catalog on "Graduation Requirements.")

7. **Tuberculin Clearance.** Provided through SDSU Health Services or family physician.

8. **Early Field Experience.** A minimum of 60 hours in a typical elementary classroom with University supervision within the five years preceding admission.

9. **Oral English and Written Statement.** Have an interview with the admissions committee of the PLC Department and write, under supervision, a statement of professional goals and philosophy.

10. **Certificate of Clearance.** The State of California requires that credential candidates possess a valid certificate of clearance before admission to the program. Forms and fingerprint cards are available in the department's application package.

11. **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.

12. **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.

13. **Application.** Applicants should complete application procedures the semester prior to beginning the credential program.

## 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 Teacher 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	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 National Teacher Examination, core battery, general knowledge section or approved waiver program (Liberal Studies major, Emphasis in Education).
4. Passage of the Spanish Language Proficiency and Cultural Awareness Examination.
5. Completion of a course in teaching reading.
6. Knowledge of U.S. Constitution, as demonstrated by successful completion of an approved course. (See the section of this catalog on "Graduation Requirements.")
7. Knowledge of health education in California, including substance abuse and nutrition.
8. 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 postbaccalaureate credit as explained in the section of this catalog on "General Regulations."

## 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 (effective July 1, 1988). (Educational Technology 470.)

## Single Subject with Bilingual Emphasis Credential (Credential Code: 00100)

The Single Subject with Bilingual 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 will pursue this credential need to specify "Single Subject with *Bilingual Emphasis*" in the application for admission.

## 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 LE-406 (594-5216).

2. **Major.** Students who complete their approved teaching major from San Diego State University must obtain a recommendation from the adviser in their single subject credential major. The recommendation is given on the basis of the evaluation of course work. The requirements for the various single subject teaching credential majors are listed under the specialty areas of the National catalog. A PASS score in the specialty area of the National Teacher Examination may also be used to meet this requirement. Students passing the NTE in the specialty area of English must also pass the CLEP examination. Sign up at Test Office, LE-406. Students who complete a major at a California institution which has approved teaching majors may obtain a recommendation



from the institution's credential analyst. Forms for this recommendation are available in ED-100. Students who have completed majors at institutions of higher education which do not have approved teaching majors must obtain a recommendation from the major adviser at San Diego State University.

### 3. Prerequisite Courses:

- ED 451 Introduction to Multicultural Education ..... 3 units  
 PLC 400 The Secondary School and Bilingual Education ..... 3 units  
 PLC 515 Bilingual Teaching Strategies ..... 3 units

**4. Grade Point Average.** Students must have a grade point average (GPA) within the top half of students having a similar major. For CSU graduates completing 30 units or more at the graduating campus, the GPA is calculated on units completed at that institution only. For CSU graduates with fewer than 30 units at the graduating campus, the GPA is calculated on the cumulative units completed at all schools attended. The GPA for non-CSU graduates is computed on overall college units completed. CSU graduates' minimum GPA must be at or above the median GPA as posted by major and by campus. Non-CSU graduates must meet or exceed the CSU system average as posted by major. A "B" (3.0) GPA must be maintained throughout the credential program once a student is admitted.

**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. U.S. Constitution.** Knowledge of U.S. Constitution, as demonstrated by successful completion of an approved course. (See the section of this catalog on "Graduation Requirements.")

**7. Tuberculin Clearance.** Provided through SDSU Health Services or family physician.

**8. 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. Education courses to satisfy this requirement are available.

**9. Oral English and Written Statement.** Interview with the admissions committee of the PLC Department and write, under supervision, a statement of professional goals and philosophy.

**10. Character and Identification Clearance.** The State of California requires that credential candidates possess a valid certificate of clearance before admission to the program. Forms and fingerprint cards are available in the department's application package.

**11. 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, telephone 594-5155.

**12. Language and Culture Examination.** All candidates must pass the Spanish Language Proficiency and Cultural Awareness Examination.

**13. Application.** Applicants should complete application procedures the semester prior to beginning the credential program.

### 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.

Program	Units
<b>Prerequisites</b>	
ED 451 Introduction to Multicultural Education	3
PLC 400 The Secondary School and Bilingual Education	3
PLC 515 Bilingual Teaching Strategies	3
<b>First Semester</b>	
PLC 914 (or TE 914 with consent of adviser) Teaching and Learning in the Content Area: Major	2
PLC 924 Behavioral and Psychological Aspects of Teaching in the Bilingual Classroom	4
PLC 954 Humanistic and Social Aspects of Teaching in the Bilingual Classroom	4
PLC 963 Student Teaching for Bilingual Secondary Students I	3-4
<b>Second Semester</b>	
PLC 903 Bilingual Student Teaching Seminar	2
PLC 933 Skills in Teaching Reading to Bilingual Secondary Students*	3
PLC 964 Student Teaching for Bilingual Secondary Students II	9-12

### 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) (NTE Test) 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. Students passing the NTE in the specialty area of English must also pass the CLEP examination. Sign up at the Test Office, LE-406.

Art: Art

Business: Accounting, Finance, Information Systems, Management, Marketing

English: Comparative Literature, Drama, English, Journalism, Linguistics, Speech Communication

Foreign Languages: Classics (Latin), French, German, Russian, Spanish

Health Science: Health Science

History: History

Industrial and Technology Education: Industrial Technology

Life Sciences: Biology

Mathematics: Mathematics

Music: Music

Physical Education: Physical Education

Physical Sciences: Chemistry, Physical Science

Social Science: Social Science

4. Passage of the Spanish Language Proficiency and Cultural Awareness Examination.

5. Knowledge of U.S. Constitution, as demonstrated by successful completion of an approved course. (See the section of this catalog on "Graduation Requirements.")

Persons whose programs allow them to meet these requirements would be eligible for a preliminary credential at the same time they finish a four-year college program.

**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 section of this catalog on "General Regulations."

### 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 (HS 321).
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. Coursework/training in computer literacy (EDTEC 470, Technologies for Teaching). (Effective July 1, 1988.)

### Language Development Specialist Certificate

The Language Development Specialist Certificate provides an interdisciplinary approach in linguistics and policy studies to train teachers in theory and application of English as a Second Language methodology for linguistically diverse students in grades K-12. Applicants need to contact the department to complete application requirements prior to beginning the certificate program.

Requirements to exit the program:

1. Valid California teaching credential.
2. Six units of an appropriate foreign language at the college level.

The certificate program includes Linguistics 520, 550, 551, 552, and Policy Studies in Language and Cross-Cultural Education 553, 602, 650\*, 651.

A grade point average of 3.0 must be obtained in the eight courses. Students who complete the certificate program are not eligible to receive the Basic Certificate in Applied Linguistics and English as a Second Language (ESL). This is a California Commission on Teacher Credentialing approved program for preparation to take the California state examination.

\* Prerequisites waived for students in this program.

### Courses

#### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 397. Problems in Education (Credit to be arranged) I, II Offered only in Extension.

Prerequisite: Consent of instructor.

Class study of specially selected problems in education. Does not apply to pattern requirements for credentials. Credit earned in this course not applicable to a bachelor's degree. (Formerly numbered Education 397.)

#### 400. The Secondary School and Bilingual Education (3) II

Prerequisite: Upper division standing.

Bilingual education at the secondary levels, including roles, curricular models, organization, and legal justification. Must demonstrate bilingual competencies before conclusion of course and admission to program. Taught in Spanish.

#### 496. Experimental Topics (1-4) I, II

Selected topics. 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.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor. Open only to senior and graduate students in education who have shown ability to work independently.

Individual study. Maximum credit six units.

#### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 515. Bilingual Teaching Strategies (3)

Prerequisite: Consent of instructor.

Legal and historical developments leading to bilingual teaching in the United States. Interactive and individualized techniques appropriate for bilingual students. Language assessment methods for grouping and evaluating bilingual students. Fieldwork required. Taught in Spanish.

#### 552. Teaching Writing in Multilingual Settings (3)

Methodologies in teaching primarily expository writing to students from various language backgrounds, focusing on skills such as those needed to avoid syntactic, semantic and stylistic language interference.

#### 553. Oral Language Assessment Techniques (3)

Theoretical and applied linguistics; language functions in the bilingual classroom; implications of sociolinguistics for diagnosis and classification of bilingual children; analysis and application of language assessment instruments; comparison of diverse linguistic systems associated with different cultures.

#### 575. Computer Applications in the Bilingual Classroom (3)

Two lectures and three hours of laboratory.

Computer applications for bilingual instructional setting including examination and evaluation of instructional software and authoring systems for developing curriculum for limited English proficient (LEP) students.

#### 596. Special Topics in Bilingual and Multicultural Education (1-3)

Prerequisite: Consent of instructor.

Selected topics in bilingual, cross-cultural education and policy studies. See Class Schedule for specific content. Maximum credit 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 Refer to the Graduate Bulletin.



# Political Science

In the College of Arts and Letters

OFFICE: Nasatir Hall 127  
TELEPHONE: (619) 594-6244

## Faculty

Emeritus: Crain, Generales, Gripp, Janssen, Joy  
Chair: Terrell  
Professors: Anderson, Andrain, Conniiff, Feierabend, Funston, Heck, Hofstetter, Johns, Kahng, Little, Loveman, Miles, Padgett, Schultze, Strand, Terrell  
Associate Professors: Cutter, Fairlie, Hobbs, Keiser, Lewin, Soule  
Assistant Professor: Callender

## Offered by the Department

Master of Arts degree in political science.  
Major in political science with the B.A. degree in liberal arts and sciences.  
Minor in political science.

## The Major

Political science is the study of governments. Its concerns, however, are not limited to formal governmental institutions such as the executive and legislative branches or the justice systems. Political science is also interested in other organizations and activities which are part of the process of government, including political parties, interest groups, and the press.

Students who become political science majors will learn about who creates the rules by which people are governed, the attitude and behavior of leaders and members of the public which cause certain decisions to be made, and how these decisions affect such values as liberty, equality, welfare, and justice. Political science is concerned with contemporary public affairs, problems in other political systems and contemporary international politics, as well as with historical growth, evolution, and decline of various types of governments.

The many career opportunities which might be available to political science graduates include teaching at the secondary level; positions with the federal government in areas such as intelligence, foreign affairs, environmental protection, and budget and computer administration; positions with state and local governments, including administrative aide for a city manager, staff assistant for a county supervisor, and assistant to the registrar of voters; administrative positions on the staffs of national, state, and local legislators; claims adjuster or claims representative; statistical technician; marketing researcher; lobbyist for a business or trade organization; political reporter; and title office trainee.

## Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

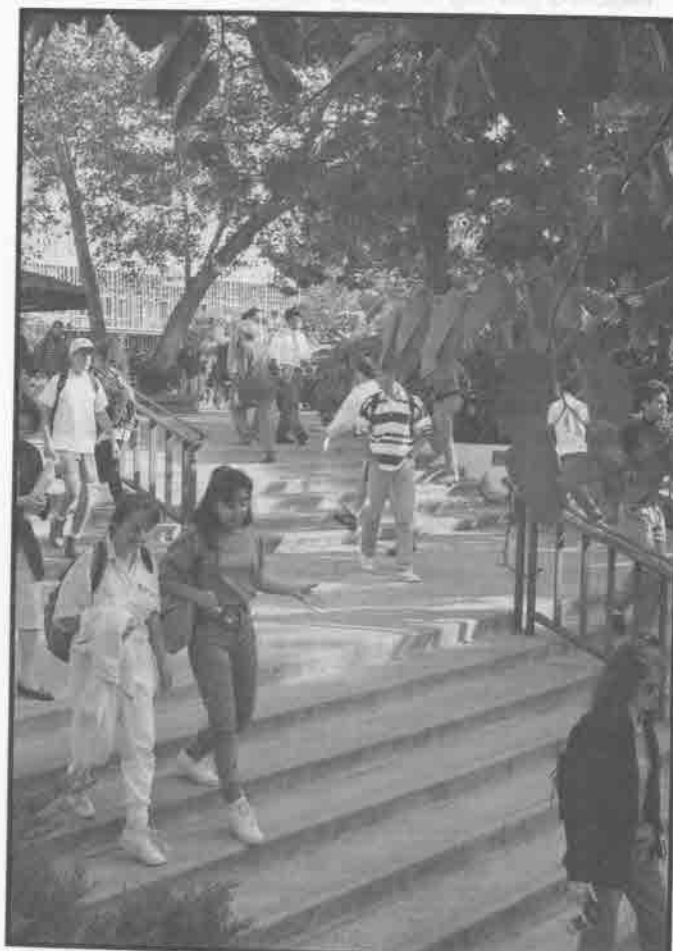
## Political Science Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 22071)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in political science courses can apply to the degree.

Students majoring in political science must complete a minor in another field to be approved by the chair of the major department.

**Preparation for the Major.** Political Science 101, 102, 103 and three units of either statistics or logic. (12 units)



**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or Anthropology 396W, English 305W or 500W, History 430W, or Sociology 396W with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units to include (a) three units in Political Science 495, 497 or 498, and (b) 21 upper division units in political science distributed among at least four of the fields listed below, provided that at least three units shall be taken in Field I.

- Field I: Political Theory. Courses numbered 301A to 305, 403 to 406, and 515A-515B.
- Field II: American Government and Politics. Courses numbered 321 to 338, 422 to 436, and 530 to 537.
- Field III: Public Law. Courses numbered 345 to 348 and 454.
- Field IV: Comparative Politics. Courses numbered 356 to 370 and 555 to 568.
- Field V: International Politics. Courses numbered 375 to 393, 476 to 482, and 575 to 577.

## Political Science Minor

The minor in political science consists of a minimum of 18 units in political science to include Political Science 101 and either 102 or 103; twelve of the 18 units must be in upper division courses and at least nine of these units must be selected from one of the following subject matter areas:

- Political Theory (Field I)
- Politics and Public Law (Fields II and III)
- Comparative Politics and International Politics (Fields IV and V)

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

#### 101. Introduction to Politics and the American Political System (3) I, II

Basic political concepts as applied to the American political system. The American political system as a constitutional democracy with reference to specific topics.

#### 102. Introduction to American and California Government and Politics (3) I, II

Political processes and institutions in the United States and California. Considers a variety of public policy issues such as environmental quality, health, education, relation between government and business, taxation, and foreign affairs as reflected in the dynamics of national and state politics.

#### 103. Introduction to Comparative Government (3) I, II

Analytical models and techniques for examination of the problems of decision making and control in various political systems. Emphasis on patterns of political action in various cultural contexts.

#### 201. Elementary Statistics for Political Science (3) I, II

Prerequisites: Course in intermediate algebra; Political Science 101 and 102; qualification on the Mathematics Departmental Placement Examination, Part IA.

Quantitative methods in political science. Tabular and graphic presentation, measures of central tendency, simple correlation and sampling techniques. Students with credit or concurrent registration in the following lower division statistics courses will be awarded a total of four units for the two (or more) courses: Biology 215, Economics 201, Engineering 140, Mathematics 119, 250, Political Science 201, Psychology 270, and Sociology 201.

#### 227. Film and Politics (1) Cr/NC

Prerequisite recommended: Political Science 102.  
Popular motion pictures analyzed from perspective of political content. Thematic implications concerning power, justice, social change, and revolution. Construction of alternative political realities present in popular media.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 310. Politics and the Arts (3)

Prerequisites: Political Science 101 and 102.  
The contribution of the artistic media to the activity and understanding of politics.

## Political Science

#### 495. Internship in Local Politics (3) I, II

Prerequisites: Limited to senior political science majors; three upper division units within Field II.

Senior majors choose internships within San Diego County in government agencies, offices of elected officials, or others approved by instructor. Requires 160 hours of fieldwork and extensive, analytical term paper.

#### 496. Experimental Topics (1-4)

Selected topics. 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.

#### 497. Investigation and Report (3) I, II

Prerequisite: Limited to senior political science majors.  
Senior thesis. Analysis of special topics.

#### 499. Special Study (1-3) I, II

Prerequisites: Twelve upper division units in political science and consent of the instructor.  
Individual study. Maximum credit six units.

### Field I: Political Theory

#### 301A-301B. History of Western Political Thought (3-3)

Prerequisites: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors. Political Science 301A is prerequisite to 301B.

Development of political ideas from the Golden Age of Greece until the French Revolution. Relevance of theory to a critical understanding of concrete political and social problems involving power, freedom, equality, justice and action. 301A emphasizes Plato, Aristotle, Augustine, Aquinas, and Marsilius of Padua. 301B stresses major political theorists such as Machiavelli, Hobbes, Locke, and Rousseau.

#### 302. Modern Political Thought (3)

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors.

Major writers of political thought in the last two centuries, including Burke, J.S. Mill, Freud, Marx, Weber and Sartre. The following topics may be covered: conservatism, liberalism, utilitarianism, socialism, fascism, positivism and existentialism.

#### 305. American Political Thought (3)

The origin and development of American political ideas from colonial times to the present. Meets the graduation requirement in the United States Constitution. When taken with Political Science 320, 321 or 422, will also meet all requirements in American Institutions.

#### 403. Socialist Political Thought (3)

Socialist thought from a historical perspective. (Formerly numbered Political Science 303.)

#### 406. Democracy and Mass Society (3)

Origin and development of theories of democracy and application of democratic ideas to contemporary political life. (Formerly numbered Political Science 306.)

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 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.



## Field II: American Government and Politics

UPPER DIVISION COURSES  
(Intended for Undergraduates)

## 320. American Institutions (3) I, II

The principles of the Constitution of the United States of America, and a survey of the political and social institutions which have developed under the Constitution. Meets the graduation requirement in the United States Constitution and California state and local government. When taken with Political Science 305, 321 or 422, will also meet all requirements in American Institutions. Not open to students with credit in Political Science 102.

## 321. State Politics (3)

Politics and policy making at the state and local levels, relations among national, state, and local governments. Emphasis on California problems and politics. Meets the graduation requirement in California government. When taken with Political Science 305 or 320, will also meet all requirements in American Institutions.

## 334. Politics of the Environment (3)

Analysis of political process as it shapes environmental policy in a world characterized by finite resources. Emphasis on expanding national and international claims made upon these resources. May include a substantial amount of material about foreign political systems.

## 335. Public Policy (3)

Prerequisite: Political Science 101 and 102.

Theory and practice of process of formulating public policy; roles of administrators, legislators, courts, interest groups, and political parties; public agencies and public interest; case studies in formulating public policies. May include a substantial amount of material about foreign political systems.

## 338. The Legislative Process (3)

A detailed analysis of legislatures. Special attention will be devoted to the impact of dynamic factors on formal procedures. May include a substantial amount of material about foreign political systems.

## 422. Urban Politics (3)

Prerequisite: Political Science 101 or 102.

The processes by which social conflicts in American urban areas are represented and regulated. Urban political culture; ecology; group development and activity; power structures; and reform movements are surveyed. The character of the urban political "problem" and proposed solutions are evaluated. Meets graduation requirement in California state and local government. When taken with Political Science 305 or 320, will also meet all requirements in American Institutions. (Formerly numbered Political Science 522.)

## 425. Political Behavior (3)

Prerequisites: Political Science 102.

Social and attitudinal variables in political behavior. Quantitative research data as used in electoral studies. May include a substantial amount of material about foreign political systems. (Formerly numbered Political Science 325.)

## 426. Political Communication (3)

Communication as a political process; the effects of political communication on individuals and groups. May include a substantial amount of material about foreign political systems. (Formerly numbered Political Science 326.)

## 436. The American Presidency (3)

Prerequisites: Political Science 101 and 102.

Analysis of principal institutions, functions and problems of the presidency and federal executive branch. Attention given to presidential leadership, staffing, executive-legislative relations and policy formation. (Formerly numbered Political Science 536.)

## 498. Internship in National Politics (9)

Prerequisites: Three upper division units within Field II and consent of instructor.

Students will be assigned to political agencies in Washington, D.C., such as congressional staffs, interest groups, executive agencies, legal/judicial offices and political party committees. Maximum credit three units applicable to the major or minor in political science.

UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)

## 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.

Field III: Public Law  
UPPER DIVISION COURSES  
(Intended for Undergraduates)

## 345. Constitutional Government (3)

Constitutionalism as a concept of legal and political philosophy; foundations of American constitutionalism; origin and framing of the American Constitution; development of constitutional principles through judicial interpretation.

## 346. Law and the Political System (3)

Forces influencing the making of law; relationship between social and legal change; nature and limits of the judicial function. (Formerly numbered Political Science 546.)

## 347A-347B. American Constitutional Law (3-3)

Substantive principles of American constitutional law. Rights and liberties protected by the Constitution against action of federal and state governments. May include problems of judicial review, federal system, separation of powers, nature of selected congressional-presidential powers. Meets graduation requirement in United States Constitution. (Formerly numbered Political Science 547A-547B.)

## 348. The Supreme Court and Contemporary Issues (3)

Recent decisions of the Supreme Court of the United States and their relationship to contemporary political and social issues. Not open to those students with credit for Political Science 347A-347B.

## 454. Special Problems in Public Law (3)

Prerequisites: Political Science 101 and 102, and three upper division units within Field III.

Exploration of selected issues in the field of law. (Formerly numbered Political Science 354.)

Field IV: Comparative Politics  
UPPER DIVISION COURSES  
(Intended for Undergraduates)

## 356. Governments of Continental Europe (3)

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

The political systems of countries of western continental Europe.

## 357. Government of England (3)

The structure and functioning of the English parliamentary system with emphasis on present-day political principles and parties.

## 359. Government and Politics in the Soviet Union (3)

Theory and practice of government and politics in the Soviet Union, with some attention to foreign affairs.

## 361. Governments and Politics of the Developing Areas (3)

Prerequisites: Political Science 101 or 103; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Internal political systems, governmental structures and the foreign policies of developing nations.

## 362. Governments and Politics of East Asia (3)

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

The internal political structure and foreign policies of China, Japan and Korea.

## 363. Governments and Politics of the Middle East (3)

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

The governmental and political structures of representative states in the Middle East including Turkey, Israel and the Arab states.

## 364. Political Change in Modern Africa (3)

Dynamics of social and political change in modern Africa.

## 370. Political Violence (3)

Prerequisites: Political Science 101, 102 or 103; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Underlying conditions, expressions and consequences of violence within political systems.

UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)

## 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.

## Field V: International Politics

UPPER DIVISION COURSES  
(Intended for Undergraduates)

## 375. International Relations (3)

Dynamics of conflict and cooperation among national, international and transnational actors; contributing political, economic, and social factors.

## 390. Dynamics of Modern International Crises (3)

Origins, development and control of selected international crises since World War II.

## 393. Institute on World Affairs (3)

Contemporary problems in international relations. May be repeated once for credit with permission of the instructor. See Class Schedule for specific content.

## 476. International Organization (3)

Evolution, functions, achievements, and limitations of international organization in modern society. Primary focus on the United Nations. (Formerly numbered Political Science 376.)

## 478. Conduct of American Foreign Relations (3)

Institutional arrangements by which American foreign policy decisions are formulated and implemented. Issues confronted by American foreign policy decision makers. (Formerly numbered Political Science 378.)

## 479. National Security Policy (3)

Objectives, instruments, and consequences of national security policy. (Formerly numbered Political Science 379.)

## 481. International Relations of the Developing Nations (3)

Prerequisite: Six units of political science.

Cooperation and conflict between the developing nations and relations of such nations with the developed countries. (Formerly numbered Political Science 381.)

## 482. International Relations of the Latin American States (3)

The foreign policies of the Latin American states; the Organization of American States; relationships with the United Nations and with the United States. (Formerly numbered Political Science 382.)

UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)

## 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  
Refer to the Graduate Bulletin.



# Portuguese

In the College of Arts and Letters

## Faculty

Chair: Doyle  
Professor: Silverman

## Offered by the Department of Spanish and Portuguese Languages and Literatures

Minor in Portuguese.  
Courses in Portuguese.  
Major work in Portuguese is not offered.

## Portuguese Minor

The minor in Portuguese consists of a minimum of 15 units in Portuguese, six units of which must be in upper division courses. Recommended: History 552.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Foreign Language Requirement for the B.A. Degree in Liberal Arts and Sciences

Students electing the study of Portuguese to fulfill the foreign language requirement for the Bachelor of Arts degree in liberal arts and sciences must successfully complete Portuguese 302 or the equivalent level of achievement. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

## High School Equivalents

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high school courses will not count as college credit toward graduation.

Secondary school language courses can be used as follows:

1. The first **two years** of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.

2. The first **three years** of high school level language count as the equivalent of the first two college semesters, although students with fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not receive credit for the first semester college course unless at least five years separate the last high school course and the first college course.

3. **Four years** of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

OFFICE: Library East 469  
TELEPHONE: (619) 594-6588

## Courses

### LOWER DIVISION COURSES

Native speakers of Portuguese will not receive credit for taking lower division courses in Portuguese except with advance approval from the department.

All lower division courses in Portuguese are taught in Portuguese.

#### 101. Elementary/Intensive (5) I, II

Five lectures and one hour of laboratory. Pronunciation, oral practice, reading on Luso-Brazilian culture and civilization, essentials of grammar. Not open to students who have completed three years of high school Portuguese unless the third course was completed five or more years ago.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

#### 299. Special Study (1-3)

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Intended for Undergraduates)

All upper division courses in Portuguese are taught in Portuguese unless otherwise stated.

#### 301. Advanced Oral and Written Composition (3)

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Oral and written composition in Portuguese, based on models from modern Portuguese and Brazilian literature. Not open to students who have completed four years of high school Portuguese unless the fourth course was completed five or more years ago.

#### 302. Advanced Oral and Written Composition (3)

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Oral and written composition in Portuguese, based on models from modern Portuguese and Brazilian literature.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 534. Portuguese Literature (3)

A study of important movements, authors and works in the literature of Portugal from its beginnings to the present.

#### 535. Brazilian Literature (3)

A study of the important movements, authors and works of the literature of Brazil from the colonial period to modern times.

# Psychology

In the College of Sciences

OFFICE: Life Sciences 110  
TELEPHONE: (619) 594-5358

## Faculty

Emeritus: Alf, Carlson, Harari, Harrison, Hunrichs, Kaplan, Karen, Kidwell, Koppman, Leukel, Lorwin, Lynn, O'Day, Penn, Psomas, Segal, Smith, Stevens, Turner

Chair: Hornbeck

Professors: Borges, Bryson, J., Bryson, R., Dicken, Fenson, Franzini, Gallo, Graf, Graham, Grossberg, Hillix, Hornbeck, Ingram, Kass, Langlais, Leckart, Levine, Litrownik, Marshall, Martin, McDonald, R., Mollenauer, Murphy, Plotnik, Radlow, Reed, Riley, Rodin, Rosenbaum, Saccuzzo, Sattler, Schulte, Sheposh, Spinetta, Yaremko

Associate Professors: Cronan, Defran, Lee, McCordick, McGivern, Price (Judy), Reilly, Sallis, Scollay

Assistant Professors: Jones, Kidder, Maltcarne, Matt, Price (Joseph)

## Offered by the Department

Doctor of Philosophy degree in clinical psychology.

Master of Arts degree in psychology.

Master of Science degree in psychology.

Major in psychology with the B.A. degree in liberal arts and sciences.

Minor in psychology

## The Major

Psychology is the scientific study of the behavior of humans and animals. Psychologists use scientific methods in an attempt to understand and predict behavior, to develop procedures for changing behavior, and to evaluate treatment strategies. Research might be conducted in the laboratory where the factors studied can be controlled; or it may take place in a real life setting where more natural behavior is studied.

There are many areas of psychology, each attempting to explain behavior from a slightly different perspective. Social psychology is concerned with the effects of social situations on human behavior. Personality theorists study individual behavior. Developmental psychologists study principles and processes responsible for change throughout life. Comparative psychologists study animal behaviors across the range of species, while physiological psychologists are concerned with the biological bases of behavior. Learning is an area of psychology exploring how new behaviors are learned and maintained. Cognitive psychologists investigate memory, thought, problem solving, and the psychological aspects of learning.

Clinical psychologists study ways to help individuals and groups of individuals change their behavior. Industrial/organizational psychologists are concerned with the physical and social aspects of people's work environments as they affect work output. Community psychologists use scientific methods to study and solve social problems.

Numerous and varied career opportunities are open to students who hold the bachelor's or master's degree in psychology. These include careers in business, such as management, public relations, personnel, and staff training; in agencies responsible for mental health service delivery in clinics, hospitals, and special schools; in teaching for child care facilities, preschools, and in conjunction with a teaching credential in elementary and secondary schools; in research, to conduct surveys, program evaluations, and basic study.

A bachelor's degree in psychology serves as preparation for graduate programs in psychology, social work, education, counseling, law, medicine, and business. A Ph.D. in psychology is required for

teaching at the university level and for licensing as a psychologist (independent practice of psychotherapy).

## Psychology Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 20011)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in psychology courses can apply to the degree.

A minor is not required with this major.

Two plans are provided for the major in psychology: **Plan A** for those students who wish to extend their liberal arts education in the field of psychology; and **Plan B** for those students expecting to pursue the study of psychology beyond the B.A. degree.

### Plan A

Plan A is for a nonprofessional major in psychology and is designed to provide students with a greater understanding of human behavior as the emphasis in their liberal arts education. The recommended pattern of courses for this program is not designed to facilitate graduate and professional study in psychology.

**Preparation for the Major.** Psychology 101, 211, 260, and 270. (12 units)

Recommended courses in related fields: Six units in General Education courses in biology; three units in a General Education course in philosophy; and six units in General Education courses in anthropology and/or sociology.

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units in psychology to include twelve units selected from Psychology 330, 340, 350, 351, 375, 380, 388. It is expected that students under Plan A will select, with the assistance of their advisers, a pattern of courses in line with their particular objectives in pursuing Plan A.

### Plan B

The purpose of Plan B is to facilitate the specific preparation of those students who wish to pursue graduate and professional preparation in psychology, e.g., clinical, industrial and personnel, physiological, social, or theoretical-experimental psychology.

**Preparation for the Major.** Psychology 101, 211, 260, and 270. (12 units)

Preparatory courses are recommended in sciences, computer-related courses, and mathematics.

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.



**Major.** A minimum of 26 upper division units in psychology to include Psychology 410, 470; four units selected from 412, 413, 415, 416, 417, 418, 419; nine units selected from 330, 340, 350, 351, 375, 380, 388; and six units selected from courses in consultation with the departmental adviser.

## Psychology Minor

Qualification on the Mathematics Departmental Placement Examination, Part IA, is a required prerequisite to this minor (except for Personality and Social).

The minor in psychology consists of 18-23 units selected from one of the following areas:

**Industrial/Organizational:** Psychology 101 and 270 or equivalent; 12 units of upper division psychology to include Psychology 320, 470, and two of the following: Psychology 321, 322, 326, 342. (18-19 units)

**Personality and Social:** Psychology 101 and 211 or 260; 12 units of upper division psychology of which nine must be selected from Psychology 330, 340, 350 and 351. (18 units)

**Physiological:** Psychology 101, 211, 260, and 270 or equivalent; 11 units of upper division psychology to include Psychology 410, 413 and 460. (23 units)

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

#### 101. Introductory Psychology (3) I, II, S

Facts, principles, and concepts which are basic to understanding human behavior.

#### 211. Learning (3) I, II, S

Prerequisite: Psychology 101.  
Basic principles and research in animal and human learning. (Formerly numbered Psychology 210.)

#### 260. Introduction to Physiological Psychology (3) I, II

Prerequisite: Psychology 101.  
Elementary physiology of the nervous system. Physiological mechanisms underlying the psychological phenomena of sensation, perception, emotion, arousal, motivation, learning and memory, and cortical specialization.

#### 270. Statistical Methods in Psychology (3) I, II, S

Prerequisite: Satisfaction of the Entry-Level Mathematics requirement. Recommended: Psychology 101 and qualification on the Mathematics Departmental Placement Examination, Part IA. **Proof of completion of prerequisites required:** Copy of ELM score or verification of exemption.

Quantitative methods in psychology. Measures of central tendency and variability, graphic methods and percentiles, linear correlation and regression, applications of the normal probability curve, and an introduction to statistical inference including analysis of variance and chi-square. Students with credit or concurrent registration in the following lower division statistics courses will be awarded a total of four units for the two (or more) courses: Biology 215, Economics 201, Engineering 140, Mathematics 119, 250, Political Science 201, Psychology 270, and Sociology 201.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 302. Human Sexuality (1) Cr/NC Offered only in Extension

Prerequisite: Psychology 101.  
New sex roles and their impact on male and female sexuality; coping with problems in love and sex. Topics include cohabitation, marriage, gay relationships, birth control, sexually transmitted diseases, lovemaking, sex and aging. Credit received in Psychology 302 not applicable to the psychology major.

#### 303. Drug Use, Abuse, and Treatment (1) Cr/NC Offered only in Extension

Prerequisite: Psychology 101.  
Motivational and personality factors involved in drug use and abuse, psychological, physiological, and neurological effects of commonly used drugs, and methods to treat drug-related problems. Credit received in Psychology 303 not applicable to the psychology major.

#### 304. Stress, Anxiety, and Coping (1) Cr/NC Offered only in Extension

Prerequisite: Psychology 101.  
Psychological and physiological effects of stress. Topics include body's response to normal stressors, development of psychosomatic problems, and reduction of stress-related problems through psychological coping techniques. Credit received in Psychology 304 not applicable to the psychology major.

#### 316. Operant Behavior (3)

Prerequisite: Psychology 101. Recommended: Psychology 211.  
Contingencies of reinforcement, stimulus control, response shaping, aversive control, and other basic principles of operant behavior applied to the understanding and modification of human behavior.

#### 317. Comparative Animal Psychology (3)

Prerequisite: Psychology 101 or other introductory course in a social or biological science.

Behavior of both captive and wild animals. Psychological factors and behavioral differences across species and their evolutionary and developmental histories.

#### 320. Personnel and Industrial Psychology (3)

Prerequisites: Psychology 101, and 270 or statistics in another field.  
Psychological principles applied to industrial problems of selection, placement and training.

#### 321. Organizational Psychology (3)

Prerequisite: Psychology 101.  
Human behavior in the context of organizational life. Factors related to effectiveness of individuals and groups within organizations, including organization design, leadership and control, motivation, cooperation and conflict. Not open to students with credit in Management 351 or Public Administration 340.

#### 322. Consumer Psychology (4)

Two lectures and six hours of laboratory.  
Prerequisites: Psychology 101, and a course in statistics.  
A review of the research literature and methods relevant to the individual as a consumer in our society. Emphasis on methods of measuring attitudes, values, and behavior of people when functioning as consumers.

#### 326. Principles of Personnel Interviewing (3)

Prerequisite: Psychology 101.  
Psychological factors in interviewing; interviewing techniques. Supervised practice in interviewing for purposes of personnel selection, appraisal and development.

#### 330. Developmental Psychology (3) I, II, S

Prerequisites: Psychology 101; completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Psychological development of the normal individual from conception through childhood, adolescence, and maturity. Emphasis on the interdependence of various periods of the individual's life.

#### 335. Psychology of Adult Development and Aging (3)

Prerequisite: Psychology 101.  
The psychological, physiological, and sociological factors influencing behavior in the later years of life.

#### 340. Social Psychology (3) I, II, S

Prerequisites: Psychology 101; completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

The major problems and findings concerning group behavior and group membership, the socialization of the individual, and processes of social interaction.

#### 342. Public Opinion Measurement (3)

Two lectures and two hours of activity.  
History, methods, and problems of public opinion and attitude measurement. Emphasis on applications in politics, marketing, personnel work, journalism, and radio and television audience measurement. Field experience.

#### 347. Psychology of Contemporary Social Problems (3)

Prerequisite: Psychology 101.  
Discussion of social issues and problems of importance to the contemporary world, from the point of view of psychological theory, method and knowledge.

#### 350. Abnormal Psychology (3) I, II, S

Prerequisite: Psychology 101.  
Causes and treatment of abnormal behavior with emphasis on major behavior disorders.

#### 351. Psychology of Personality (3), I, II, S

Prerequisites: Psychology 101; completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Major theoretical approaches to individual differences and the study of the person. Techniques of personality assessment. Selected research findings.

#### 352. Psychology of Humor (1)

Prerequisite: Psychology 101.  
Major theories of humor. Research on attributes of humor, its physical and emotional health benefits, role of humor in therapy, measurement issues, and uses and abuses of humor.

#### 365. Drugs and Behavior (3)

Prerequisite: Psychology 101. Recommended: Psychology 260.  
Fundamentals of regulation, administration, tolerance, dependence, and physiological activity of drugs. Effects of stimulants, depressants, opiates, psychedelics, and psychotherapeutic drugs on the nervous system and on cognitive, personality, and behavioral functioning.

#### 375. Intermediate Statistics: Computer Methods (4) I, II

Two lectures and six hours of laboratory.  
Prerequisite: Psychology 270.  
Application of microcomputers to psychological research with primary emphasis on statistical and graphic analysis of data.

#### 380. Cognitive Psychology (3) I, II

Prerequisite: Psychology 101. Recommended: Psychology 211.  
Theory and research on attention, learning, memory, thinking, understanding, and language.

#### 388. Sensation and Perception (3)

Prerequisite: Psychology 101.  
Theory and research in sensory and perceptual processes.

#### 401. Philosophical Issues in Psychology (3)

Prerequisite: Six units of psychology.  
Modern empiricism and the philosophy of science as related to issues in contemporary psychology.

#### 410. Introduction to Experimental Psychology (4) I, II

Two lectures and six hours of laboratory.  
Prerequisites: Psychology 211 and 270.  
Understanding of experimental design, quantitative methods, and experimental reports as they are applied to all areas of psychology.

#### 412. Experimental Psychology: Social (4) I, II

Two lectures and six hours of laboratory.  
Prerequisite: Psychology 410.  
Experimental literature, assigned and original laboratory projects in the field of social psychology.

#### 413. Experimental Psychology: Physiological (4)

Two lectures and six hours of laboratory.  
Prerequisites: Psychology 260 or 460; and Psychology 410.  
Experimental literature, assigned and original laboratory projects in the field of physiological psychology. Histological and pharmacological techniques.

#### 415. Experimental Psychology: Personality and Clinical (4) I, II

Two lectures and six hours of laboratory.  
Prerequisite: Psychology 410. Recommended: Psychology 350 or 351.  
Experimental and theoretical literature, assigned and original laboratory projects in the field of personality and clinical psychology.

#### 416. Experimental Psychology: Learning (4)

Two lectures and six hours of laboratory.  
Prerequisite: Psychology 410.  
Experimental literature, assigned and original laboratory projects in the field of learning.

#### 417. Experimental Psychology: Primate Behavior (4)

Two lectures and six hours of laboratory.  
Prerequisites: Psychology 101; 260 or three units of biology or three units of anthropology; and Psychology 270. Recommended: Psychology 410.  
Experimental literature, assigned and original observational and experimental projects in the field of primate learning and behavior.

#### 418. Experimental Psychology: Child Development (4) I, II

Two lectures and six hours of laboratory.  
Prerequisite: Psychology 410. Recommended: Psychology 330.  
Methods, techniques and principles used in the scientific study of child behavior.

#### 419. Experimental Psychology: Memory and Cognition (4)

Two lectures and six hours of laboratory.  
Prerequisite: Psychology 410. Recommended: Psychology 380.  
Experimental literature, assigned and original laboratory projects in human memory and cognition. Examination of information-processing capacities and processes in perception, learning, memory, and other cognitive activities.

#### 432. Advanced Topics in Developmental Psychology (3)

Prerequisite: Psychology 330.  
Selected areas in developmental psychology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

#### 442A. Psychology and the Environment I (3) I

Prerequisites: Completion of the General Education requirement in Foundations II.A., Natural Sciences, and II.B., Social and Behavioral Sciences. Nine units selected from Psychology 211, 270, 316, 317, 340, 417, 587, and upper division standing.  
Relationship of human behavior to environmental preservation; use of behavior modification principles in the design of strategies to sustain and enhance earth's natural resources.

#### 442B. Psychology and the Environment II (3) II

Prerequisite: Psychology 442A.  
Relationship of human behavior to environmental preservation; use of behavior modification principles in the design of strategies to sustain and enhance earth's natural resources.

#### 446. Advanced Topics in Social Psychology (3)

Prerequisite: Psychology 340.  
Selected areas in social psychology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.



**452. Introduction to Counseling and Therapy (3) I, II**

Two lectures and two hours of activity.  
Prerequisite: Psychology 350 or 351.  
A survey of theory, methods and research in psychological approaches to personality and behavior change. Practice in basic interviewing and critical analysis of interviews. Not open to students with credit in Psychology 650 or Counselor Education 660.

**453. Advanced Topics in Abnormal Psychology (3)**

Prerequisite: Psychology 350.  
Selected areas in abnormal psychology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**454. Mental Retardation (3)**

Prerequisite: Psychology 101. Recommended: Psychology 330.  
Nature and causes of mental retardation, including psychological effects of adverse physical, chemical, biological, and social stimulation. Description and classification of mental retardation.

**455. Psychology of Human Sexual Behavior (3)**

Prerequisite: Psychology 101.  
Evaluation of behavioral and physiological data of normal, aberrant, and dysfunctional human sexual behavior, including description of available treatment methods.

**456. Psychology of Death and Bereavement (3)**

Latest psychological research and clinical practice in the area of death and dying, geared to assisting the student in appropriate ways of aiding both the dying and the bereaved in coming to terms with death.

**457. Psychological Factors in Alcoholism (3)**

Prerequisites: Six units of psychology and upper division standing.  
Theoretical and empirical approaches to alcoholism: causes and treatment.

**460. Advanced Topics in Physiological Psychology (3)**

Prerequisite: Psychology 260 or six units of biology.  
Selected areas within physiological psychology. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units.

**462. Sleeping and Dreaming (3)**

Sleep and sleep disorders: electrophysiological, neurophysiological, biochemical, psychopharmacological, and psychological aspects.

**470. Psychological Testing and Measurement (3) I, II**

Prerequisite: Psychology 270, or a semester of statistical methods in any other department.

Measurement theory and the basic principles of testing. The selection, construction and critical evaluation of group tests of intelligence, personality, aptitude, interest and achievement.

**491. Academic or Psychological Counseling Experiences (3) Cr/NC**

Prerequisites: Upper division psychology major with a 3.0 minimum grade point average and consent of the psychology undergraduate coordinator.

Individual supervision of academic or psychological counseling experiences, geared to the acquisition of counseling and communication skills. May be repeated with the approval of the psychology undergraduate coordinator. Maximum credit six units.

**495. Readings and Practice in Companionship Therapy (3) I, II**

Prerequisite: Six units from Psychology 330, 340, 350, or 351.  
Students are paired with troubled or potentially troubled clients from selected community agencies, supervised by both the instructor and the agency. Assigned readings, small group meetings, written reports required. May be repeated with new client and agency. Maximum credit six units.

**496. Selected Topics in Psychology (1-4)**

Prerequisite: Psychology 101.  
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 six units.

**497. Senior Project (1-3) I, II**

Prerequisites: Twelve units of psychology and consent of instructor.  
An individual investigation and report on a research project. Maximum credit six units.

**499. Special Study (1-3) I, II**

Prerequisite: Consent of department chair.  
Individual study, including library or laboratory research and a written report. Maximum credit six units.

**UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)**

**501. History of Psychology (3)**

Limited to graduate students or psychology majors with senior standing.  
The historical background of modern psychology.

**551. Clinical Psychology: Theory and Practice (4)**

Two lectures and six hours of laboratory.  
Prerequisite: Psychology 350.  
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.

**570. Advanced Statistics (3) I**

Two lectures and two hours of activity.  
Prerequisite: Psychology 270.  
Principles of experimental design. Comprehensive treatment of analysis of variance, including factorial designs, repeated measures, and trend analysis. Case studies from psychological research.

**571. Advanced Statistics (3)**

Two lectures and two hours of activity.  
Prerequisite: Psychology 270.  
Quantitative methods in psychology, with emphasis on methods of correlation and regression, including multiple regression and canonical regression. Case studies from psychological research.

**587. Advanced Principles of Learning and Cognition (3)**

Prerequisites: Psychology 211 and 270.  
Empirical data, basic principles and theoretical positions of major theorists in learning and cognitive psychology.

**596. Selected Topics in Psychology (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  
Refer to the Graduate Bulletin.**

# 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

A Member of the National Association of Schools of Public Affairs and Administration (NASPAA).

**Faculty**

Emeritus: Bigger, Kitchen, Kochanski, Leiffer  
Director: Rea  
Professors: Boostrom, Caves, Clapp, Gazell, Gilbreath, Gitchoff, Gupta, Henderson, Pugh, Rea, Sparrow, Sutton  
Associate Professors: Calavita, Lee  
Assistant Professors: Concepción, Dobbs, Edlund, Walshok, Wilson

**Offered by the School of Public Administration and Urban Studies**

Master of City Planning degree.  
Master of Public Administration degree.  
Major in criminal justice administration with the B.S. degree in applied arts and sciences. (Refer to this section of the catalog on Criminal Justice Administration.)  
Major in public administration with the B.A. degree in applied arts and sciences.  
Emphasis in city planning.  
Minor in public administration.  
Certificate in public administration (available at Imperial Valley Campus only).

**The Major**

Today, more than ever before, the nation is in need of effective leadership and competence in the administration of public affairs. The growth of all levels of government and public service organizations and their increasing responsibilities in a complex society have led directly to the need for more capable public administrators. The primary purpose of the public administration major is to provide knowledge and skills for students who wish to prepare themselves for management careers in government, community agencies, private not-for-profit organizations, planning and consulting firms, and private sector organizations that work in partnership with the public sector.

The undergraduate public administration major is an interdisciplinary program. In addition to the courses taken within the department, provisions have been made for the student to select additional courses in areas as diverse as economics, sociology, social welfare, political science, and psychology. Required preparatory courses for the major include classes in accountancy, economics, information and decision systems, political science, and statistics.

Career opportunities in public administration can be found throughout the public and private sectors, and the future is represented by an expanding job market. The Public Administration Center within the School of Public Administration and Urban Studies provides a comprehensive file of current job openings locally, throughout California, and across the country.

Upon graduation, students have secured a wide variety of administrative positions within government, the private sector, and community agencies. For example, graduating students have recently been placed with city personnel and finance departments, county operating departments, special districts, hospitals, and consulting firms.

**Public Administration Major**

With the B.A. Degree in Applied Arts and Sciences  
(Premajor Code: 21020) (Major Code: 21021)

Applications will be accepted only during the months of August for the following spring semester and November for the fall semester. Change of major and declaration of major will be accepted only during specific filing periods. Please contact the school for deadlines.

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

**Preparation for the Major.** Accountancy 201, Information and Decision Systems 180, Economics 101 and 102, Political Science 102, Public Administration 200, and a three-unit course in statistics. (21 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units to include Public Administration 301, 310 or 312 or 315, 330, 340, 450, 460, 497 or 498; and 15 units selected with the approval of an adviser from the public administration faculty. Within this program, students may specialize in such areas as personnel and labor relations; urban management, urban planning, public finance and budgeting, information systems, and environmental management. Interested students must seek guidance from a public administration program faculty adviser. A master plan of the courses taken to fulfill the major must be approved by a public administration program faculty adviser and filed with the Evaluations Office one semester before graduation.

**IMPACTED PROGRAM.** The public administration major is designated as an impacted program and specific regulations related to admissions are imposed. Consult the school for regulations and admissions criteria.

**Emphasis in City Planning  
(Premajor Code: 21020) (Major Code: 21021)**

**Preparation for the Major.** Accountancy 201, Economics 101 and 102, Information and Decision Systems 180, Political Science 102, Public Administration 200, and a three-unit course in statistics. (21 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units to include Public Administration 301, 310, 330, 340, 450, 460, 497 or 498; and Public Administration 320, 420, 525, and two courses selected from Public Administration 341, 350, 510, and 512. A master plan of courses taken to fulfill this emphasis must be approved by a city planning program faculty adviser and filed with the Evaluations Office one semester before graduation.

**Public Administration Minor**

The minor in public administration consists of 24 units to include Political Science 102 and a course in statistics or Information and Decision Systems 180, Public Administration 301, 310 or 312 or 315, Decision Systems 180, Public Administration 301, 310 or 312 or 315,



# Recreation

In the College of Professional Studies and Fine Arts

OFFICE: Professional Studies and Fine Arts 431  
TELEPHONE: (619) 594-5110

Accredited by the National Recreation and Parks Association.

## Faculty

Emeritus: Hanson  
Chair: Lamke  
Professors: Dixon, Duncan, Dustin, Gattas, Geba, Lamke  
Associate Professors: Peterson, Rankin  
Assistant Professors: Beck, Namba

## Offered by the Department of Recreation, Parks and Tourism

Major in recreation administration with the B.S. degree in applied arts and sciences.

Emphasis in outdoor recreation.  
Emphasis in recreation systems management.  
Emphasis in recreation therapy.  
Minor in recreation.

## The Major

A commitment to working with people to enhance the quality of their lives is important to a study of recreation.

Increasingly diverse opportunities are available in the park, recreation and tourism profession. The major offers a sufficiently wide range of courses for students who may wish to enter diverse recreation, park, or human services fields.

Students in this major elect one of three areas of emphasis. The outdoor recreation emphasis stresses conservation, natural science, ecology, and recreation/park administration. Society's efforts to sustain a balance between the environment and recreational use are studied.

Recreation systems management stresses the effective organization, administration and supervision of recreation, park, and tourism agencies, both public and private.

Recreation therapy prepares students to work with the disabled. It stresses elements of both psychology and social science, as well as recreation leadership skills.

Outdoor recreation graduates serve as naturalists, outdoor education specialists, outdoor recreation planners, park interpreters, and park rangers.

Recreation systems management graduates find employment as administrators and supervisors with public, private or commercial park and recreation agencies. They assume professional positions with youth and family serving agencies, private clubs and condominium associations, a variety of leisure related businesses including tourism agencies, and municipal, county, and state organizations.

Recreation therapy graduates may become therapeutic recreation specialists, registered and certified by the State Board of Personnel. They are employed typically by hospitals, convalescent and rehabilitation centers, and retirement communities.

## Recreation Administration Major

With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 21031)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

The major in recreation administration may be planned with an emphasis in one of the following three areas: (1) Outdoor Recreation, (2) Recreation Systems Management, or (3) Recreation Therapy.

A minor is not required with this major.

## Emphasis in Outdoor Recreation

**Preparation for the Major.** Recreation 101, 107, 284; Biology 100, 100L; Geography 101; Geological Sciences 100, 101; Psychology 101; Sociology 101. (26 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or Recreation 396W with a grade of C (2.0) or better.

**Major.** A minimum of 51 upper division units to include Recreation 304, 305, 351, 464, 482, 485, 486, 498 (6 units), 560, 575; Biology 330, Geography 370, 575; and nine units selected from Biology 358, 454, 520, 523, 524, 525; Geography 572; Geological Sciences 301; History 441; Political Science 334; Psychology 340; Recreation 496, 548, 549, 565.

## Emphasis in Recreation Systems Management

**Preparation for the Major.** Recreation 101, 107, 284; Psychology 101; Sociology 101; nine units selected from Accountancy 201; Economics 101; Finance 140; Information and Decision Systems 180, 290. (24 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or Recreation 396W with a grade of C (2.0) or better.

**Major.** A minimum of 48 upper division units to include Recreation 304, 305, 351, 464, 498 (12 units), 560, 565; nine units selected from Recreation 340, 460, 470, 475, 482, 485, 548, 549, 575, 580; and nine units from Counseling and School Psychology 400; Economics 370, Marketing 370, 371, 373; Psychology 321, 340, 342, 347; Public Administration 301, 340, 350, 460; Sociology 355, 444, 459, 557.

## Emphasis in Recreation Therapy

**Preparation for the Major.** Recreation 101, 107, 284; Biology 150; English 100; Information and Decision Systems 290; Psychology 101; Sociology 101. (25 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or Recreation 396W with a grade of C (2.0) or better.

**Major.** A minimum of 51 upper division units to include Recreation 304, 305, 351, 361, 371, 452, 464, 498 (12 units), 565; Biology 336; and twelve units selected from Counseling and School Psychology 400, Drama 310; Psychology 330, 335, 350, 351, 452, 454; Recreation 549, 575, 580; Sociology 436, 441, 443, 444, 527, 528, 543.

## Recreation Minor

The minor in recreation consists of a minimum of 21 units to include Recreation 101, 107, 304, 305, and nine additional upper division units selected from Recreation 340, 351, 361, 371, 452, 464, 475, 485, 486, 496, 548, 549, 565, 575, 580. Prerequisite to the minor includes Biology 100.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

#### 101. Introduction to Recreation Systems (3) I, II

Basic role of recreation and park systems in today's society. Scope of recreation services, their history, philosophy, facilities, programs, personnel and evaluation.

#### 107. Recreation Planning and Leadership (3) I, II

Two lectures and three hours of laboratory. Theories, principles and techniques of group leadership, group dynamics, communication, problem solving, creativity, program planning, and publicity as they relate to selected recreation systems.

#### 284. Supervised Field Work (3) I, II, S Cr/NC

Prerequisites: Consent of instructor or department chair, credit or concurrent registration in Recreation 107, and 125 hours experience in recreation leadership.

Observation and participation in community recreation leadership. Practical experience in a variety of recreational settings. Minimum of one hour per week in class plus eight hours per week at an agency.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 304. Challenges of Leisure (3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences.

Study of leisure and its impact on contemporary life; issues affecting recreation in today's urbanized society. (Formerly numbered Recreation 204.)

#### 305. Wilderness and the Leisure Experience (3) I, II

Prerequisites: Biology 100; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences.

Use and abuse of natural resources for recreational purposes. Effects of increased leisure on wilderness areas. Field experiences required. (Formerly numbered Recreation 205.)

#### 340. Conduct of Recreational Sports (3) I, II

Three lectures plus outside practical experience in the conduct of recreational sports programs.

Organization of competition, community sports programs, administration of intramural athletics, and techniques of officiating.

#### 351. Recreation for Special Populations (3) I, II

Analysis of the sociopsychological aspects of special populations and their implications for leisure pursuits. Field trips may be included.

#### 361. Scientific Foundations of Recreation Therapy (3) I, II

Prerequisite: Recreation 351 required for recreation majors; open to others with consent of instructor.

Theoretical principles of therapy and prevention. Survey of medical and psychiatric pathology and terminology.

#### 371. Professional Foundations of Recreation Therapy (3) I, II

Prerequisite: Recreation 351 required for recreation majors; open to others with consent of instructor.

Analysis of present-day policies, programs, implementation and future aspects of professional principles of recreation therapy.

#### 396W. Writing in Recreation Settings (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; grade report or copy of transcript.

Theory and practice of writing in the field of recreation and parks with application to various settings.





**404. Cross-Cultural Perspectives of Leisure (3) II**

Prerequisite: Recreation 204.  
Cultural approach to philosophy and potential of leisure in a world of shifting social patterns. Emphasis on how culture influences leisure values.

**452. Clinical Methodology of Recreation Therapy (3) I, II**

Two lectures and three hours of laboratory.  
Prerequisites: Recreation 351, 361, 371.  
Integration and application of clinical principles and therapeutic procedures. Emphasis on methodological and theoretical constructs of recreation therapy.

**460. Industrial, Corporate, and Military Recreation (3) II**

Prerequisite: Junior standing. Recommended: Recreation 101 and 107.

Industrial, corporate, and military recreation services with emphasis on organizational patterns including underlying and theoretical concepts, finances, types of programs, specialized administrative skills, and current trends and issues.

**464. Supervision of Recreation and Park Agencies (3) I, II**

Prerequisite: Recreation 107.  
Interagency relations, personnel policies and procedures, volunteer coordination, supervisory techniques, community organization, public relations in public, private and commercial settings.

**470. Recreational Travel and Tourism Management (3) I**

Prerequisites recommended: Recreation 101 and 204.  
Tourism management, economics, marketing and development. Recognizing indicators of tourism's recreational, social and cultural impact. Organization of tourism industry and its components.

**475. Commercial Recreation Management (3) I**

Analysis of commercial recreation field, including design, development, programming and marketing aspects of various commercial recreation enterprises.

**482. Principles of Outdoor Education (3) II**

Prerequisite: Recreation 101.  
Multisensory methods of incorporating ecological attitudes and concepts in outdoor recreation programs. Awareness of natural environment and application of instructional techniques in outdoor education.

**484. Directed Leadership (3) I, II, S Cr/NC**

One lecture and eight hours of supervised activity.  
Prerequisite: Recreation 284.  
Supervised leadership experience in public and private recreation agencies. Maximum credit six units.

**485. Outdoor Recreation Planning and Policy (3) I, II**

Nature and scope of recreation in nonurban areas. Public demand for recreation and its impact on natural resources. Management, planning, research and operation of regional and national park and recreation areas.

**486. Interpretative Techniques in Outdoor Recreation (3) I, II**

Concepts of interpretation. Role of the interpreter. Designing nature trails, exhibits and centers. Audiovisual aids to interpretation.

**496. Experimental Topics (1-4)**

Selected topics. 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.

**498. Internship in Recreation Systems (6 or 12) I, II, S Cr/NC**

Twenty off-campus hours required per week for 6-unit program, or 40 off-campus hours required per week for 12-unit programs.  
Prerequisites: Consent of instructor or department chair, completion of all required lower division recreation courses, and completion of both Standard or Multimedia First Aid certificate and CPR certificate by end of semester.

Students will be assigned to various governmental, commercial, private or medical agencies conducting recreation programs. Variety of experiences in supervision and administration. Maximum credit 12 units.

**499. Special Study (1-3) I, II**

Prerequisite: Consent of special study adviser.  
Individual study. Maximum credit six units.

**UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)**

**548. Aquatic Administration (3) I**

Management of swimming pools, beaches, lakes and marinas; safety factors; legal requirements; health standards; facilities and programming.

**549. Camp Administration (3) II**

Prerequisite: Recreation 101.  
Operation of resident, day and travel camps. Staff management, health and safety, finances, food services, maintenance, planning and publicity.

**560. Legal and Fiscal Aspects of Parks and Recreation Management (3) I, II**

Prerequisite: Recreation 464.  
Legal obligations and basic principles of fiscal management pertinent to delivery of leisure services. Budgeting, record keeping, liability, open space acquisition and preservation, constitutional guarantees, administrative regulations, contracts, criminal law, and legal research.

**565. Recreation Systems Administration and Research (3) I, II**

Prerequisite: Recreation 464.  
Organizational behavior, planning, policy development, and future trends of recreation systems. Methods of investigation, data analysis, and reporting in relation to research needs in recreation, parks, and tourism.

**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.

**GRADUATE COURSES  
Refer to the Graduate Bulletin.**

# Religious Studies

In the College of Arts and Letters

OFFICE: Adams Humanities 4231  
TELEPHONE: (619) 594-5185

**Faculty**

Emeritus: Anderson, Friedman, Jordan  
Chair: Downing  
Professors: Downing, Sparks  
Associate Professors: Hermansen, Holler, Johnson, Khalil  
Assistant Professor: Geffer

**Offered by the Department**

Major in religious studies with the B.A. degree in liberal arts and sciences.  
Minor in religious studies.

**The Major**

Religious studies seeks to explore the role of religion as an important part of human history. It is designed to improve understanding of religion, not to advocate religious belief or any particular religious tradition.

Religious studies students examine the major Eastern and Western religions, their founders and leaders, myths and rituals, theologies, creeds and scriptures, and institutional forms, as well as the relationship between religion and literature, the arts, ethics, science, and psychology.

Career opportunities available to religious studies graduates include positions such as university, college, community college, or secondary school teacher (graduate study and/or teaching credential required); counselor and social worker (graduate study required); religious education director, rabbi, priest, or minister in a church or synagogue setting (graduate training required); religion reporter or editor for a newspaper or magazine; textbook editor. The religious studies program is also a good background for graduate professional programs in such areas as law, business, and foreign service.

**Advising**

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major. Students seeking a minor in religious studies under the *Individualized Program* area must confer with the department adviser in the first semester of their study.

**Religious Studies Major**

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 15101)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in religious studies courses can apply to the degree.

A minor is not required with this major.

**Preparation for the Major.** Religious Studies 101; Philosophy 101 or 102 or Religious Studies 102. (6 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Religious Studies 396W or, with approval of the department, Anthropology 396W, English 305W, or Sociology 396W with a grade of C (2.0) or better.

**Major.** A minimum of 27 upper division units in religious studies to include Religious Studies 300, 498, either 301 or 305, and at least three units from each of the three areas listed below:

**Western Religious Traditions:** Religious Studies 310, 312, 314, 316, 318, 320, 325, 330, 331, 340, 522, 580\*, 581\*, 582\*, 583\*, 596\*

**Eastern Religious Traditions:** Religious Studies 401, 403, 580\*, 581\*, 582\*, 583\*, 596\*

**Religion and Culture:** Three units from Religious Studies 300, 350, 353, 354, 360, 363, 365, 370, 372, 375, 380, 385, 480, 580\*, 581\*, 582\*, 583\*, 596\*

\* When deemed relevant by the department adviser. Maximum credit six units for any course with variable content.





## Religious Studies Minor

The minor in religious studies consists of a minimum of 15 units to include at least three lower division units in religious studies, and 12 units from one of the three areas listed below:

**Western Religions:** Religious Studies 301, 305, 310, 312, 314, 316, 318, 320, 325, 330, 331, 340, 522, 580\*, 581\*, 582\*, 583\*, 596\*.

**Eastern Religions:** Religious Studies 401, 403, 580\*, 581\*, 582\*, 583\*, 596\*.

**Religion and Culture:** Religious Studies 350, 353, 354, 360, 363, 365, 370, 372, 375, 380, 385, 480, 580\*, 581\*, 582\*, 583\*, 596\*.

Or **AN INDIVIDUALIZED PROGRAM** of 12 upper division units approved in advance by the department adviser.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

\* When deemed relevant by the department adviser. Maximum credit six units for any course with variable content.

## Courses

## LOWER DIVISION COURSES

## 101. World Religions (3) I, II

Major figures, attitudes, and teachings of world religions.

## 102. Introduction to Religion (3) I, II

Nature, meaning, and presuppositions of religious experience.

## 296. Experimental Topics (1-4)

Selected topics. 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.

UPPER DIVISION COURSES  
(Intended for Undergraduates)

## 300. Ways of Understanding Religion (3) I

Prerequisite: Three units of religious studies.  
Major approaches to study of religious phenomena and central issues in methodology. (Formerly numbered Religious Studies 201.)

## 301. Hebrew Scriptures (3) I, II

Prerequisites: Three units of religious studies; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Problems of composition and historical significance in the context of religious meanings of the scriptures known to Jews as the Tanakh (the Pentateuch, the Prophets and the Writings) and to Christians as the Old Testament.

## 305. The New Testament (3) I, II

Prerequisites: Three units of religious studies; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors. Recommended: Religious Studies 301.

The problems of composition and historical significance in the context of religious meanings.

## 310. Greek and Latin Fathers (3)

Prerequisite: Three units of religious studies.  
Readings in patristic thought from Ignatius of Antioch through Augustine.

## 312. Russian Orthodox Spirituality (3)

Prerequisite: Three units of religious studies.  
Major doctrines, practices and developments in Eastern Christianity with focus on Russian Orthodoxy.

## 314. Medieval Western Christianity (3)

Prerequisite: Three units of religious studies.  
Readings in source materials illustrative of the doctrinal and institutional development of the Western Church during the medieval period to early stages of the Reformation.

## 316. The Reformation and Beginnings of Modern Christianity (3)

Prerequisite: Three units of religious studies.  
Readings in source materials illustrative of the doctrinal and institutional development of the Western Church during the Reformation and the Enlightenment.

## 318. Modern Religious Thought in the West (3)

Prerequisite: Three units of religious studies.  
Selected issues in religious thought in Europe and America during the nineteenth and twentieth centuries.

## 320. Judaism (3)

Prerequisites: Three units of religious studies; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Major doctrines, practices, and developments from rabbinic times to present.

## 325. Christianity (3)

Prerequisites: Three units of religious studies; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Major doctrines, practices and developments from time of Jesus to present.

## 330. Topics in Judaism (3)

Prerequisite: Three units of religious studies.  
Selected topics such as early Hebrew religion, the Talmudic period, medieval religious thought, mysticism, modern Judaism from the emancipation to the Holocaust, contemporary thought. May be repeated with different content. See Class Schedule for specific content. Maximum credit six units.

## 331. Topics in Islam (3)

Prerequisite: Three units of religious studies.  
Selected topics such as the Qur'an and its interpretation (*tafsir*), Prophet Muhammed and his traditions (*hadith*), and Islamic mysticism (Sufism). May be repeated with new content. Maximum credit six units.

## 340. Islam (3)

Prerequisites: Three units of religious studies; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Major doctrines, practices and developments from the time of Mohammed to the present.

## 350. Dynamics of Religious Experience (3)

Prerequisites: Three units of religious studies; and completion of the General Education requirement in Foundations II.C., Humanities.  
Chief data and major approaches in the study of individuals' religious behavior and experiences. Special attention to relevant problems in world religions and philosophical views of man.

## 353. The Human Dimension of Religion and Psychology (3)

Prerequisites: Three units of religious studies; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

The meeting of religion and psychology. Selected religious thinkers and selected psychologists and personality theorists from the psychoanalytic, behavioral and humanist traditions. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units of which three units may be applicable to General Education.

## 354. Religion and Society (3)

Prerequisites: Three units of religious studies; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Theological and religious interpretations of the social dimension of human existence. Critique of social science inquiry into traditional and contemporary forms of religious life.

## 360. Religion, Literature, and the Arts (3)

Prerequisite: Three units of religious studies.  
The relations between religion, literature, and the arts in major cultural traditions.

## 363. Religion and the Sciences (3)

Prerequisites: Three units of religious studies; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Relation of the natural sciences to religious questions of nature, humanity, and destiny.

## 365. Religion and Ethics (3)

Prerequisite: Three units of religious studies.  
Values, morality, and responsibility, from religious perspectives. Application to contemporary moral issues.

## 370. Women and Religion (3)

Prerequisite: Three units of religious studies.  
Place and role of women in major religious traditions; historic contributions of women to religion; female deities; feminist responses to male-centered traditions.

## 372. Goddesses (3)

Prerequisite: Three units of religious studies.  
History and significance of goddess traditions in archaic primal religions, in ancient near east, and in major world religions.

## 375. Primal Religion (3)

Prerequisite: Three units of religious studies.  
Primal religion studied with focus on religious forms of myth, ritual, and experience in past and present, interpretation of the transition from primal to modern religion and the persistence of primal characteristics in historical religions.

## 380. Shamanism (3)

Prerequisite: Three units of religious studies.  
Shamanism from a global perspective, from primal to modern times, its persistence and revitalization in post-industrial religion; its religious forms through comparative study of Amazonian, African, Native American, and Southeast Asian forms.

## 385. Native American Religions (3)

Prerequisite: Three units of religious studies.  
Native American religions with focus on sacred culture, world view, ritual life, community and myth as a basis for interpreting religious experience; encounter of Indian traditions with modernity and revitalization responses.

## 396W. Writing/Research Methods (1) Cr/NC

Prerequisites: Six upper division units in religious studies. Must be taken concurrently with an upper division course in religious studies. 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; grade report or copy of transcript.

Research and writing in field of religious studies.

## 401. Religions of India (3)

Prerequisites: Three units of religious studies; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Phenomenological studies in the major religious traditions of India, especially Hinduism and Buddhism.

## 403. Religions of the Far East (3)

Prerequisites: Three units of religious studies; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Phenomenological studies in the major religious traditions of east Asia, especially China and Japan.

## 480. Ways of Spiritual Transformation (3)

Prerequisite: Three units of religious studies.  
Doctrines and practices of self-transformation based on readings selected from various world religions.

## 496. Experimental Topics (1-4)

Prerequisite: Three units of religious studies.  
Selected topics. 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.

## 498. Senior Project (3)

Prerequisites: Religious Studies 396W, twelve upper division units in religious studies, and consent of instructor.

Seminar workshop and project in the comparative study of religious practices, doctrines, themes (such as religious ethics, mysticism), phenomenological studies in religions, etc.

## 499. Special Study (1-3) I, II

Prerequisite: Twelve upper division units in religious studies.  
Individual study. Maximum credit six units.

UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)

## 506. Spiritual Traditions of India (3)

Prerequisite: Three units of religious studies.  
India's religious and philosophical modes of thought; reading and analysis of primary texts in translation.

## 522. Religion in America (3)

Prerequisite: Three units of religious studies.  
Selected topics in religion in America, such as Deism, transcendentalism, pragmatism, church-state relations, Jewish identity, etc. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

## 580. A Major Figure (3) I, II

Prerequisite: Three units of religious studies.  
Life, works and significance of one major figure in a religious tradition. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

## 581. 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 and master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES  
Refer to the Graduate Bulletin



# Russian

In the College of Arts and Letters

OFFICE: Library East 468B  
TELEPHONE: (619) 594-6313

## Faculty

Emeritus: Dukas, Kozlik  
Chair: Wulbern  
Professor: Fetzner  
Assistant Professor: Shapovalov

## Offered by the Department of German and Russian Languages and Literatures

Master of Arts degree in Russian.  
Major in Russian with the B.A. degree in liberal arts and sciences.  
Teaching major in Russian for the single subject teaching credential in foreign languages.  
Minor in Russian.

## The Major

Russian is one of the most widely used languages in the world today. About one-third of all scientific articles are published in Russian. Some of the world's great literature has been produced by Russian writers such as Tolstoy, Chekhov, and Solzhenitsyn. The political impact of the Soviet Union is felt internationally. Knowledge of Russian will provide students with a better understanding of one of the world's important and influential countries.

The Russian program offers a wide range of courses, including specialized courses in literature and linguistics. This major is useful preparation for graduate programs in international trade, international law, librarianship, public administration, and journalism. For students interested in pursuing further studies in the Russian language, a Master of Arts degree is offered. This program requires intensive scholarly investigation and may prepare students for careers in which fluency in Russian is essential.

Knowledge of Russian, particularly when combined with business-related courses, is becoming a valuable asset. Many American firms have opened offices in Moscow and Leningrad, and the volume of American trade with the Soviet Union has been growing at a rapid pace. As a result, there are indications of an expanding interest in Russian graduates by American business organizations with employment possibilities in the United States and the Soviet Union.

Other career possibilities include Russian specialists, generally employed by the federal government; high school teachers; librarians; translators; and interpreters.

## Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

## Russian Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 11061)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in Russian courses can apply to the degree.

Students majoring in Russian must complete a minor in another field to be approved by the departmental adviser in Russian.

**Preparation for the Major.** Russian 100A, 100B, 200A, 200B, 211, and 212. (24 units)

**Foreign Language Requirement.** The foreign language requirement for graduation is automatically fulfilled through coursework for preparation for the major.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units in Russian to include Russian 301, 302, 305A-305B; and 12 units in 500-level courses in Russian.

## Russian Major

For the Single Subject Teaching Credential in Foreign Languages  
With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 11061)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under Policy Studies or Teacher Education. For students completing the single subject teaching credential program, no more than 54 units in Russian courses can apply to the degree.

This major may be used by students in policy studies or teacher education as an undergraduate major for the B.A. degree in liberal arts and sciences. A minor in another field approved by the departmental adviser in Russian is required for the degree.

**Preparation for the Major.** Russian 100A, 100B, 200A, 200B, 211, and 212. (24 units)

**Foreign Language Requirement.** The foreign language requirement for graduation is automatically fulfilled through coursework for preparation for the major.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 30 upper division units in Russian to include 301, 302, 305A-305B, 430, 580, 581; and nine upper division units in Russian.

**Proficiency Examination.** Before taking a student teaching assignment in Russian, the candidate for the credential may be required to pass an oral and written proficiency examination in the language, administered by the Department of German and Russian Languages and Literatures. The candidate must consult with the chair of the Department of German and Russian Languages and Literatures concerning this examination.

## Russian Minor

The minor in Russian consists of a minimum of 16 units in Russian to include Russian 200B and six units of upper division courses in Russian.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Foreign Language Requirement for the B.A. Degree in Liberal Arts and Sciences

Students electing the study of Russian to fulfill the foreign language requirement for the Bachelor of Arts degree in liberal arts and sciences must successfully complete Russian 200A or the equivalent level of achievement. The usual sequence of coursework is Russian 100A, 100B, and 200A. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

## High School Equivalents

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high school courses will not count as college credit toward graduation.

Secondary school language courses can be used as follows:

1. The first **two years** of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.

2. The first **three years** of high school level language count as the equivalent of the first two college semesters, although students with fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not receive credit for the first semester college course unless at least five years separate the last high school course and the first college course.

3. **Four years** of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

## Courses

### LOWER DIVISION COURSES

Native speakers of Russian will not receive credit for taking lower division courses in Russian except with advance approval from the department.

**All lower division courses in Russian are taught in Russian.**

No credit will be given for Russian 100A, 100B, 200A, 200B, 301, 302 taken out of sequence.

#### 100A. First Course in Russian (5) I

Pronunciation, oral practice, reading, essentials of grammar. Not open to students who have completed three years of high school Russian unless the third course was completed five or more years ago. (Formerly numbered Russian 101.)

#### 100B. Second Course in Russian (5) II

Prerequisite: Russian 100A or two years of high school Russian. Continuation of Russian 100A. Not open to students who have completed four years of high school Russian unless the fourth course was completed five or more years ago. (Formerly numbered Russian 102.)

#### 200A. Third Course in Russian (5) I

Prerequisite: Russian 100B or three years of high school Russian. Practical application and review of the basic principles of Russian. Oral practice, reading of cultural material in Russian. (Formerly numbered Russian 201.)

#### 200B. Fourth Course in Russian (5) II

Prerequisite: Russian 200A. Continuation of Russian 200A. (Formerly numbered Russian 202.)

#### 211. Conversation (2) I

Prerequisite: Russian 100B or three years of high school Russian. Practice in the spoken language with emphasis on the articulation of Russian sounds; practical vocabulary; conversation on everyday cultural topics.

#### 212. Conversation (2) II

Prerequisite: Russian 200A or 211, or four years of high school Russian. Continuation of Russian 211.

### UPPER DIVISION COURSES (Intended for Undergraduates)

**All upper division courses in Russian are taught in Russian unless otherwise stated.**

#### 301. Advanced Grammar and Composition (3)

Prerequisites: Russian 200B and 212; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Advanced grammar and stylistics; intensive writing practice; reports based on outside reading.

#### 302. Advanced Grammar and Composition (3)

Prerequisites: Russian 200B and 212; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Advanced grammar and stylistics; intensive writing practice; reports based on outside reading.

#### 305A-305B. Survey of Russian Literature (3-3)

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Russian literature from its beginnings, with emphasis on nineteenth and twentieth centuries. Taught in English with readings in English.

#### 430. Russian Civilization (3) I, II

Prerequisites: Russian 200B and 212. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Development of Russian culture; emphasis on painting, music, architecture, and literature within a social context.

#### 499. Special Study (1-3) I, II

Prerequisites: Fifteen upper division units in the major with an average of B (3.0) or better and consent of instructor. **Proof of completion of prerequisites required:** Grade report or copy of transcript. Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 501. Translation (3)

Prerequisite: Russian 302. Comparison of Russian and English through translation of a variety of texts from Russian to English and from English to Russian.

#### 555. Russian Short Story, Drama and Poetry of the Nineteenth Century (3)

Prerequisites: Russian 200B and 212. Development of the Russian short story, drama and poetry of the nineteenth century.

#### 561. Russian Novel of the Nineteenth Century (3)

Prerequisites: Russian 200B and 212. Development of the Russian novel of the nineteenth century.

#### 563. Russian Literature of the Twentieth Century (3)

Prerequisites: Russian 200B and 212. Poetry, prose and drama of the twentieth century.



**580. Russian Syntax and Stylistics (3)**

Prerequisites: Russian 301 and 302. **Proof of completion of prerequisites required:** Grade report or copy of transcript. The structure of contemporary Russian.

**581. Russian Phonetics and Morphology (3)**

Prerequisites: Russian 200B and 212. **Proof of completion of prerequisites required:** Grade report or copy of transcript. The sounds and forms of contemporary Russian.

**596. Topics in Russian Studies (3) I, II**

Prerequisite: Russian 302 (for linguistic topics) or Russian 305B (for literary topics). **Proof of completion of prerequisites required:** Grade report or 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**  
**Refer to the Graduate Bulletin.**



# Social Science

In the College of Arts and Letters

OFFICE: Adams Humanities 4192  
TELEPHONE: (619) 594-6344

**Faculty**

Social Science is administered through the Social Science Committee.

Coordinator: O'Brien (History)

**The Major**

Social science is a multidisciplinary program, encompassing the faculties and courses of twelve departments—Africana Studies, American Indian Studies, Anthropology, Economics, Geography, History, Mexican American Studies, Political Science, Psychology, Religious Studies, Sociology, and Women's Studies. The major aims are to promote an appreciation for the interrelatedness of these disciplines by exposing students to their varied methodologies. This program, therefore, is especially appropriate for students who wish to be liberally educated in a broad spectrum of understandings, insights, and appreciations. Students may devise their own focus or select either the emphasis outlined in Africa and the Middle East or in Environment.

The social science major is appropriate for many beginning positions in government and, when supplemented with a business administration minor, for careers in business. For students who continue in graduate study after receiving their bachelor's degrees, it is an excellent preparation for graduate and professional programs in law, social work, public administration, librarianship, counseling, business, and the ministry. Students who complete the Single Subject Teaching Credential in Social Science are prepared to teach world history, United States history, geography, government, and economics in high school.

The social science major with an emphasis in environment provides an opportunity for the student to gain an interdisciplinary perspective on some of the major quality of life, public health, and natural resource conservation problems facing the world today. The course offerings available in the emphasis will provide a basic understanding of the nature of the problems, as well as give more specific insights into such practical aspects as the economics and politics associated with these environmental challenges. The large range of courses from which students may choose allows them latitude to pursue their individual interests.

Students selecting the emphasis in environment will be prepared to pursue careers in a wide variety of fields associated with natural resource management, such as county, state, or federal agencies that manage parks, recreation areas, or other public lands. Entry-level jobs with planning or consulting firms are other possibilities. The emphasis will also provide students with a broad background that will be useful in a variety of graduate programs dealing with the natural environment or with natural resource conservation.

**Advising**

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

**Social Science Major**

**With the B.A. Degree in Liberal Arts and Sciences**  
**(Major Code: 22011)**

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

**Preparation for the Major.** Three units of statistics selected from Economics 201, Mathematics 250, Political Science 201, Psychology 270, or Sociology 201. A six-unit sequence in each of three of the following departments selected from: (1) Anthropology 101, 102; (2) Economics 100, 101, 102; (3) Geography 101, 102; (4) History 105, 106, 110A-110B, 115A-115B; (5) Mexican American Studies 110A-110B, 120A-120B; (6) Political Science 101, 102, 103; (7) Sociology 101, 150. Statistics courses taken in a social science department may not be used in fulfillment of that department's six-unit sequence (21 units).

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements." Spanish is recommended for those planning to work in this part of the United States.

**Upper Division Writing Requirement.** Passing the University Writing Examination or Anthropology 396W or Sociology 396W with a grade of C (2.0) or better.

**Major.** A minimum of 33 upper division units to include a 15-unit specialization in one department and the remaining 18 units from among three additional departments. Students may specialize in anthropology, economics, geography, history, political science, sociology, or, under certain conditions listed below, Mexican American studies. The remaining 18 units must be taken from three separate departments other than the department of specialization. Students who specialize in anthropology, economics, geography, history, political science or sociology may take a maximum of six units in Afro-American studies or American Indian studies or Mexican American studies or religious studies or psychology or women's studies from courses listed below.

Students specializing in Mexican American studies must select courses from Mexican American Studies 301, 303, 320, 350A-350B, 480.

Students with a 15-unit specialization in Mexican American studies must take the remaining 12 lower division units and 18 upper division units in anthropology, economics, geography, history, political science, or sociology.

Only students with a specialization in anthropology, economics, geography, history, political science or sociology may take a maximum of six units in the major from Afro-American studies or American Indian studies or Mexican American studies or psychology or religious studies or women's studies. These six units can only be selected from the following courses:

- Africana Studies 331, 380, 445, 470, 471A-471B.
- American Indian Studies 303, 400, 440, 450, 460.
- Mexican American Studies 301, 303, 320, 350A-350B, 480.
- Psychology 320, 321, 322, 330, 340, 342, 347, 350, 351, 452, 453, 454, 455.
- Religious Studies 301, 305, 314, 316, 318, 340, 353, 363, 365, 401, 403.
- Women's Studies 310, 320, 325, 330, 340, 341A-341B, 360, 370, 375, 390, 580.



**Emphasis in Africa and the Middle East**

The adviser for this emphasis is Dr. Issa J. Khalil, Department of Religious Studies.

**Preparation for the Major.** History 100, 101, and six units selected from Anthropology 101, 102; Comparative Literature 270A, 270B; Economics 101, 102; Geography 101, 102. (12 units)

Students should note that a number of the upper division required and recommended courses listed below have lower division prerequisites, but these prerequisites do not constitute requirements per se for the completion of the major.

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Students are encouraged to meet the foreign language competency requirement for the social science major by taking a language appropriate to their interests in African or Middle Eastern studies. Refer to the section of this catalog on "Graduation Requirements."

A minor is not required with the major.

**Upper Division Writing Requirement.** Passing the University Writing Examination or Anthropology 396W or Sociology 396W with a grade of C (2.0) or better.

**Major.** A minimum of 30 upper division units, selected with the consent of the adviser, to include at least 15 units in anthropology, economics, geography, history, political science or religious studies, or a combination of 15 units in art, comparative literature, humanities, and religious studies.



**Required courses:** Anthropology 449 or 474; Humanities 457 or 458; six units from History 473A, 473B, 475A, 475B, and 574; and Political Science 363 or 364. In addition, the following courses are recommended: Anthropology 350, 424, 529; Economics 365, 489; Political Science 361, 481; Religious Studies 340.

**Emphasis in Environment**

The adviser for this emphasis is Dr. Philip R. Pryde, Department of Geography.

**Preparation for the Major.** Biology 100 and 100L; a six-unit sequence in each of three of the following fields: (1) anthropology, (2) economics, (3) geography, (4) history, (5) political science, and (6) sociology. (22 units)

Courses recommended for these sequences are as follows: Anthropology 101 and 102, Economics 101 and 102, Geography 101 and 102, History 105, 106, or 110A-110B or 115A-115B, Political Science 101 and 102, Sociology 101 and 150. Additional recommended courses include Biology 315 and Geological Sciences 100 and 101.

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or Anthropology 396W or Sociology 396W with a grade of C (2.0) or better.

**Major.** A minimum of 30 upper division units to include nine units selected from Economics 452, 453, 454 or 489, Geography 370 or 378, Political Science 334 or 335, and three additional units from this list; and 18 units from at least three departments selected from Economics 452, 453, 454, 458; Geography 370, 378, 569, 572, 573, 574, 575, 576, 577; History 441, 540; Political Science 334, 335; Sociology 350, 459, 557. Recommended: Biology 315, 454; Geological Sciences 303; Physics 301.

**Social Science Major**

**For the Single Subject Teaching Credential  
With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 22011)**

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under Policy Studies or Teacher Education.

This major may be used by students in policy studies or teacher education as an undergraduate major for the B.A. degree in liberal arts and sciences.

**Preparation for the Major.** Thirty units distributed as follows: Economics 101, 102; Geography 101, 102; History 100-101 or 105-106, and 110A-110B; Political Science 101 and 102. (30 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements." Spanish is recommended for those planning to work in this part of the United States.

**Upper Division Writing Requirement.** Passing the University Writing Examination or Anthropology 396W or History 430W or Sociology 396W with a grade of C (2.0) or better.

**Major.** A minimum of 33 upper division units distributed as follows:

Six units from either history or political science selected from History 410A-410B, 442A-442B, 544A-544B, 545A-545B, 546A-546B, 547A-547B, 548A-548B; or from Political Science 305, 320, 338, 345, 347A-347B, 348, 406, 425, 436, 530, 531, 537.

Nine units selected from History 305A-305B, 407A-407B, 415A-415B, 420, 421, 440, 473A-473B, 475A-475B, 551A-551B; Political Science 301A-301B, 302, 356, 359, 361, 363, 364, 375, 378, 481, 566, 568. At least three units must be taken from each department.

Three units of geography selected from Geography 312, 321, 354, 370.

Six units of history selected from History 541A-541B.

Three units of Afro-American studies, American Indian studies, Mexican American studies, or women's studies selected from African American Studies 470, 471A-471B; American Indian Studies 400, 420, 440; Mexican American Studies 301, 350A-350B; Women's Studies 310, 340, 341A-341B, 375.

Three units of economics selected from Economics 330, 338, or 490.

Three units of anthropology, psychology, or sociology selected from Anthropology 350, 410, 432, 529; Psychology 330, 340, 347, 350, 351, 455; Sociology 350, 355, 400, 421, 430, 433, 444, 450, 457, 522, 557.

**Courses****LOWER DIVISION COURSES****201A. Statistical Computer Package: SPSS (1) I, II Cr/NC**

Eleven hours of supervised laboratory instruction and nineteen hours of supervised technical activity.

Prerequisite: Credit or concurrent registration in an elementary statistics course.

Organization and modification of numerical data for computer analysis. Use of selected statistical procedures from the Statistical Package for the Social Sciences (SPSS) including frequency distributions, crosstabulation, t-tests, correlation and regression. Maximum combined credit of three units of Social Science 201A, 201B, 201C, 201D applicable to a bachelor's degree.

**201B. Statistical Computer Package: BMDP (1) I, II Cr/NC**

Eleven hours of supervised laboratory instruction and nineteen hours of supervised technical activity.

Prerequisite: Credit or concurrent registration in an elementary statistics course.

Organization and modification of numerical data for computer analysis. Use of selected statistical procedures from the Biomedical Computer Programs (BMDP) including data description, t-tests, multi-way frequency tables, multiple linear regression, analysis of variance and covariance, and nonparametric procedures. Maximum combined credit of three units of Social Science 201A, 201B, 201C, 201D applicable to a bachelor's degree.

**201C. Statistical Computer Package: TSP (1) I, II Cr/NC**

Eleven hours of supervised laboratory instruction and nineteen hours of supervised technical activity.

Prerequisite: Credit or concurrent registration in Economics 441.

Organization and modification of numerical data for computer analysis. Use of selected statistical procedures from the Times Series Processor (TSP) computer program including ordinary least squares regression, residual analysis, autocorrelation correction, correction for heteroskedasticity and two stage least squares regression. Maximum combined credit of three units of Social Science 201A, 201B, 201C, 201D applicable to a bachelor's degree.

**201D. Statistical Computer Package: SAS (1) I, II Cr/NC**

Eleven hours of supervised laboratory instruction and nineteen hours of supervised technical activity.

Prerequisite: Credit or concurrent registration in an elementary statistics course.

Organization and modification of numerical data for computer analysis. Use of selected statistical procedures from the SAS computer program including frequency distributions, crosstabulation, correlation, regression, analysis of variance, t-tests, and nonparametric procedures. Maximum combined credit of three units of Social Science 201A, 201B, 201C, 201D applicable to a bachelor's degree.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.



# Social Work

In the College of Health and Human Services

Accredited by the Council on Social Work Education.

## Faculty

Emeritus: Bailly, Brennen, Butler, Cohen, Guidry, Haworth, Herman, Ishikawa, Kahn, Kukkonen, Maxwell, Ontell, Reichert, Riehm, Sardinas, Schmidt, Stumpf  
 Director: Harbert  
 Associate Director: Siman  
 Professors: Davis, Dean, Griffin, Harbert, Kelley, Roberts-DeGennaro, Stanford, Valle, Zuniga  
 Associate Professors: Ellis, Harris, Pritchard, Siman, Stoesz  
 Assistant Professors: Ajemian, Finnegan, Jones, Raymer, Rhee, Sucato  
 Lecturers: Haynes, Landsverk, Letourneau, Milstein, O'Cull, Packard, Shuman, Smith, Sproul, Stanger

## Offered by the School of Social Work

Master of Social Work degree.  
 Master of Social Work and Master of Public Health degrees (concurrent program).  
 Major in social work with the B.A. degree in liberal arts and sciences.  
 Minor in social work.  
 Early intervention specialist certificate.  
 Human services paraprofessional certificate.

## The Major

The profession of social work is deeply committed to the relief of human distress and inequality, and to the assistance of people in the meeting of their social, psychological, and economic needs. The objective of the School of Social Work is to assist students in acquiring the essential knowledge, philosophy, and basic skills required for beginning professional social work practice; namely, to develop a philosophy which recognizes individual human welfare as the purpose and goal of social policy, to develop an awareness and understanding of human behavior, to attain a level of competence in practice methods and skills, to acquire knowledge in methods of research in social work, and to accept responsibility for continued development of competence in their practice after they have completed their academic education.

The social work major is designed to apply to a wide variety of social work practice settings. Preparatory coursework for the major includes a basis in the liberal arts and sciences. The upper division curriculum is intensive, encompassing coursework in cultural pluralism, human behavior, social policy and program evaluation, social work practice, and social work research. Required field experience is an integral part of the program.

The B.A. degree prepares students for immediate employment in those social work positions which do not require graduate level preparation, as well as providing the foundation for graduate study.

## Social Work Major

With the B.A. Degree in Liberal Arts and Sciences  
 (Major Code: 21041)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog entitled "Graduation Requirements." No more than 51 units in social work courses can apply to the degree.

A minor is not required with this major.

OFFICE: Hepner Hall 119  
 TELEPHONE: (619) 594-6865

**Preparation for the Major.** Social Work 110, 120, 130; Biology 100 or any three units in a human biology course; Economics 100 or three units of any economics course; Health Science 101; Psychology 101; Sociology 101; Psychology 270 or Sociology 201 or Mathematics 250. All preparatory courses must be completed before taking 300 or 400 level social work courses in the major. (27 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 42 upper division units, in a prescribed course sequence, to include Social Work 350, 360, 370A, 370B, 381, 483A-483B, 489A (6 units), 489B (6 units), 491, and six units of upper division electives in social work.

**Prescribed Course Sequence:** Listed below is the expected course sequence students should utilize in the major. All 300-level courses must be completed with an overall 2.0 GPA before students will be allowed to enroll in Social Work 483A and 489A.

JUNIOR YEAR		SENIOR YEAR	
SW 360	SW 350	SW 483A	SW 483B
SW 370A	SW 370B	SW 489A	SW 489B
SW 381	Elective	SW 491	Elective

**Field Practicum.** All students must enroll in field practicum. This is a 16-hour per week internship at a School of Social Work arranged and supervised social work community agency (students are not permitted to locate their own agencies). Students may begin field practicum during the fall semester only and must concurrently enroll in Social Work 483A and 489A. The continuation of field practicum is offered in spring semester only when students must concurrently enroll in Social Work 483B and 489B. These courses are sequential and students must complete both "A" courses before going on to the two "B" courses. During the spring semester preceding enrollment in field practicum, students must obtain a field application from the school office (HH-119). In order to qualify for the internship, students must have completed all 300 level social work courses with a 2.0 GPA. The coordinator of field instruction evaluates each application to determine whether the student has met all requirements for admission to field practicum and assigns the student to an agency for internship. Students who do not file a field application by the deadline date will not be able to enter field practicum. Specific times and days of field practicum are arranged between the student and the assigned agency, but most agencies require daytime availability. Evening and weekend placements are not available. Students should arrange their schedules appropriately to meet these criteria.

## Social Work Minor

The minor in social work consists of 24 units to include Social Work 110, 120, 350, 360, 370A, 381; Psychology 101; and Sociology 101.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.



## Human Services Paraprofessional Certificate

This certificate is designed specifically for individuals in recovery from any form of substance abuse who wish to pursue paraprofessional career opportunities in this field. A certificate in paraprofessional human services may be sought by ex-offenders and ex-substance abusers who: (a) do not meet the prerequisite requirements for a major in social work for the B.A. degree, but who are interested in pursuing a paraprofessional career in human services; (b) are not interested in or able to complete non-professional offerings which are part of the regular degree program; (c) have already earned a bachelor's degree and are not interested in a second degree.

Students are admitted to the certificate program as regular students of San Diego State University. Students must apply to the program as well as to the university. Candidacy for the certificate program will be established by the undergraduate social work program adviser.

Awarding of the certificate requires completion of an approved pattern of ten courses (30 units) with a minimum grade point average of 2.0. The following is the prescribed 30-unit course sequence for the certificate:

SEMESTER 1 (15 units)		SEMESTER 2 (15 units)	
Health Science 574		Health Science 331	
Social Work 360		Social Work 350	
Social Work 381		Social Work 370A*	
Social Work 410*		Social Work 382	
Social Work 489A*		Social Work 489B*	

Course offerings under this program may only be taken in the on-campus program. Fifteen units in the certificate program may be counted toward the major in social work, but may not be counted toward the minor. For further information, consult the undergraduate social work program adviser.

\* Prerequisites waived for these courses.

## Courses

### LOWER DIVISION COURSES

**110. Human Societies and Social Problems (3) I, II**  
 Perspectives on problems of human societies and their relation to contemporary social problems and issues. Emphasis on distributive problems and forms of stratification.

**120. Explorations in Human Services (3) I, II**  
 Two lectures and three hours of fieldwork. Orientation to the field of social welfare. Readings, class discussions and participation in social work activities on campus and in the community. Work as a volunteer in the agency is required in a variety of field settings. Scheduling is flexible.

**130. Marriage and Contemporary Human Relations (3) I, II**  
 Developing understanding and ability to evaluate various concepts, attitudes and value systems as they relate to marriage and other contemporary human relationships. Assist students in acquiring abilities to develop and sustain interpersonal relationships.



**296. Experimental Topics (1-4)**

Selected topics. 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.

**UPPER DIVISION COURSES  
(Intended for Undergraduates)**

**350. Cultural Pluralism (3) I, II**

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Understanding of the American society as a culturally pluralistic social process and an understanding of social work as a culturally directed profession with emphasis on the concept of cultural identities created by one's values, ideologies, knowledge and behavior.

**351. Perspectives on Life in Urban Communities (3) I, II**

Characteristics and processes of contemporary urban communities as they shape the lifestyles of people. Urban communities examined in terms of their functional and dysfunctional capacities for meeting human needs.

**360. Perspectives on Human Behavior and the Social Environment (3) I, II**

Prerequisite: Completion of General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Interdisciplinary, comparative, and critical approach to explanatory theories of human behavior. Focus on interrelatedness of factors that affect the nature and quality of human life with linkage to the social welfare of individuals, families and communities.

**370A. Social Policies and Social Issues (3) I, II**

Prerequisites: Social Work 110 and 120.  
Major social forces and institutions as they relate to and determine social policy emphasizing social welfare services in an industrialized society.

**370B. Social Provision and Program Evaluation (3) I, II**

Issues and dilemmas related to the provision of social services, and analysis of social programs. Evaluating effectiveness and efficiency of social service programs and social work services.

**381. Seminar in Basic Skills in Social Work Practice (3) I, II**

Prerequisite: Junior standing.  
Helping skills in social work practice make use of assessment and interviewing theory. Addresses written, verbal interpersonal skills with individuals, small groups and communities with regard to assessment in social work practice.

**382. Seminar in Intermediate Skill Development for Social Workers (3) I, II**

Prerequisite: Social Work 381.  
Students are expected to participate in simulation of social work practice situations, activities and skills. Presentation of research and theory will be interwoven with structured classroom experiences.

**400. Social Work Practice: Child Welfare (3) I, II**

Prerequisite: Social Work 370A.  
Problems of children and supportive, supplementary and substitute social services which have been developed to meet these needs.

**410. Social Work Practice: Family Issues (3) I, II**

Prerequisite: Social Work 370A.  
Issues relative to social work intervention with families, including major social work and interpersonal family problem situations. Family practice methods and social service provisions, and social policy issues around family needs.

**420. Aging and the Social Services (3) I, II**

Prerequisite: Social Work 370A.  
Contemporary status, social problems and needs, and developmental theories of the elderly population. Social services delivery system which serves the elderly.

**483A-483B. Integrating Seminar (3-3) I, II**

Prerequisites: Social Work 370B and a 2.0 grade point average in all junior level social work courses required in the major; concurrent registration in Social Work 489A for 483A; concurrent registration in Social Work 489B for 483B.

The integration of social work theory, principles and practice techniques.

**489A-489B. Field Experience in Social Work (3-9, 3-9) I, II**

Prerequisites: Completion of all 300-level social work courses with a minimum 2.0 grade point average; concurrent registration in Social Work 483A for 489A; concurrent registration in Social Work 483B for 489B; arrangements made during prior semester with coordinator of field instruction.

A minimum of 12 units (6 in Social Work 489A and 6 in Social Work 489B) is required. Students spend 16 hours per week per semester in practice field assignments in selected social work agencies or settings.

**491. Methods of Social Work Research (3) I, II**

Prerequisite: Social Work 370B.  
Definition and purpose of research in social welfare and social work. Formulation of research problems, selecting a design and methodology; techniques of collecting, organizing, interpreting and analyzing data.

**496. Experimental Topics (1-4)**

Selected topics. 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.

**497. Investigation and Report (3) I, II**

Prerequisite: Consent of instructor.  
Analysis of special topics in social welfare.

**499. Special Study (1-3) I, II Cr/NC**

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

**UPPER DIVISION COURSES  
(Also Acceptable for Advanced Degrees)**

**540. Seminar in Social Effects of the Legal Process (3)**

Prerequisite: Upper division, undergraduate social work major; or classified graduate standing in the School of Social Work; or classified graduate standing or unclassified standing with consent of the director.  
Structure and functions of law as it bears upon such groups as defendants in criminal prosecutions, recipients of welfare programs, conservatees in mental health hearings, children in juvenile court dependency proceedings. The legal conflicts social workers may encounter between their ethics and their duties to clients and agency.

**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  
Refer to the Graduate Bulletin.**

# Sociology

In the College of Arts and Letters

OFFICE: Nasatir Hall 203  
TELEPHONE: (619) 594-5449

**Faculty**

Emeritus: Bloomberg, DeLora, Gillette, Johnson, Klapp, Milne, Somerville, Sorensen, Stephenson, Wendling  
Chair: Wood  
Professors: Cottrell, El-Assal, Hohm, Hough, Ima, Kolody, Mouratides, Preston, Rumbaut, Sanders, Sandlin, Scheck, Schulze, Weeks, Winslow, Wood  
Associate Professors: Buck, Chandler, Emerick, Gay, Kennedy, Kirkpatrick, Werner  
Lecturers: Clanton, Eaton, Landsverk

**Offered by the Department**

Master of Arts degree in sociology.  
Major in sociology with the B.A. degree in liberal arts and sciences.  
Minor in sociology.

**The Major**

Sociology is the scientific study of social life and the social causes and consequences of human behavior. Sociology's subject matter ranges from the intimate family to the hostile mob, from crime to religion, from the divisions of race and social class to the shared beliefs of a common culture, from the sociology of work to the sociology of sport. In fact, few fields have such broad scope and relevance.

Sociology seeks to understand the interaction of individuals with institutions and social organizations in which we are inextricably involved, and the norms, values, beliefs, and traditions that make social life possible and meaningful.

The Department of Sociology offers its majors a field internship program, which allows students to gain hands-on experience selected from a wide variety of community agencies and private business organizations. Many students have found permanent employment through their internships.

Employment opportunities for individuals with B.A. degrees in sociology are, as for all liberal arts graduates, quite varied. Many students work for various private and public agencies; some go on to graduate work in sociology; others go on to other graduate programs such as law, medicine, and social work. Sociologists with M.A. and Ph.D. degrees are generally employed at colleges and universities or government agencies. However, a growing number of sociologists with graduate degrees are being employed by private businesses.

**Advising**

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

**Sociology Major**

**With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 22081)**

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in sociology courses can apply to the degree.

Students majoring in sociology must complete a minor in another field.

**Preparation for the Major.** Sociology 101, 150, 201. (9 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or Sociology 396W with a grade of C (2.0) or better.

**Major.** Students may elect to major in one of three tracks: (a) General Sociology, (b) Applied Social Research, or (c) Industrial Sociology. The Applied Social Research track provides a more rigorous preparation in sociological research methods and students completing this course of study receive a special certificate at graduation. The Industrial Sociology track is specifically designed for students interested in personnel and management. Within these three tracks, upper division course requirements for the sociology major are as follows:

**(a) General Sociology**

A minimum of 30 upper division units in sociology to include Sociology 301, six units of electives, plus:

Three units from *each* of the following areas:

**Methods:** Sociology 406, 407, 408.

**Social Psychology:** Sociology 310, 410, 412, or 517.

**Theory:** Sociology 400, 401, or 403.

Twelve units from *one* of the following areas:

**Family, Sexuality, and the Life Cycle:** Sociology 320, 420, 421, 522, 527, 528.

**Social Change:** Sociology 350, 351, 355, 450, 455, 456, 457, 459, 555, 556, 557.

**Social Control:** Sociology 441, 443, 444, 445, 543.

**Social Organization:** Sociology 335, 338, 430, 431, 433, 436, 531, 537, 539.

No more than three units of Sociology 499 or 597 and six units of Sociology 496 or 596 may be applied toward the General Sociology track.

**(b) Applied Social Research**

A minimum of 30 upper division units in sociology to include Sociology 301, 406, 407, 408, and 505 (15 units), plus:

Three units from *each* of the following areas:

**Internship:** Sociology 480.

**Social Psychology:** Sociology 310, 410, 412, or 517.

**Theory:** Sociology 400, 401, or 403.

Six units of electives excluding Sociology 499 or Sociology 597.

**(c) Industrial Sociology**

A minimum of 27 upper division units in sociology to include Sociology 320, 355, 430, 431, 480, 531 (18 units), plus:

Three units from *each* of the following areas:

**Social Psychology:** Sociology 310, 410, 412, or 517.

**Theory:** Sociology 400, 401, or 403.

Three units of electives excluding Sociology 499 or Sociology 597.





### Sociology Minor

The minor in sociology consists of a minimum of 18 units to include Sociology 101 and 150 or 201; three units selected from Sociology 310, 410, 412, or 517; and nine units selected from one of the following areas:

**Applied Social Research:** Sociology 505 required; and six units selected from 301, 406, 407, 408.

**Family, Sexuality, and the Life Cycle:** Sociology 320, 420, 421, 522, 527, 528.

**Industrial Sociology:** Sociology 320, 355, 430, 431, 531.

**Social Change:** Sociology 350, 351, 355, 450, 455, 456, 457, 459, 555, 556, 557.

**Social Control:** Sociology 441, 443, 444, 445, 543.

**Social Organization:** Sociology 335, 338, 430, 431, 433, 436, 531, 537, 539.

**Theory and Methods:** Sociology 301, 305, 400, 401, 403, 406, 407, 408, 505.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

### Sociology Honors Thesis

The Department of Sociology offers undergraduates of superior achievement the opportunity to write a sociology honors thesis leading to special recognition upon graduation. Sociology 490, Senior Honors

Thesis, is open to students who rank in the top twenty percent of senior sociology majors and who have successfully completed Sociology 396W. Interested students should consult with the undergraduate advisers in the Sociology Department.

### Courses

#### LOWER DIVISION COURSES

##### 101. Introductory Sociology: The Study of Society (3) I, II (CAN SOC 2)

This course is prerequisite to all upper division courses in sociology. Major ideas, concepts, and methods in the study of society to include socialization, culture, social structure, social stratification, deviance, social control, and social change.

##### 150. Contemporary Social Problems (3) I, II (CAN SOC 4)

Prerequisite: Sociology 101.  
Contemporary social problems. Topics may include poverty, inequality, unemployment, crime and deviance, population and ecological problems, health, family issues, and the role of ideology and interest groups in the definition of social problems.

##### 201. Elementary Social Statistics (3) I, II

Prerequisites: Course in intermediate algebra. Sociology 101; qualification on the Mathematics Departmental Placement Examination, Part IA.

Basic statistical techniques in sociology. Tables and graphs, measures of central tendency and variability, correlations, cross-classification, and introduction to multivariate analysis, sampling and

statistical inference. Computer applications may be included. Students with credit or concurrent registration in the following lower division statistics courses will be awarded a total of four units for the two (or more) courses: Biology 215, Economics 201, Engineering 140, Mathematics 119, 250, Political Science 201, Psychology 270, and Sociology 201.

##### 296. Experimental Topics (1-4)

Selected topics. 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.

#### UPPER DIVISION COURSES (Intended for Undergraduates)

##### 301. Introduction to Social Research (3)

Prerequisite: Sociology 101.  
Sociological research methodology. Techniques for testing and developing sociological theory, including hypothesis formulation, data collection, data analysis and writing a research report.

##### 305. Sociological Laboratory II (1)

Three hours of laboratory.  
Prerequisite: Must be taken in conjunction with a three-unit upper division course.  
Application of experimental, quantitative or qualitative methods to sociological problems and the use of experimental, social simulation teaching techniques.

##### 310. Love, Jealousy, and Envy: The Sociology of Emotions (3)

Prerequisite: Sociology 101.  
Sociological understanding of human emotions developed through consideration of history of sex and love, social psychology of jealousy, and political implications of envy. Understanding and management of emotions analyzed from a sociological point of view.

##### 320. Sex/Gender Roles in American Society (3) I, II

Prerequisites: Sociology 101; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Male-female relationships in occupational, educational, and familial settings. Changing concepts of femininity and masculinity. Images of men and women in literature, in the mass media, and in laws and judicial decisions.

##### 335. Mass Communication and Popular Culture (3)

Prerequisites: Sociology 101, and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Development of popular culture as influenced by the growth of mass media of communication, including popular music, television, film, newspapers, and advertising. The power, functions, and effects of the mass media in society and in social change.

##### 338. Sociology of Religion (3) II

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Forms of religious belief, knowledge, practice, and experience tied to different social arrangements and historical periods. Consequences of religion for society. Secularization and conversion processes in modern industrial societies.

##### 350. Population and Contemporary Issues (3) I, II

Prerequisites: Sociology 101; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Analysis of population processes as they affect and are affected by such contemporary issues as rapid world population growth, famine, ecological pressures, abortion, women's liberation, racial and ethnic relations, and illegal migration.

##### 351. Comparative Societies (3) I, II

Prerequisite: Sociology 101.

Human societies in world-historical perspective, from agrarian societies to the modern world system. Comparative study of societies based on changing technologies of production (agriculture, industrial) and different social structures (despotic, slave-owning, feudal, capitalist, socialist).

##### 355. Minority Group Relations (3) I, II

Prerequisites: Sociology 101; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Historical and comparative analysis of race and ethnic relations. Origins and maintenance of ethnic stratification systems; discrimination and prejudice; the adaptation of minority communities; role of social movements and government policies in promoting civil rights and social change.

##### 396W. Writing in Sociology (3)

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; grade report or copy of transcript. Recommended: Sociology 101.

Instruction and practice in methods of writing in the social sciences. Principles of scientific discourse, research and report writing, and proposal writing.

##### 400. History of Social Thought (3) I

Prerequisite: Sociology 101.

World-historical survey of social thought prior to the late nineteenth century classical theorists, from the traditions of tribal societies and early civilizations to pre-Socratic and classical Greek philosophers, and from the Italian Renaissance to the Age of Enlightenment.

##### 401. Classical Sociological Theory (3) I, II

Prerequisite: Sociology 101.

Theories of major European and American sociologists since the mid-nineteenth century, including Comte, Marx, Tocqueville, Spencer, Sumner, Durkheim, Pareto, Weber, Simmel, Mead, and Park. Relevance of classical social theory to contemporary sociology.

##### 403. Contemporary Sociological Theory (3)

Prerequisite: Sociology 101.

Major figures and trends in American and European sociological theory since World War II, with emphasis on such schools as structural-functionalism, Marxism, symbolic interactionism, and critical theory.

##### 406. Intermediate Social Statistics (3) II

Prerequisites: Sociology 201 and 301.

Statistical techniques in the analysis of social research data and hypothesis testing, including analysis of variance, covariance, partial correlation, multiple and logistic regression, logic and log-linear models, discriminant and factor analysis. Practical application with the use of statistical packages.

##### 407. Survey and Experimental Research Methods (3) I, II

Prerequisites: Sociology 201 and 301.

Research process from research design through data processing, analysis, and interpretation. Quantitative research techniques including universe enumeration, sampling, questionnaire construction, scaling techniques, structured interviews, and experimental designs.

##### 408. Qualitative Research Methods (3)

Prerequisites: Sociology 201 and 301.

Field research methods including interviewing, observation, participant observation and case studies. Problems in research design, gaining and maintaining rapport, and analysis and interpretation of qualitative data.



**410. Social Psychology: Mind, Self, and Society (3) I, II**

Prerequisites: Sociology 101; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Major theories, problems, and findings concerning the relationship of the individual and society. Topics include consciousness and construction of meaning, self-concept and social identity, socialization and interaction, group behavior and group membership.

**412. Social Construction of Reality (3) II**

Prerequisite: Sociology 101.

Analysis of reality as an ongoing social process. Creation and internalization of social worlds through language. Common sense and the multiple realities of everyday life. Dynamic emergence of social structure.

**420. Sexuality in Modern Society (3) I, II**

Prerequisite: Sociology 101.

Current research on contemporary sexual attitudes and behaviors, including changing norms in premarital, marital, and extramarital relationships. Controversies and implications for the individual and society.

**421. The American Family and Its Alternatives (3) I, II**

Prerequisites: Sociology 101; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Changes in intimacy in American family. Selection of mating partners, spousal and parenting relationships, and alternatives to traditional family forms. Changing functions of the family viewed in historical perspective. Present realities and future prospects.

**430. Social Organization (3) I, II**

Prerequisites: Sociology 101; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Social structure analyzed from the micro-level of roles and interaction to groups, institutions, complex organizations, societies, and the world as a social system. Basic concepts of sociology and their application in concrete case studies.

**431. Workers, Managers, and Bureaucracy (3) II**

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. Theories and ideologies of management and worker motivation in corporations and government agencies.

**433. Wealth, Status, and Power (3) I, II**

Prerequisite: Sociology 101.

Distribution of wealth, power, privilege, and prestige in society. Causes, outcomes, and dynamics of inequality. Processes of upward and downward social mobility. Relationship of social class to politics, the economy, and other institutions.

**436. Sociology of Health and Illness (3) I, II**

Prerequisite: Sociology 101.

Sociological perspectives on health, disease, and healing. Socialization, roles, conflict, and change in medical work settings. Health and medical institutions in comparative social contexts. Social transformation of American medicine.

**441. Sociology of Mental Illness (3) I, II**

Prerequisite: Sociology 101.

Social, cultural, and political factors involved in definition of "madness" and control of mental illness in various societies. Review of research about the incidence, prevalence, and social ecology of mental illness and its distribution by social class.

**443. Crime and Society (3) I, II**

Prerequisite: Sociology 101.

Social origins, forms, and functions of criminal law. Sociological theories about the causes and consequences of crime. Measurement and distribution of violent crimes, property crimes, victimless crimes, white collar crime, and their impact on society.

**444. Juvenile Delinquency (3) I, II**

Prerequisite: Sociology 101.

Nature and extent of delinquency; the causative factors involved; methods of control and prevention, with special attention to protective and remedial measures offered by the school, home, juvenile court, correctional institutions and camps, probation and parole, and recreational agencies.

**445. Sociology of Deviance (3) I, II**

Prerequisite: Sociology 101.

Conformity and nonconformity; the relationship between individual liberty and social control; stigma and the labeling of deviant behavior such as prostitution, alcoholism, drug addiction, and crime.

**450. Social Change (3) I, II**

Prerequisites: Sociology 101; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Social change at the interpersonal, institutional, and societal levels of analysis. Major economic, political, technological, and demographic forces that have shaped the contemporary world. Topics may include modernization, industrialization, urbanization, revolution, and prospects of social change in rich and poor nations.

**455. Asian American Communities (3) I**

Prerequisite: Sociology 101.

Comparative analysis of selected Asian and Pacific Islander communities in the United States. Entrance, reception, response, and adaptation. Assessment of public policies of current issues and future prospects.

**456. Collective Behavior: Crowds, Cults, and Crises (3)**

Prerequisite: Sociology 101.

Processes of social behavior in masses and groups, including crowd behavior, mass hysteria, riots, mobs, fads, fashions, crazes, panics, rumors, and scapegoating. Sects and cults; social movements; the effects of mass communications and propaganda.

**457. Protests, Reforms, and Revolutions (3) I, II**

Prerequisite: Sociology 101.

Revolutionary and reform movements in relationship to the larger society. Conditions leading to development of social movements. Emergence of leadership, ideologies, strategies, recruitment of members, and social consequences, case studies.

**459. Sociology of the Future (3)**

Prerequisite: Sociology 101.

Alternative futures in selected areas of social life, such as family, technology, work, and leisure, from local to global levels of analysis. Review and assessment of research into the future.

**480. Field Internship (3-6) I, II**

Prerequisite: Sociology 201.

Supervised field placement of students in community agencies. Practical experiences related to studies within the sociology curriculum. Maximum credit six units.

**490. Senior Honors Thesis (3) I, II**

Prerequisites: Sociology 396W; open to sociology majors with senior standing and permission of the honors thesis adviser.

Directed research on a sociological topic chosen in consultation with the honors adviser, and completion of a senior honors thesis. Required of students wishing to graduate with a Certificate of Recognition in Sociology with Honors.

**496. Experimental Topics (1-4) I, II**

Prerequisite: Consent of the instructor.

Selected topics. 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.

**499. Special Study (1-3) I, II**

Prerequisite: Consent of instructor.

Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

**505. Applied Sociological Research (3) I, II**

Prerequisite: Sociology 407 or 408.

Types and methods of applied sociological research; and an overview of their application in substantive areas. Practical research skills.

**517. Life Crises and Coping: Sociological Perspectives (3) II**

Prerequisite: Sociology 101.

Social variation in the occurrence of life crises, personal and social coping strategies, and psychosocial outcomes. (Formerly numbered Sociology 525.)

**522. The Family in Comparative and Historical Perspectives (3) II**

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) I**

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) I**

Prerequisite: Sociology 101.

Sociological concepts and theories of the process of dying. Comparative study of death and dying with emphasis on social, psychological, and social organization approaches. Consideration of contemporary social-ethical issues surrounding dying in our society.

**531. Working and Society (3) II**

Prerequisite: Sociology 101.

Work and occupations in the division of labor. Paid and unpaid labor; work at home and in the marketplace. The social drama of work: identity, role conflict, and change. Power, pay, and status ranking of occupations; the professionalization of work.

**537. Political Sociology (3)**

Prerequisite: Sociology 101.

Social organization of political processes. Power and authority, social class, primary groups, collective behavior, social change, and other sociological factors considered in their relationships to political processes.

**539. Sociology of Education (3) I, II**

Prerequisite: Sociology 101.

Social organization of education in the United States and other societies. Structure and functions of educational institutions. Formal and informal education. Class, ethnic, and other social factors affecting the educational process. Implications of educational decision making and testing.

**543. Police, Courts, and Corrections: The Sociology of Crime and Punishment (3) I**

Prerequisite: Sociology 101.

Historical sociology of the American criminal justice system. Development and functions of police, criminal courts, prisons, parole, and probation. Theories and ideologies of punishment and rehabilitation. Review of contemporary research.

**555. Immigrants and Refugees in Contemporary American Society (3) I**

Prerequisite: Sociology 101.

Contemporary migration to the United States, especially from Latin America and Asia. Political and economic migration. Immigrant and refugee adaptation. Theoretical controversies, research applications, and policy implications.

**556. Topics in Comparative Societies (3) II**

Prerequisite: Sociology 101.

Social structures, social problems, and social change in selected areas of the world in comparative and historical perspectives. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**557. Urban Sociology (3) I, II**

Prerequisite: Sociology 101.

The structure and function of the modern city; types of neighborhoods; forms of recreation; social forces in a metropolitan area; types of urban personalities and groups; rural-urban conflicts of culture. Practical field studies required.

**596. Current Topics in Sociology (1-3) I, II**

Prerequisite: Sociology 101.

Selected specialized, controversial or currently relevant topics in sociology. Maximum opportunity provided for student initiative in determining course content and procedures. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**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 Refer to the Graduate Bulletin.



# Spanish

In the College of Arts and Letters

## Faculty

Emeritus: Baker, Lemus, Santaló, Sender, Weeter  
Chair: Doyle  
Professors: Barrera, Case, Castillo, Christensen, Doyle, Head, Higgs, Jiménez-Vera, Segade, Silverman, Wilson  
Associate Professors: Hidalgo, O'Brien, Robinson, Talamantes, Young

## Offered by the Department of Spanish and Portuguese Languages and Literatures

Master of Arts degree in Spanish.  
Major in Spanish with the B.A. degree in liberal arts and sciences.  
Teaching major in Spanish for the single subject teaching credential in foreign languages.  
Minor in Spanish.  
Certificate in court interpreting (available at Imperial Valley Campus only).  
Certificate in translation studies.

## The Major

Spanish is the fourth most widely spoken language in the world and the second most frequently used language in the Southwest. Because of San Diego's proximity to Mexico and other Spanish-speaking countries, many students here are interested in learning Spanish. Their reasons range from practical application in jobs, travel, reading or recreation to a curiosity about the culture or literature of Spanish-speaking countries. The Department of Spanish and Portuguese offers a wide range of courses and programs designed to satisfy the varied needs of students who enter the Spanish major.

A major in Spanish for the single subject teaching credential can lead directly to a career in secondary teaching. The federal government also employs those with Spanish-speaking ability in both civil service and diplomatic areas. In addition, many fields which involve contact with the public require knowledge of Spanish. These types of public contact fields include law enforcement, medicine, banking, tourism, government, library positions, foreign affairs, public relations, advertising, missionary assignments, and social services.

## Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major.

## Spanish Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 11051)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 49 units in Spanish courses can apply to the degree.

Students majoring in Spanish must complete a minor in another field approved by the departmental adviser in Spanish.

**Preparation for the Major.** Spanish 100A, 100B, 100C, 202, 211, and 212. See adviser. (22 units)

**Foreign Language Requirement.** The foreign language requirement for graduation is automatically fulfilled through coursework for preparation for the major.

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**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 27 upper division units in Spanish to include Spanish 301A, 301B, 302; six units selected from Spanish 305A, 305B, 306A, 306B; Spanish 440 or 441 or 442; Spanish 448 or 449; Spanish 450; and one 500-level Spanish course. At least 12 upper division units must be taken in residence at SDSU.

## Spanish Major

For the Single Subject Teaching Credential in Foreign Languages With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 11051)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under Policy Studies or Teacher Education. For students completing the single subject teaching credential program, no more than 52 units in Spanish courses can apply to the degree.

This major may be used by students in policy studies or teacher education as an undergraduate major for the B.A. degree in liberal arts and sciences. A minor in another field approved by the departmental adviser in Spanish is required for the degree.

**Preparation for the Major.** Spanish 100A, 100B, 100C, 202, 211, and 212. (22 units)

**Foreign Language Requirement.** The foreign language requirement for graduation is automatically fulfilled through coursework for preparation for the major.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 30 upper division units in Spanish to include Spanish 301A, 301B, 302; six units selected from 305A, 305B, 306A, 306B; Spanish 440 or 441 or 442; Spanish 448 or 449; Spanish 450 and 561; and one 500-level Spanish course. At least 15 upper division units must be taken in residence at SDSU.

## Spanish Minor

The minor in Spanish consists of a minimum of 18 units, at least twelve of which must be in upper division Spanish courses.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Certificate in Translation Studies

The Department of Spanish and Portuguese Languages and Literatures offers a Certificate in Translation Studies. The certificate requires 15 units in Spanish dealing with translation theory, nonliterary and literary translation, from Spanish to English and from English to Spanish.

A prospective candidate for the certificate should possess a bilingual facility in Spanish and English. The student must complete with a grade of B or better English 305W (or pass the University Upper Division Writing Competency Examination), and Spanish 301A, 301B, 302, and 450 prior to starting work on the certificate.

After meeting the basic requirements for admission, the student must complete with a GPA of 3.0 or better 15 units to include Spanish 491, 492, 493, 556, and three units from Spanish 307, 495, 497, 557\*, and either 499 or 596 when offered with appropriate certificate-related content.

Upon completing the 15 units of coursework, the student must take a departmental examination for the certificate. Upon successful completion of the examination, the student will be awarded the certificate. Courses in the certificate may not be counted toward the major or minor in Spanish.

\* Linguistics prerequisite waived for Spanish 557.

## Certificate in Court Interpreting (Imperial Valley Campus)

The Imperial Valley Campus offers a Certificate in Court Interpreting. The certificate requires 15 units in Spanish dealing with problems of court interpreting and includes interpreting from Spanish to English and from English to Spanish.

A prospective candidate for the certificate should possess a bilingual facility in Spanish and English. The student must complete with a grade of B or better English 305W (or pass the University Upper Division Writing Competency Examination), and Spanish 301A, 301B, 302, and 450 prior to starting work on the certificate.

After meeting the basic requirements for admission, the student must complete with a GPA of 3.0 or better 15 units to include Spanish 491, 492, 493, 556, 557\*, and 494 (six units) and nine units selected from 491, 493, 556, 557\*, and either 499 or 596 when offered with appropriate certificate-related content.

Upon completing the 15 units of coursework, the student must take a departmental examination for the certificate. Upon successful completion of the examination, the student will be awarded the certificate.

\* Linguistics prerequisite waived for Spanish 557.

## Foreign Language Requirement for the B.A. Degree in Liberal Arts and Sciences

Students electing the study of Spanish to fulfill the foreign language requirement for the Bachelor of Arts degree in liberal arts and sciences must successfully complete Spanish 100C or the equivalent level of achievement. The usual sequence of coursework is Spanish 100A, 100B, and 100C. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

## High School Equivalents

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high school courses will not count as college credit toward graduation.

Secondary school language courses can be used as follows:

1. The first **two years** of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.

2. The first **three years** of high school level language count as the equivalent of the first two college semesters, although students with fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not have completed three years of foreign language in high school unless at least five years separate the last high school course and the first college course.

3. **Four years** of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

Students entering San Diego State University with five or six years of high school Spanish may enroll in Spanish 202; the department recommends, however, that they take Spanish 301A and 301B.

## Courses

### LOWER DIVISION COURSES

Native speakers of Spanish from foreign countries will not receive credit for taking lower division courses in Spanish, except with advance approval from the department.

All lower division courses in Spanish are taught in Spanish.

No credit will be given for Spanish 100A, 100B, 100C, 202, 301A, 301B taken out of sequence.

### 100A. First Spanish Course (4) I, II, S

Four hours of lecture plus laboratory.  
Pronunciation, oral practice, readings on Hispanic culture and civilization, essentials of grammar. Not open to students who have completed three years of high school Spanish unless the third course was completed five or more years ago. (Formerly numbered Spanish 101.)

### 100B. Second Spanish Course (4) I, II, S

Four hours of lecture plus laboratory.  
Prerequisite: Spanish 100A or two years of high school Spanish. Continuation of Spanish 100A. Not open to students who have completed four years of high school Spanish unless the fourth course was completed five or more years ago. (Formerly numbered Spanish 102.)

### 100C. Third Spanish Course (4) I, II, S

Four hours of lecture plus laboratory.  
Prerequisite: Spanish 100B or three years of high school Spanish. Continuation of Spanish 100B. Not open to students who have completed five years of high school Spanish unless the fifth course was completed five or more years ago. (Formerly numbered Spanish 201.)

### 202. Intermediate Spanish (4) I, II, S

Prerequisite: Spanish 100C.  
Systematic review and analysis of grammar through study of cultural materials. Emphasis on written and spoken language.

### 203. Intermediate Spanish for US Hispanic Students I (3) I

Prerequisite: Exposure to Spanish in the home, neighborhood, or Spanish-speaking country.  
Introduction to written Spanish: orthography, spelling, basic sentence construction, vocabulary enrichment. Not open to students with credit in Spanish 100A, 100B, 100C, 202.

### 204. Intermediate Spanish for US Hispanic Students II (3) II

Prerequisite: Spanish 203 or approved diagnostic placement test.  
Introduction to written Spanish: review of orthography, spelling, basic sentence construction, vocabulary enrichment, complex and compound sentence construction, basic principles of writing. Not open to students with credit in Spanish 100A, 100B, 100C, 211.

### 211. Intermediate Conversation and Writing (3) I, II, S

Prerequisite: Spanish 202.  
Emphasis on the spoken language with a modicum of writing practice; practical vocabulary and useful phrases; conversation on assigned social, cultural or literary topics at an intermediate level; all class discussion conducted in Spanish. Not open to students with credit in Spanish 211-Y.

### 212. Intermediate Conversation and Writing (3) I, II, S

Prerequisite: Spanish 202.  
Grammar review and analysis. Focus on written language.

### 296. Experimental Topics (1-4)

Selected topics. 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.



**297. Reading Spanish for Graduate Students (3) II Cr/NC**  
Prerequisite: Limited to graduate students.  
Techniques of reading expository and critical material for graduate students who have a foreign language requirement.

**299. Special Study (1-3)**  
Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

#### UPPER DIVISION COURSES (Intended for Undergraduates)

All upper division courses in Spanish are taught in Spanish unless otherwise stated.

**301A. Advanced Reading and Writing (3) I, II, S**  
Prerequisites: Spanish 211, 212; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
Reading and composition on Hispanic cultural themes; review of grammatical structures. (Formerly numbered Spanish 303.)

**301B. Advanced Oral and Written Composition (3)**  
Prerequisites: Spanish 301A; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
Advanced Spanish composition based on literary works; all class discussions conducted in Spanish. Not open to students with credit in Spanish 301Y. (Formerly numbered Spanish 301.)

**302. Advanced Oral and Written Composition (3) I, II, S**  
Prerequisites: Spanish 301B; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
Continuation of Spanish 301A and 301B. Introduction to literary terms. Development of skills to write a research paper. All class discussions conducted in Spanish.

**305A-305B. Survey Course in Spanish Literature (3-3)**  
Prerequisites: Spanish 301A; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
Important movements, authors and works in Spanish literature from the Middle Ages to the present.

**306A-306B. Survey of Spanish American Literature (3-3)**  
Prerequisites: Spanish 301A; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
Reading from representative Spanish American authors during colonial, revolutionary and modern periods.

**307. Introduction to Commercial Spanish (3) I**  
Prerequisite: Spanish 301A.  
Terminology and forms of business correspondence and documents.

**440. Spanish Civilization (3)**  
Prerequisites: Spanish 301A; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
Spanish culture of the past and present, with emphasis on literature, philosophy and the arts. Not open to students with credit in Humanities 350.

**441. Spanish American Civilization (3)**  
Prerequisites: Spanish 301A; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
Spanish American cultures, with emphasis on literature, philosophy and the arts.

**442. Mexican Civilization (3)**  
Prerequisites: Spanish 301A; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.  
The major currents and characteristics of Mexican culture, as expressed through the centuries in literature, philosophy and the arts.

**448. Spanish Linguistics (3) I, II, S**  
Prerequisite: Spanish 302.  
Structural, historical, and applied Spanish linguistics.

**449. Phonetics and Phonemics (3) I, II, S**  
Prerequisites: Spanish 301A, 301B, and 302.  
Sounds of Spanish, and Spanish phonemic systems. Problems involved in teaching of Spanish pronunciation to English-speaking students.

**450. Advanced Grammar (3) I, II, S**  
Prerequisite: Spanish 302.  
Significant systematic features of modern Spanish grammar with analysis of passages from literature. Required for credential applicants.

**491. Introduction to Translation Studies (3) I**  
Prerequisites: Spanish 450 and satisfaction of the University Upper Division Writing requirement.  
Theoretical grounding and practical problems of literary and non-literary translation; linguistic and cultural obstacles; literary, legal, commercial, medical, social services lexicons in context. (Formerly numbered Spanish 304.)

**492. Translation Theory (3)**  
Prerequisite: Spanish 491.  
Historical overview of translation theory. Translation types and conventions. Theoretical considerations of lexical, morphological, verbal, phonic, syntactic, and hermeneutic elements. Cross-language equivalence, fidelity, loss and gain in translation. Criteria for excellence and evaluation. Culture and commerce of translation.

**493. Advanced Spanish-English/English-Spanish Translation (3) I, II**  
Prerequisites: Spanish 450 and 491.  
Practicum involving methods and techniques in translation of legal or government papers, banking documents, and business contracts from Spanish into English and from English into Spanish. Practice in translation of old Spanish into English (deeds, surveys, baptismal records, manuscripts of books).

**494. Court Interpreting in Spanish-English and English-Spanish (3) I, II (Offered at IVC only)**  
Prerequisites: Spanish 450 and 491.  
Practicum in judiciary interpreting. Problem areas include: simultaneous interpreting, consecutive interpreting, summary interpreting, sight translation; mock trials and specialized vocabulary. Visits to local courts. May be repeated with consent of instructor. Maximum credit six units.

**495. Internship in Translation and Interpretation (3) I, II**  
Prerequisites: Spanish 491 and consent of instructor.  
Students selectively assigned to legal firms, medical facilities, commercial establishments or public offices that deal routinely with English and Spanish translation and interpretation. Students work 15 hours weekly under joint supervision of site coordinators and instructor. Maximum credit six units.

**496. Selected Studies in Spanish (3)**  
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 six units.

**497. Advanced Commercial Spanish (3) II**  
Prerequisite: Spanish 301B or 307.  
Terminology and techniques used in commercial transactions including interpretation and writing of business materials.

**499. Special Study (1-3) I, II**  
Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units. This course is intended only for students who are currently enrolled in or who already have credit for all upper division courses in Spanish available in any given semester.

#### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

**510. Modern Spanish Drama (3)**  
Prerequisites: Spanish 305A-305B.  
Spanish theater from the Civil War to the present. Theater of the absurd, theater of social justice, underground theater, and new directions in today's Spanish drama. (Formerly numbered Spanish 510B.)

**515A-515B. Mexican Literature (3-3)**  
Prerequisites: Spanish 306A-306B.  
Aspects of Mexican culture. Semester I: A rapid survey of Mexican literature from the colonial period to the twentieth century. Semester II: The twentieth century, with emphasis on the contemporary Mexican novel and theater.

**520. Caribbean Area Countries Literature (3)**  
Prerequisites: Spanish 306A-306B.  
Literature of Caribbean Islands, Central America, Colombia and Venezuela, from colonial period to present. Special emphasis on contemporary era.

**522. Andean Countries Literature (3)**  
Prerequisites: Spanish 306A-306B.  
Literature of Ecuador, Peru, Bolivia, and Chile from the period immediately preceding the Spanish conquest to the present.

**524. Contemporary Argentine Literature (3)**  
Prerequisites: Spanish 306A-306B.  
Literature of contemporary Argentina. Leading prose writers to include Borges, Cortázar, Malra, Sábato.

**530. Nineteenth Century Spanish Novel and Short Story (3)**  
Prerequisites: Spanish 305A-305B.  
The development of the novel and short story in Spain in the nineteenth century.

**533. Contemporary Spanish Novel (3)**  
Prerequisites: Spanish 305A-305B.  
The development of the novel and short story in Spain since 1936.

**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.

**557. Spanish/Spanish American Dialectology (3)**  
Prerequisites: Spanish 450; one English composition course and one linguistics course.  
Phonological, morphological, syntactic and lexical characteristics of the principal dialects of Spanish.

**561. Methods in Teaching Spanish as a Second Language (3)**  
Prerequisite: Spanish 448 or 450.  
Teaching of Spanish as a second language: contemporary theory and methods. Not open to students with credit or concurrent enrollment in French 561.

**570. Spanish American Poetry (3) I, II, S**  
Prerequisites: Spanish 306A-306B.  
Spanish American poetry of the nineteenth and twentieth centuries.

**571. Spanish American Short Story (3) I, II, S**  
Prerequisites: Spanish 306A-306B.  
Principal Spanish American short story writers.

**572. Spanish American Theater (3) I, II, S**  
Prerequisites: Spanish 306A-306B.  
Principal Spanish American dramatists and movements. Special emphasis on contemporary era.

**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.

#### GRADUATE COURSES Refer to the Graduate Bulletin.



# Special Education

In the College of Education

OFFICE: North Education 70  
TELEPHONE: (619) 594-6665

Accredited by the California Commission on Teacher Credentialing.

## Faculty

Emeritus: McClard, Singer, Trimmer  
Chair: Cegelka  
Professors: Cegelka, Doorlag, Forbing, Kitano, Lewis, Lynch, Patton, Pumpian  
Associate Professors: Brady, Graves  
Assistant Professor: Karge

## Offered by the Department

Master of Arts degree in education.  
Special education specialist credentials.  
Certificate in bilingual (Spanish) special education.  
Certificate in teaching the emotionally disturbed/behaviorally disordered.  
Resource specialist certificate of competence.  
Supported employment and transition specialist certificate.

## Courses

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 397. Problems in Education (Credit to be arranged) I, II Offered only in Extension

Prerequisite: Consent of instructor.  
Class study of specially selected problems in education. Does not apply to pattern requirements for credentials. Credit earned in this course not applicable to a bachelor's degree. (Formerly numbered Education 397.)

#### 470. Special Education Applications (2 or 3) Cr/NC

One lecture and two or four hours of activity.  
Prerequisite: Consent of instructor.  
Procedural applications in educational and/or community programs for students with handicapping conditions.

#### 496. Selected Topics in Special Education (1-4) I, II, S

Prerequisite: Consent of instructor.  
Instructional sequences 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. 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.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor. Open only to senior and graduate students in education who have shown ability to work independently.  
Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

NOTE: 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.

#### 508. Characteristics and Identification of Students Who Are Gifted and Talented (3) I

Prerequisite: Special Education 500.  
Historical and philosophical foundations of education for the gifted, including review of research on characteristics screening and identification procedures.

#### 524. Characteristics and Education of Students with Learning Handicaps (3) I

Prerequisites: Credit or concurrent registration in Special Education 500 and 501.  
Historical and philosophical perspectives of programs related to students with learning handicaps, including review of research on educational programs, curricular approaches, and characteristics.

#### 525. Characteristics and Education of Students with Severe Handicaps (3) I

Prerequisites: Credit or concurrent registration in Special Education 500 and 501.  
Historical and philosophical perspectives of programs related to students with severe handicaps, including review of research on educational programs, curricular approaches and characteristics.

#### 526. Characteristics and Education of Students with Physical Handicaps (3) I

Prerequisites: Credit or concurrent registration in Special Education 500 and 501.  
Historical and philosophical perspectives of programs related to students with physical handicaps, including review of research on students' characteristics, educational programs, and curricular approaches.

#### 527. Ethnolinguistic Diversity and Students with Learning Handicaps (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 Handicaps 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 for Special Education 513A, 513B, or 513C.

#### 560. Applications of Technology for Exceptional Learners (3) I, II, S

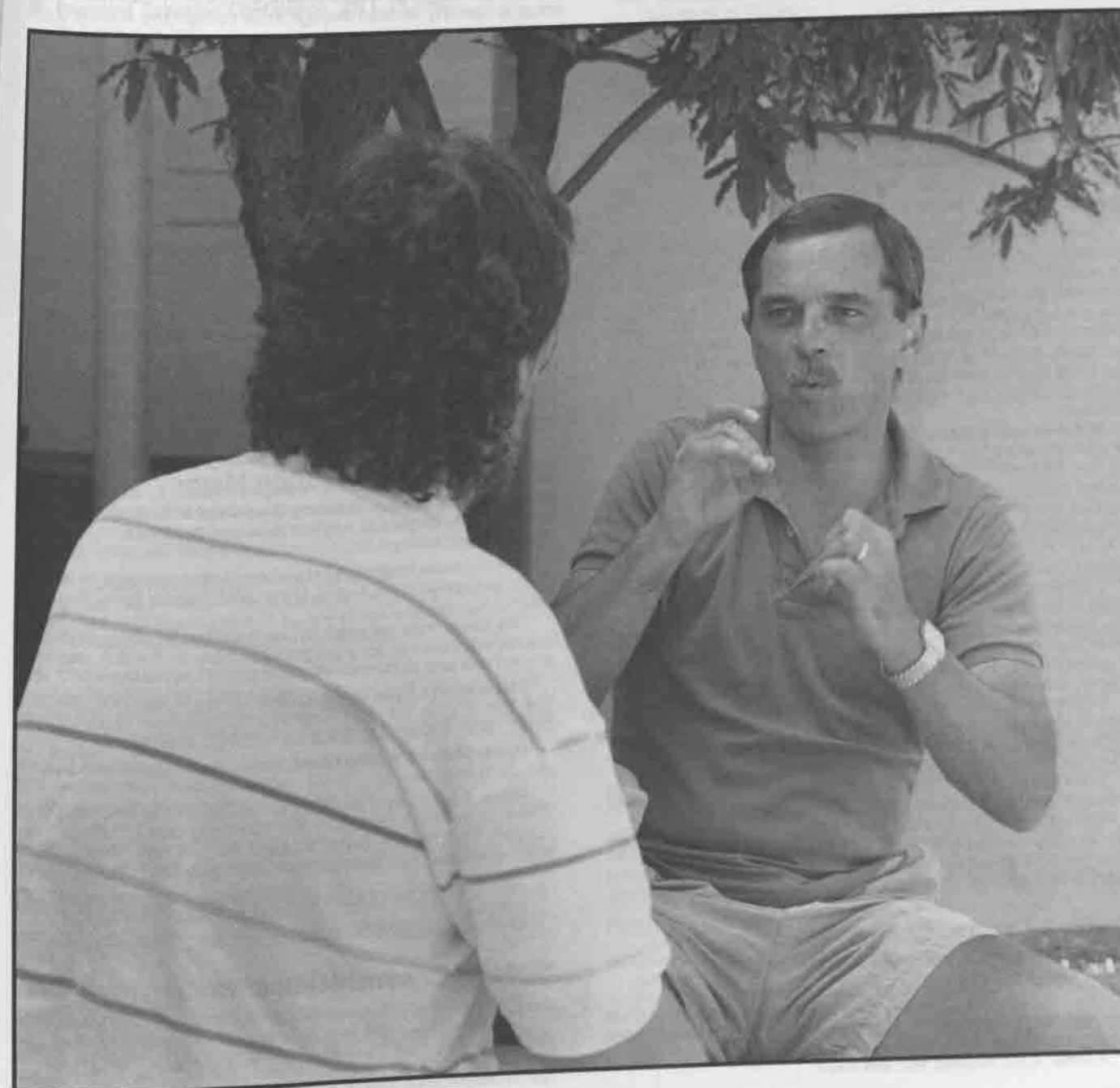
Prerequisite: Special Education 500.  
Educational applications of current technologies for learners who are handicapped and/or gifted. Selection, modification, and

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 Refer to the Graduate Bulletin.





# Speech Communication

In the College of Professional Studies and Fine Arts

OFFICE: Speech and Telecommunications 201  
TELEPHONE: (619) 594-6051

## Faculty

Emeritus: Adams, Benjamin, Mills, Sanders  
Chair: Andersen, J.  
Professors: Andersen, J., Andersen, P., Hellweg, Lustig, Samovar, Spitzberg, Weitzel  
Associate Professors: Beach, Dionisopoulos  
Assistant Professor: Geist

## Offered by the Department

Master of Arts degree in speech communication.  
Major in speech communication with the B.A. degree in applied arts and sciences.  
Teaching major in speech communication for the single subject teaching credential in English/speech.  
Minor in speech communication.

## The Major

Speech communication is the study of all aspects of human communication. The major in speech communication offers a curriculum that recognizes the importance of communication theory and skills in an increasingly complex society. Communication concepts and practices are grounded in traditional and contemporary theories and research methods to ensure the broadest possible education and the most direct utilization of knowledge for both immediate and future goal attainment. Appreciation for, and personal growth in, social and political relationships and ethical standards are also goals of the curriculum.

Recent surveys of business, industry, and other institutions indicate the most important talent required of prospective employees is effective communication skills. Thus, providing career-relevant training is another major theme of the curriculum. Instruction in logical and practical reasoning, interpersonal skills, interviewing, and other skills complement training in public speaking and argumentation.

Majors also may elect a program leading to a high school teaching credential which entitles them to teach speech, English, and literature.

In addition, the major in speech communication is particularly well suited to prepare students for postgraduate education in communication, law, and other areas. An advanced degree in speech communication prepares students to teach and do research in communication at universities or to work in the corporate world as communication experts, trainers, or personnel or human resource specialists.

In addition to classroom experiences, the department sponsors a debate and forensics team that competes nationally; individual students' speaking skills are sharpened through participation in a program that consistently ranks in the top ten nationwide.

Availability of speech communication classes may be limited by existing enrollment demands.

Applications will be accepted only during the months of August for the following spring semester and November for the fall semester. Change of major or declaration of major will be accepted only during specific filing periods. Please contact the department for deadlines.

## Speech Communication Major

With the B.A. Degree in Applied Arts and Sciences  
(Major Code: 15061)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

**Preparation for the Major.** Speech Communication 105, 135, 160, 190, and three units of electives in Speech Communication (except Speech Communication 103). (15 units)

All speech communication majors must satisfy either a foreign language or a mathematics competency requirement.

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Mathematics Competency Requirement.** May be satisfied by three semesters of college mathematics, or a statistical sequence such as Mathematics 250, 350A, 350B (which is highly recommended); or Political Science 201\*, 515A, 515B; or Psychology 270, 570; or Sociology 201\*, 406, 408.

\* Additional prerequisites required.

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 33 upper division units to include Speech Communication 335, 450, 535; at least six units selected from Speech Communication 406, 445, 475, 580, 592; at least six units selected from Speech Communication 302, 307, 361, 407, 415, 485, 491; and twelve units of electives from the 300 level and above. No more than three units from Speech Communication 302, 361; and no more than three units from Speech Communication 485.

## Speech Communication Major

For the Single Subject Teaching Credential in English/Speech  
With the B.A. Degree in Applied Arts and Sciences  
(Major Code: 15061)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under Policy Studies or Teacher Education.

This major may be used by the students in policy studies or teacher education as an undergraduate major for the B.A. degree in applied arts and sciences.

**Preparation for the Major.** Speech Communication 105, 135, 160, 204, 291; English 100, 200; nine units selected from English 250A\*, 250B\*, 260\*, 260B\*; Linguistics 101\* (24-33 units)

**Upper Division Writing Requirement.** English 500W with a grade of C (2.0) or better.

**Major.** A minimum of 36-45 upper division units to include Speech Communication 307, 308, 360, 491, 530; three units of 309; six units selected from Speech Communication 301, 302, 361; English 527\*, 528\*; and three units selected from Linguistics 520+, 524+, or 550.

\* Only nine units from English 250A, 250B, 260A, 260B, 527, or 528 are required.

+ Only three units from Linguistics 101, 520, 524, or 550 are required.

## Speech Communication Minor

The minor in speech communication consists of a minimum of 24 units to include 12 units selected from Speech Communication 135, 160, 204, 291; and 12 units of electives most appropriate to the student's major selected in consultation with the speech communication undergraduate adviser from one of the following areas:

**Communication History:** Speech Communication 450, 451, 580, and 589.

**Communication Forms:** Speech Communication 302, 307, 308, 309, 360, 361, 485, and 491.

**Communication Relationships:** Speech Communication 406, 415, 475, 530, 535 and 592.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

#### 90. Improving Speaking Confidence (1) I, II Cr/NC

Two hours of activity.  
Prerequisite: Must be taken prior to or concurrent with Speech Communication 103.

Anxiety reduction and skill enhancement for students experiencing anxiety in oral communication situations. Not applicable to a bachelor's degree or general education. (Formerly numbered Speech Communication 102.)

#### 103. Oral Communication (3) I, II (CAN SPCH 4)

Training in fundamental processes of oral expression; method of obtaining and organizing material; outlining; principles of attention and delivery; practice in construction and delivery of various forms of speeches. Not open to students with credit in Africana Studies 140, or Mexican American Studies 111A.

#### 105. Introduction to the Discipline of Speech Communication (3) I, II

Speech communication as an academic and professional discipline, its associations and journals, history and traditions, relationships to other disciplines, research methodologies, and careers for graduates. Intended for students who are either considering or who are committed to a speech communication major or minor. This class should be completed as early as possible.

#### 135. Principles of Communication (3) I, II

Identification, description, and study of fundamental communication principles such as language, nonverbal codes, perception and empathy. Emphasis on the interpersonal communication context.

#### 160. Argumentation (3) I, II (CAN SPCH 6)

Argument as a form of discourse; organizing, supporting, presenting and refuting arguments in a variety of formats; evaluating argument, including common fallacies in reasoning.

#### 190. Communication Research Methods (3) II

Ways of identifying communication topics for research, formulating topics into appropriate research questions, and generating procedures to study them. Information sources available in speech communication.

#### 204. Advanced Public Speaking (3)

Prerequisite: Speech Communication 103.  
Practice in extemporaneous speaking on subjects of current interest, both national and local, with stress on organization and delivery. Not open to students with credit in Mexican American Studies 111A.

#### 245. Interpersonal Communication (3)

Theory and application of effective interpersonal communication. Emphasis on fundamental principles and interpersonal skill development.

#### 261. Intercollegiate Forensics (1) Cr/NC I, II

Two field trips required.  
Three hours of activity and two coaching hours to be assigned. Credit for participation in intercollegiate program. Maximum credit four units for Speech Communication 261 and 361. (Formerly numbered Speech Communication 161.)

#### 291. Group Discussion (3)

Role of group discussion in a democratic society. Principles and methods of group discussion in problem-solving and learning situations. Practice in dealing with questions of policy and controversial issues. Development of skills in discussion preparation, participation and leadership. (Formerly numbered Speech Communication 191.)

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 301. Management of Speech Activities (1) I, II Cr/NC

Two hours of activity.  
Prerequisite: Speech Communication 103.  
Planning, preparation, management and supervision of speech tournaments and other interscholastic activities under the supervision of the speech communication staff. Maximum credit two units.

#### 302. Contemporary Forensics Problems (2) Cr/NC

Prerequisites: Speech Communication 103 and 160.  
Identification of significant arguments in political, economic, and social problems confronting twentieth century United States. Use of case studies to emphasize research tools leading to comprehensive analysis. Oral performance stressed. See Class Schedule for specific content. Maximum credit eight units. (Formerly numbered Speech Communication 400.)

#### 307. Communication in Professional Settings (3)

Prerequisites: Speech Communication 103 and one of the following: Speech Communication 204, 245, 261, 291.  
Communication principles in professional contexts including interviewing and technical and nontechnical oral presentations. Skill in meeting management. (Formerly numbered Speech Communication 392.)

#### 308. Oral Interpretation (3)

Prerequisite: Speech Communication 103.  
Analysis of literary compositions as guides to oral interpretation. Practice through presentation of readings, group speaking, and readers' theatre. (Formerly numbered Speech Communication 508.)

#### 309. Workshop in Speech (1-3) Cr/NC

Prerequisites: Speech Communication 103, 105, 204, and 307 or 361; and consent of instructor.  
Study of some problems in speech communication. Maximum credit six units.

#### 335. Human Message Systems (3) II

Prerequisite: Speech Communication 103.  
Addresses communication messages holistically. Structure, development and function of linguistic and nonlinguistic message systems explored stressing their interdependent and independent effects on communication processes.

#### 360. Argumentation Theory (3)

Prerequisites: Speech Communication 103 and 160.  
The approaches to argument and the patterns and problems in argument. Consideration of implications for society. Written and oral reports. (Formerly numbered Speech Communication 362.)

#### 361. Intercollegiate Forensics (1) I, II Cr/NC

Two field trips required.  
Prerequisite: Speech Communication 103.  
Three hours of activity and two coaching hours to be assigned. Credit for participation in intercollegiate program. Maximum credit four units for Speech Communication 261 and 361.



**406. Organizational Communication (3)**

Prerequisites: Speech Communication 105, 135, 160, 190. **Proof of completion of prerequisites required:** Signed department verification card.

The organization as a communication system; role of the organization in persuasive campaigns; communication strategies and problems within the organizational structure.

**407. Communicative Perspectives on Interviewing (3)**

Prerequisites: Speech Communication 105, 135, 160, 190. **Proof of completion of prerequisites required:** Signed department verification card.

Application of communicative theory to interviewing situations. Emphasis on perception; source, message, and receiver variables; defensive communication; feedback. Phrasing of questions, ways to enhance respondent participation, and formulation of behavioral objectives. Classroom simulation, supplemented by out-of-class interviews.

**415. Nonverbal Communication (3)**

Prerequisites: Speech Communication 105, 135, 160, 190, 335. **Proof of completion of prerequisites required:** Signed department verification card.

Theory and research on nonverbal aspects of speech communication, with emphasis on codes and functions. (Formerly numbered Speech Communication 315.)

**445. Relational Communication (3)**

Prerequisites: Speech Communication 105, 135, 160, 190. Recommended: Speech Communication 245. **Proof of completion of prerequisites required:** Signed department verification card.

Theory and application of effective relational communication principles in both intimate and nonintimate contexts. Theoretical and empirical evidence on communication strategies and behaviors in relationship initiation, development, and termination. Relationship of communication behaviors to relational goals. (Formerly numbered Speech Communication 345.)

**450. Rhetorical Theory (3)**

Prerequisites: Speech Communication 105, 135, 160, 190. **Proof of completion of prerequisites required:** Signed department verification card.

Development of rhetorical theory as a mechanism for generating and understanding public discourse. Theories from ancient Greece to the present. (Formerly numbered Speech Communication 350.)

**451. Rhetorical Criticism (3)**

Prerequisites: Speech Communication 105, 135, 160, 190. **Proof of completion of prerequisites required:** Signed department verification card.

Systems and approaches to description, analysis, interpretation, and evaluation of rhetorical communication. (Formerly numbered Speech Communication 354.)

**475. Intercultural Communication (3) I, II**

Prerequisites: Speech Communication 103; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors. Open to majors and nonmajors.

Study of communication with emphasis on the influence of cultural background, perception, social organization, language and nonverbal messages in the cross-cultural communication experience.

**485. Internship in Speech Communication (1-3) I, II**

Prerequisites: Speech Communication 105, 135, 160, 190; twelve units selected from Speech Communication 307, 335, 360, 406, 407, 415, 445, 475, 535, 580, 592; a 2.75 overall GPA and a 2.75 GPA in the major; and approval of the director of internships. **Proof of completion of prerequisites required:** Signed department verification card.

Prearranged and supervised fieldwork or activity extension of academic coursework in speech communication. Maximum credit six units, no more than three of which may be taken in any one semester.

**491. Group Communication (3)**

Prerequisites: Speech Communication 105, 135, 160, 190. **Proof of completion of prerequisites required:** Signed department verification card.

The theoretical processes of small group communication. Emphasis on the theory of group formation, interaction, procedures, and leadership. (Formerly numbered Speech Communication 391.)

**496. Selected Topics in Speech Communication (1-4) I, II**

Prerequisite: Twelve units in speech communication.  
A specialized study of selected topics from the areas of speech communication. 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 six units.

**499. Special Study (1-3) I, II**

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

**UPPER DIVISION COURSES**  
(Also Acceptable for Advanced Degrees)

**503. Instructional Communication (3)**

Prerequisites: Speech Communication 105, 135, 160, 190. **Proof of completion of prerequisites required:** Signed department verification card.

Communication messages and strategies as they apply to instructional contexts. Communication within traditional instructional contexts and focus on training programs, adult workshops, and other less traditional information dissemination situations.

**530. Language Analysis (3)**

Prerequisites: Speech Communication 105, 135, 160, 190, 335. **Proof of completion of prerequisites required:** Signed department verification card.

Examines language from a variety of perspectives, including conversation analysis, psycholinguistics, sociolinguistics, and ethnomethodology. Focuses on language development, semantics, verbal competence, and everyday language as an interactional achievement.

**535. Theories of Human Communication (3) I**

Prerequisites: Speech Communication 105, 135, 160, 190. **Proof of completion of prerequisites required:** Signed department verification card.

Theoretical approaches for the study of human communications; relationship of meaning, message, and behavior in the communication process; special issues in communication theory.

**580. Communication and Politics (3)**

Prerequisites: Speech Communication 105, 135, 160, 190. **Proof of completion of prerequisites required:** Signed department verification card.

Contemporary political communication events and processes, with a focus on speeches, debates, and campaigns.

**584. Communication in Law and Medicine (3)**

Prerequisites: Speech Communication 105, 135, 160, 190. **Proof of completion of prerequisites required:** Signed department verification card.

Courtroom interrogation and testimony and medical diagnostic interactions studied as unique types of everyday conversation. Communication practices and constraints in institutional contexts.

**589. Ethical Issues in Communication (3)**

Prerequisites: Speech Communication 105, 135, 160, 190. **Proof of completion of prerequisites required:** Signed department verification card.

Classical and modern ethical concepts and issues in communication.

**590. Quantitative Methods in Communication (3) I**

Prerequisites: Speech Communication 105, 135, 160, 190. **Proof of completion of prerequisites required:** Signed department verification card.

Philosophy of social science, research design, and statistical applications to communication problems. (Formerly numbered Speech Communication 537.)

**592. Persuasion (3) I, II**

Prerequisite: Speech 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 speech communication.

**593. Qualitative Methods in Communication Research (3)**

Prerequisites: Speech Communication 105, 135, 160, 190. **Proof of completion of prerequisites required:** Signed department verification card.

Observation of interaction and analysis of data gathered in everyday communication settings. Historical and contemporary assumptions, methods, and theoretical implications of employing recordings, transcriptions, interviews, and texts as tools for the discovery of communication patterns.

**596. Selected Topics in Speech Communication (1-3)**

Prerequisite: Senior standing or above.  
Specialized study. 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**  
Refer to the Graduate Bulletin.





# Teacher Education

In the College of Education

A Member of the American Association of Colleges for Teacher Education. Accredited by the California Commission on Teacher Credentialing and the National Council for Accreditation of Teacher Education.

## Faculty

Emeritus: Ackerly, Altamura, Anderson, Baker, Birch, Blanc, Botkin, Bradley, Briggs, Burnside, Campbell, Charles, Clark, Crum, Elliott, Erickson, Fisher, Friedrich, Fulkerson, Gast, Gates, Gega, Gjerde, Goodson, Gray, Groff, Hill, Huls, Inskip, Klann, LaPray, LuPone, McCoy, Meek, Morris, Person, Platz, Prouty, Reel, Riggs, Rixman, Rodney, Schrupp, Smith, H., Stautland, Stough, Strand, Tossas, Wilding, Yarrowborough, Yesselman

Director: Mehaffy

Professors: Becklund, Bee, Berg, Cornejo, Curry, Duckworth, Fearn, Flood, Kendall, Lapp, McCabe, McCormack, Mehaffy, Moreno, Murphy, Nagel, Pehrson, Retson, Ross, R., Rowland, Shaw, Smith, R., Steckbauer, Strom, Treadway

Associate Professors: Bezuk, Ford, Kaatz, Lujan, Mason, Mathison, Pang, Park, Ross, P., Santa Cruz

Assistant Professors: Armstrong, Barba, Colvin, Evans, Farnan, Nieto, Philipp, Tran

## Offered by the School

Master of Arts degree in education.  
Multiple subject credential.  
Reading/language arts specialist credential.  
Single subject teaching credential.  
Certificate in children's literature.

## The Credentials

The demand for elementary and secondary teachers is dramatically increasing. Current growth in student enrollment and the need to replace teachers who retire combine to forecast a significant increase in new teacher hiring during the next decade. Students in California's public schools reflect a wide variety of ethnic, linguistic, and cultural backgrounds. The School of Teacher Education is committed to preparing teachers to ensure the academic success of all students. Candidates from underrepresented groups are strongly encouraged to apply.

**The Multiple Subject Credential** qualifies graduates to teach in any K-12 self-contained classroom (a classroom where one teacher is responsible for teaching in all subject fields). For most, this means an elementary or middle school setting but does not preclude an alternative school or school-within-a-school (e.g., pregnant teen) setting. The credential programs include a study of educational psychology plus a variety of methods courses in subjects commonly taught in elementary schools.

A full-time, two-semester program is available to those wishing to prepare as rapidly as possible. The three-semester, part-time program accommodates those students who may have employment or family responsibilities as well as those who may wish to resume university study more leisurely. Both programs require a daytime commitment. Examinations and/or coursework prerequisite to program admission, if not completed within the undergraduate degree program, may extend the total time commitment for credential issuance by one semester.

CENTER FOR CAREERS IN EDUCATION: Education 100  
TELEPHONE: (619) 594-5964

**The Single Subject Credential** qualifies graduates to teach in grades K-12 in a specific subject area. Most candidates prepare to teach in grades 7-12 (usually junior or senior high school) or in a middle school setting (usually grade 6-8). Students in the program follow a sequence of courses which normally takes two semesters to complete. The first semester of the program emphasizes curriculum theory and development, educational research, and foundations of education and includes a part-time student teaching experience. The second semester focuses on a full-time student teaching experience and accompanying seminar. The program requires a daytime commitment. Examinations and/or coursework prerequisite to program admission, if not completed within the undergraduate degree program, may extend the total time commitment for credential issuance by one or more semesters.

## 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 General Knowledge Test of the Core Battery (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 the section of this catalog on "Graduation Requirements," IV. American Institutions Requirement, B.2. United States Constitution.)
6. Knowledge of health education in California, including substance abuse and nutrition: HS 101, 320 (preferred), or 321 and, as of 9/1/92, 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 1993 academic terms are available from Aztec Shops Copy Center during the following open enrollment dates:

For Spring 1993 — August 25 through October 9, 1992

For Fall 1993 — January 25 through March 12, 1993

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, LE-406. Candidates are urged to take this examination as early as possible. Candidates are required to submit both an official CBEST transcript and 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 General Knowledge Test of the National Teacher Examination (NTE) Core Battery. 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 NTE are available through the Test Office, LE-406.
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."** 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. **Physical Educ. 241, "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/or 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."

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.



## 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:** Comparative Literature, Drama, English, Journalism, Linguistics, Speech Communication  
**Foreign Languages:** Classics (Latin), French, German, Russian, Spanish  
**Health Science:** Health Science  
**History:** History  
**Industrial and Technology Education:** Industrial Technology  
**Life Sciences:** Biology  
**Mathematics:** Mathematics  
**Music:** Music  
**Physical Education:** Physical Education  
**Physical Sciences:** Chemistry, Physical Science  
**Social Science:** Social Science

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 453, 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 NTE. 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, B.2. United States Constitution.)
6. Knowledge of health education in California, including substance abuse and nutrition, HS 320 or 321 (preferred), and as of 9/1/92, 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 or SPED 501.
8. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): EDETC 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 Clear 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 Single 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 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 1993 academic terms are available from Aztec Shops Copy Center during the following open enrollment dates:

For Spring 1993 — August 25 through October 9, 1992  
 For Fall 1993 — January 25 through March 12, 1993

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, LE-406. Candidates are urged to take this examination as early as possible. Candidates are required to submit both an official CBEST transcript and 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 an NTE Specialty Area Examination (including CAPA where necessary), 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 this catalog. 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 NTE are available through the Test Office, LE-406.
- Candidates for major assessment should seek information on recommendation forms and procedures through the Center for Careers in Education, ED-100, prior to contacting the individual academic advisers for review and evaluation. Procedures may vary according to discipline. 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.

### 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.

### Description of Interdepartmental Major for Elementary Teaching

#### Liberal Studies Major With the B.A. Degree in Liberal Arts and Sciences

**Emphasis in Three Departments (Major Code: 49011):** This program is available to all students but is not acceptable for the Multiple Subject credential. Information regarding this option is presented in the section of this catalog on "Liberal Studies."

**Emphasis in Education (Major Code: 49012):** Liberal Studies with the B.A. degree in Liberal Arts and Sciences.

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

The Emphasis in Education major meets all the requirements for the multiple subject/diversified major as specified for the Multiple Subject credential.

Refer to the section of the catalog on "Liberal Studies" for an outline of the requirements for this major.

The following coursework is required for acceptance into the education program and may be included in the Liberal Studies major unless otherwise noted:

Education 451	Music 102
Mathematics 210	Physical Education 241A, 241B

Other students who wish to take this major must consult the Dean of the Division of Undergraduate Studies to secure program approval.

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 Single 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. Teacher Education 453, "The Secondary School."

This introductory course serves as an orientation to careers in secondary education. During this course, students will participate in supervised fieldwork assignments. A recommendation from a TE 453 professor is a requirement for program admission.

4. **Grade Point Average.** Candidates must have cumulative grade point averages (GPAs) within the upper one-half of undergraduate students in the candidate's 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. **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.

### 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.



General advising for the Emphasis in Education major is available at the University Advising Center.

### Children's Literature Certificate

This certificate attests that the student has successfully completed 18 units (minimum GPA 3.0) of planned, advised, coherent, and articulated study in the field of literature for children. Prerequisites include admission to the University and to upper division or graduate standing. The Certificate in Children's Literature may be earned with a specialization either in Education or in English and Comparative Literature. Nine units in the certificate program may be counted toward the major in English, and six units may be counted toward the minor in English.

**Specialization in Education.** Nine units from courses in group A, six units from group B, and three units of an appropriate elective chosen with the approval of a faculty adviser.

**Specialization in English and Comparative Literature.** Nine units from courses in group B, six units from group A, and three units of an appropriate elective chosen with the approval of a faculty adviser.

**Group A, Education:** Educational Technology 596; Teacher Education 496\*, 530, 531.

**Group B, English and Comparative Literature:** Comparative Literature 561 (when offered as European Children's Literature); English 496\*, 501, 526\*, 527\*, 528\*, 549\*.

\* With adviser's permission when the subject is closely related to children's literature.

### Courses

Note to all Multiple Subject and Single Subject credential candidates: All credential courses are listed and described in the **Graduate Bulletin** under the 900-series courses.

#### General

#### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 303. The Teaching Profession: First Clinical Experience (4) (Offered at IVC only)

Three lectures and three hours of laboratory. Social science concepts and theories for the teaching profession; guided student observation and participation in public school classrooms.

#### 396W. Advanced Writing Skills in Education (3)

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; grade report or copy of transcript.

Writing to improve communication in educational and related subjects, including reports, proposals, and articles.

#### 397. Problems in Education (Credit to be arranged) I, II Offered only in Extension.

Prerequisite: Consent of instructor.

Class study of specially selected problems in education. Does not apply to pattern requirements for credentials. Credit earned in this course not applicable to a bachelor's degree. (Formerly numbered Education 397.)

#### 400. Techniques for Substitutes (3) I, II

One lecture and four hours of activity.

Prerequisite: Admission to a credential program or a teaching credential.

Preparation for persons entering the field of substituting. Skills in adapting to the temporary status of substitute teaching, compilation of substitute teaching materials, and workshops to create materials.

#### 402. Foundations of Education (3) I, II (Offered at IVC only)

Combines disciplines of anthropology, economics, history, philosophy, political science, psychology, and sociology to introduce student to concepts and generalizations informing the teaching and learning process in modern classrooms.

#### 415. Methods and Materials of Instruction (3) I, II (Offered at IVC only)

Prerequisites: Admission to single subject teaching credential program and student teaching. To be taken concurrently with Teacher Education 963 or 964.

Teaching concerns, instructional planning and materials, classroom management, measurement and evaluation, effective discipline, curriculum, computer literacy, special problems encountered in teaching, career planning, school-community communication processes.

#### 434. Teaching of Reading (3) I, II (Offered at IVC only)

Two lectures and two hours of laboratory.

Nature of reading as a human behavior; various approaches and materials used to facilitate student growth in learning to read.

#### 453. The Secondary School (3) I, II

To screen, advise, and initiate admission requirements. Includes fieldwork assignment, demonstration of oral and writing competencies, and initial teacher professional competencies.

#### 456. Law and Teaching (1)

Prerequisite: Admission to teacher education or a valid teaching credential.

Impact of statutory and case law on teaching.

#### 496. Experimental Topics (1-4)

Selected topics. 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.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor. Open only to senior and graduate students in education who have shown ability to work independently.

Individual study. Maximum credit six units.

#### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 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.

#### 512. Arts and Crafts for Teachers: A Multicultural Approach (3)

One lecture and four hours of activity.

Prerequisite: Twelve units in education.

Art histories and craft traditions from world cultures. Creation of instructional materials from different cultural sources.

#### 522. Substance Abuse in the Schools (3)

Prerequisite: Health Science 574.

Development of school policy and school plan to include substance abuse prevention, identification, intervention, referral, and aftercare. Collaboration with parents, schools, agencies, and local communities.

#### 525. Discipline and Classroom Management (3) I, II

Prerequisite: Six upper division units in education, psychology or sociology.

Analysis of research and theories of classroom discipline, management, and teaching effectiveness, with practical application to the elementary and secondary classroom setting.

#### 526. Teaching the Special Child in the Regular Classroom (2)

Prerequisite: Teaching credential or admission to multiple subject credential program.

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.

#### 531. Storytelling (3)

Art of storytelling, including planning of the story hour, locating suitable materials, techniques for learning and presenting various story types. Selection of literature appropriate for oral presentation to different groups and age levels.

#### 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) I, II SP\*

Designed to meet the needs of individuals or groups of teachers who wish to develop or continue the study of some problem. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 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**  
Refer to the Graduate Bulletin.





# Telecommunications and Film

In the College of Professional Studies and Fine Arts

OFFICE: Professional Studies and Fine Arts 222  
TELEPHONE: (619) 594-6575

## Faculty

Emeritus: Jones, Lee, Madsen  
Chair: Witherspoon  
The Van Deerlin Chair in Communication: Eger  
Filmmaker in Residence: Ofield  
Professors: Anderson, Heighton, Jameson, Johnson, Real,  
Witherspoon, Wylie  
Associate Professors: Blue, Durbin, Meador

## Offered by the Department

Master of Arts degree in telecommunications.  
Major in telecommunications, with the B.A. degree in liberal arts and sciences.  
Major in television-film production, with the B.S. degree in applied arts and sciences.  
Major in drama, with emphasis in design for television.  
See Drama.  
Minor in radio-television.

## The Van Deerlin Chair in Communication

More than 40 major communications companies contributed to establish The Van Deerlin Chair in Communication. The Chair serves as the center for the study of public policy issues affecting the communications/information field, the area in which Lionel Van Deerlin was vitally concerned during his 18 years in Congress. The current holder of the Chair is John M. Eger, president of Worldwide Media Group, Inc., and former senior vice president of the CBS Broadcast Group.

## The Major

As a result of the rapid development of new communications technology and applications, there is an increasing demand for effective communicators and management personnel in the fields of telecommunications and film. The goals of the radio-television major are to provide students with operational skills and experience in the various phases of radio, television and film, production, and management.

To fulfill these needs, the curriculum provides a professionally oriented, academically sound education in the art, management, and science of communication through the media of telecommunications and film.

To name but a few, career opportunities for radio-television majors include positions in public relations and advertising; in television, with positions in management, sales, programming, writing, producing and directing; and art direction; in radio, with positions in management, sales, programming, writing, and producing and directing; in film, with positions in cinematography, directing, editing, producing, art direction, writing, studio management and production management; and in new technologies, including computer conferencing, data networks, teletext, and satellites.

## Telecommunications Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 06031)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in telecommunications and film courses can apply to the degree.

The B.A. degree is designed for students interested in developing a more liberal education as they develop professional and conceptual competencies in electronic and film media. The B.A. degree permits flexible programs of courses in and out of the department within two areas of specialization: *Telecommunications and Film* which can prepare students in broad areas such as electronic media advertising, news, media communication theory and criticism, instructional uses of media, art direction; and *Management* of television, cable, radio, telecommunications facilities, and telecommunications systems theory and design.

A minor is required with this major.

**Preparation for the Major.** Telecommunications and Film 100, 110, 160, and six units from Telecommunications and Film 121, 122, or 123. (15 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to the section of the catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 305W with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units in telecommunications and film which fulfill the requirements in one of the following specializations:

### Specialization in Telecommunications and Film

Telecommunications and Film 320, 330, and 18 units selected with the approval of the department.

### Specialization in Management

Telecommunications and Film 375, 500 or 501, 505, and 590, and 12 units from Telecommunications and Film 310, 330, 400, 440, 497, 500, 501, 530, 535, 540, and 575.

## Television-Film Production Major

With the B.S. Degree in Applied Arts and Sciences  
(Major Code: 06031)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

The B.S. degree is designed to prepare students for professions in television and film production or for occupations where extensive knowledge of designing messages to be presented by these media are required. Training is specifically directed toward assisting students in their effort to seek professional work in various fields of television and film production as writers, producers, directors, and art directors.

A minor is not required with this major.

**Preparation for the Major.** Telecommunications and Film 100, 110, 121, 122, 123, 160, 250, 260, and 280. (27 units)

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 305W with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units in telecommunications and film to include Telecommunications and Film 320, 330, 401, 410,

550 or 551; nine units selected from Telecommunications and Film 522, 550, 551, 560, and 580; six units in an allied professional sequence; and six units of electives.

### Allied Professional Sequences\*

**Advertising:** Journalism 460, 463, 465, 466, 480; Marketing 370, 371, 372, 373, 376, 470, 472; Psychology 322, 342; Telecommunications and Film 400, 440, 540.

**Communication:** Political Science 426; Psychology 321, 326, 340; Sociology 410, 430, 537; Speech Communication 307, 360, 406, 407, 445, 451, 475, 491, 535, 580, 589, 592.

**Criticism:** Linguistics 551; Music 351; Philosophy 523, 531, 541, 542; Speech Communication 530; Telecommunications and Film 320.

**Education:** Educational Technology 540, 541, 544.

**Electronics:** Industrial Technology 361, 462, 464, 563.

**Graphic Arts and Photography:** Industrial Technology 320, 341, 381, 443, 444, 482, 523, 542; Journalism 451.

**Information Systems:** Information and Decision Systems 480, 482.

**International Media:** English 548; Geography 312; Management 466; Political Science 375, 481, 482; Speech Communication 475; Telecommunications and Film 363, 590.

**Law and Government:** Journalism 502; Political Science 335, 346, 347A, 347B; Telecommunications and Film 505.

**Management:** Management 350, 352, 356, 453, 454; Telecommunications and Film 401, 500.

**Mass Communication:** Journalism 408, 500, 503, 509; Political Science 310, 426; Psychology 322, 342; Sociology 335, 406, 410, 430, 450, 456, 459; Telecommunications and Film 400, 562, 575.

**News:** Journalism 310, 320, 425, 474, 475, 502, 529; Telecommunications and Film 310, 505.

**Performance:** Drama 431, 445, 532; Speech Communication 307, 308, 592; Telecommunications and Film 390.

**Playwriting:** Drama 325; English 577, 578, 579 (Screenplay only), 581W, 587; Telecommunications and Film 410.

**Production Design and Management:** Drama 440, 447, 448A, 448B, 540; Industrial Technology 320, 422; Psychology 320, 321; Telecommunications and Film 550, 551.

**Research Methods:** Telecommunications and Film 400; Information and Decision Systems 301, 366; Journalism 509; Psychology 322, 342, 470; Sociology 406, 407.

\* Additional prerequisites required for courses in these sequences.

## Radio-Television Minor

The minor in radio-television consists of a minimum of 15-18 units, 12 units of which must be in upper division. The minor is a focused pattern of courses selected with the approval of the departmental adviser for minors. Requirements for admission to the minor are sophomore standing (30 or more units completed) with a minimum grade point average of 3.0 overall and a grade of B or better in either Telecommunications and Film 100 or 160.

Radio-television minors may select one of the following areas:

**Film as Art and Communication:** Telecommunications and Film 160, 363, 364, 562, and three units of electives.

**Public Telecommunications:** Telecommunications and Film 100, 505\*, 575, 590.

**Telecommunications Management:** Telecommunications and Film 100, 500\*, 505\*, and nine units selected from the following: Telecommunications and Film 400\*, 440, 530\*, 535\*, 540, 575.

Obtaining courses to fulfill this minor is not easy because of the high demand for courses.

\* For students in the minor, Telecommunications and Film 315 may be substituted for Telecommunications and Film 100 as a prerequisite for these courses.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

#### 100. Survey of Telecommunications (3) I, II

Theory and operation of the broadcasting industry to include the history and regulation of broadcasting in the U.S., the social and economic setting of American broadcasting and the organization of commercial and educational radio and television stations.

#### 110. Telecommunications and Film Writing (3) I, II

Prerequisites: Satisfaction of the English Placement Test and Writing Competency requirements. Ability to type. **Proof of completion of prerequisites required:** Copy of EPT or competency scores or verification of exemption; proof of Cr in Academic Skills 97A or 97B, or notification from Academic Skills. Limited to telecommunications and film majors.

Theory and practice in writing for electronic and film media. Audience analysis, problems of timing, aural style, scripting techniques.

#### 121. Audio Production (3) I, II

Two lectures and three hours of activity.

Prerequisite: Limited to telecommunications and film majors. Theory of audio production, use of basic audio equipment, and basic sound production. Practical experience in University sponsored productions.

#### 122. Still and Motion Picture Photography (3) I, II

Two lectures and three hours of activity.

Prerequisite: Limited to telecommunications and film majors. Basic film equipment and its use in preparation of photographic materials for film and TV production. Practical experience in University sponsored productions.

#### 123. Video Production (3) I, II

Two lectures and three hours of activity.

Prerequisite: Limited to telecommunications and film majors. Television control room, studio, and auxiliary equipment and their use in production of programs. Practical experience in University sponsored productions.

#### 160. Cinema as Art and Communication (3) I, II

An appreciative survey of cinema in its diverse forms. Historical and stylistic influences on the aesthetic values and social implications of cinema. Illustrated by screen examples.

#### 250. Staging and Art for Television and Film (3)

Two lectures and three hours of activity.

Prerequisites: Telecommunications and Film 122 or 123; drama majors with design for television emphasis must have approval of the emphasis adviser. **Proof of completion of prerequisite required:** Change of major form or other evidence of acceptable major code in telecommunications and film or approval from design for TV emphasis adviser in drama. Students who cannot prove prerequisite completion will be administratively dropped from class.

Aesthetic considerations and technical practices in staging, lighting, and graphics for television and film. Practical experience in university sponsored productions. (Formerly numbered Telecommunications and Film 120.)

#### 260. Film Techniques (3) I, II

Two lectures and more than three hours of activity.

Prerequisites: Telecommunications and Film 110, 121, 122, with average grade of 2.0 or better. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Principles of film theory and practice in cinematography and editing; use of motion picture equipment. Technique and theory as they apply to the several filmic forms. Preparation of filmed materials.



**280. Television Production and Directing (3) I, II**

Two lectures and more than three hours of activity.  
Prerequisites: Telecommunications and Film 110, 121, 122, 123; with average grade of 2.0 or better. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Theory and practice in the skills and knowledge of television production. Includes basic program types, responsibilities of director, and director's relationships to production staff.

**296. Experimental Topics (1-4)**

Selected topics. 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.

**UPPER DIVISION COURSES**  
(Intended for Undergraduates)

**310. Radio and Television News Writing and Editing (3) I, II**

Prerequisite: Ability to type.  
Gathering, writing and editing news in special forms required by radio and television. Not open to students with credit in Journalism 470.

**320. Film and Video Aesthetics (3) II**

Prerequisite: Telecommunications and Film 160.  
Ways cinematic texts (films and video) work as language systems and complex cultural products. Major film and video theorists analyzed according to their contribution to the field.

**325. Video and Film Production for Non-Majors (3) I, S**

Two lectures and three hours of laboratory.  
Prerequisite: Upper division standing.  
Technical and aesthetic principles and practices applicable to nonfictional and fictional presentations by video and film. Practical experience in basic video and film production and postproduction techniques. Not open to telecommunications and film majors.

**330. Socio-Cultural Aspects of Media (3)**

Prerequisites: Telecommunications and Film 100 and 160.  
Social and cultural dimensions of communication media. Media structures, uses, and effects at national and international levels. Critical and ethical questions in a context of humanities and popular arts. Not open to students with credit in Journalism 408.

**363. International Cinema (3) I**

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Foreign feature films as expression of national cultures. Maximum credit six units of which three units may be applicable to General Education. May be repeated with new content. See Class Schedule for specific content.

**364. Film Classics (3) I, II**

Prerequisite: Upper division standing.  
Viewing and analysis of those American and foreign theatrical films, particularly of the sound era, which represent milestones in the development of the cinema. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**375. Infrastructure of the Information Age (3)**

Prerequisite: Telecommunications and Film 100.  
Technologies and institutions critical to those responsible for communication and information services as an information society.

**390. Broadcast and Film Performance (3) I**

Two lectures and three hours of activity.  
Prerequisite: Drama 110.  
Preparation and delivery of materials before the microphone and camera. Practical experience in University sponsored productions.

**400. Electronic Media Research (3)**

Prerequisite: Telecommunications and Film 100.  
Research in radio and television decision-making processes. Methodologies, analyses and applications of audience, programming, and advertising research.

**401. Business Aspects of Television and Film Production (3) I, II**

Prerequisites: Telecommunications and Film 260 or 280 or 325. Normally taken concurrently with Telecommunications and Film 560 or 580. **Proof of completion of prerequisites required:** Grade report or copy of transcript.

Financing, preproduction planning, and postproduction of television and film.

**410. Script Writing for Television and Film (3)**

Prerequisites: Telecommunications and Film 260 or 280, and satisfaction of the English Placement Test and Writing Competency requirements. **Proof of completion of prerequisites required:** Test scores or verification of exemption; grade report or copy of transcript.

Development of a single program and series ideas. Scripting of dramatic original and adaptation forms, and the documentary. (Formerly numbered Telecommunications and Film 510.)

**440. Electronic Media Commercial Practices (3)**

Prerequisite: Twelve units in telecommunications and film.  
Structure and procedures in broadcast advertising organizations, policies, training, and evaluation of research tools.

**495. Workshop in Telecommunications and Film (1-3)**

Study of some problem in radio, television or film. Maximum credit six units. (Formerly numbered Telecommunications and Film 495A.)

**496. Experimental Topics (1-3)**

Prerequisites: Upper division standing, permission of instructor.  
Selected topics. 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.

**497. Internship in Telecommunications and Film (3) I, II Cr/NC**

Supervised work in area telecommunications and film organizations under combined supervision of professionals and professors. (Formerly numbered Telecommunications and Film 495B.)

**499. Special Study (1-3) I, II**

Prerequisite: Consent of instructor.  
Individual study. Maximum credit six units.

**UPPER DIVISION COURSES**  
(Also Acceptable for Advanced Degrees)

**500. Electronic Media Management (3) I, II**

Prerequisite: Telecommunications and Film 100. **Proof of completion of prerequisite required:** Grade report or copy of transcript.

Revenue generation, marketing, programming, social responsibilities, and current developments in radio, television, cable, and related industries. Planning, organization, actuating, and controlling in electronic media organizations.

**501. Management of Telecommunication Systems. (3) II**

Prerequisite: Telecommunications and Film 375.  
Organization and administration of telecommunication systems, with emphasis on structure, policy environment, and principal institutions affecting non-broadcast telecommunication.

**505. Government and Telecommunications (3) I, II**

Prerequisite: Telecommunications and Film 100.  
Responsibilities of broadcasters as prescribed by law, governmental policies and regulations, and significant court decisions.

**522. Film and Television Cinematography (3) I**

Two lectures and three hours of laboratory.  
Prerequisites: Telecommunications and Film 260, 280, and 320.  
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.

**530. Radio Programming (3) II**

Two lectures and three hours of scheduled activity.  
Prerequisites: Telecommunications and Film 100 and 121.  
Formats, policies, production practices and research in modern programming. Student work is broadcast on KPBS-FM.

**535. Television Programming (3) I**

Prerequisite: Telecommunications and Film 100.  
Structure of television programming. Problems such as ratings, advertisers and scheduling. Social effects and criticism of television programming.

**540. Electronic Media Advertising (3) I, II**

Prerequisites: Two courses in broadcasting, journalism or marketing.  
Theory, procedures, and the role of broadcast advertising, including marketing and media research, campaign planning, media strategy, time purchasing, and evaluation.

**550. Art Direction for Television and Film (3) I, II**

One lecture and four hours of activity.  
Prerequisites: Telecommunications and Film 250, 260 or 280 or 325, and consent of instructor. **Proof of completion of prerequisites required:** Grade report or 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) I, II**

Prerequisites: Telecommunications and Film 250 and credit or concurrent registration in Telecommunications and Film 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 Production (3) I, II**

One lecture and more than six hours of activity.  
Prerequisites: Telecommunications and Film 260, 410, and consent of instructor. **Proof of completion of prerequisites required:** Grade report or copy of transcript.  
Practicum in direction and production of 16mm dramatic and nondramatic films. Cameras, lighting, design, sound techniques. Experience in University sponsored productions. Maximum credit six units. (Formerly numbered Telecommunications and Film 560A-560B.)

**562. Documentary and Propaganda Film/Television (3) I, II**

Prerequisite: Telecommunications and Film 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.

**575. Technological Trends in Telecommunication (3) I**

Prerequisite: Telecommunications and Film 375.  
Developments and trends in telecommunication and related technology, with their implications for the future.

**580. Advanced Television Producing and Directing (3) I, II**

One lecture and more than six hours of activity.  
Prerequisites: Telecommunications and Film 280, 410, and consent of instructor. **Proof of completion of prerequisites required:** Grade report or copy of transcript.  
Program development, presentational techniques and individual projects in the producing, direction and production of television programs. Practical experience in University sponsored productions. Maximum credit six units. (Formerly numbered Telecommunications and Film 580A-580B.)

**590. International Telecommunications (3)**

Prerequisite: Telecommunications and Film 100 or Journalism 200.  
Comparative study of broadcasting in various world areas; economic, social and political determinants of broadcasting patterns.

**596. Selected Topics in Telecommunications and Film (1-3) I, II**

Prerequisite: Twelve units in telecommunications and film.  
Specialized study of selected topics from the areas of telecommunications and film. May be repeated with new content. See Class Schedule for specific content. 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**  
Refer to the Graduate Bulletin.

## Urban Studies

Refer to "Interdisciplinary Programs" in this section of the catalog.



# Women's Studies

In the College of Arts and Letters

OFFICE: Adams Humanities 3138  
TELEPHONE: (619) 594-6524

## Faculty

Chair: Jones  
Professors: Espín, Huckle, Jones, Watson, Zimmerman  
Associate Professors: Cayleff, Kohen

## Offered by Women's Studies

Major in women's studies.  
Minor in women's studies.

## The Major

Women's studies explores who women were, who women are, who they might be, and how their lives and human interactions are affected by society's values, traditions, and institutions. SDSU has offered courses in women's studies since 1969 and has one of the strongest academic programs in the nation. Its origins are in the women's movement, and its vision includes a world free of sexual, racial, age, and class distinctions and other inequalities.

Courses are designed to provide students with a coherent, integrated, and academically rigorous education. Content areas include concepts of self and family, theories of sex differences, history, cultural contributions, and the study of society's institutions. The emphasis is on increasing the awareness of objective conditions in women's lives throughout the world, and on developing critical analytical skills.

A degree in women's studies may be used as preparation for a wide range of careers. Professional opportunities exist in political and social agencies working with women and developing public policy on women's issues such as health care, employment, family violence, and education. Women's studies students prepare for careers in such fields as law, journalism, public administration, social services, personnel, and psychology. The skills that women's studies majors develop in critical thinking and analysis are highly valued in many additional occupations and professions today. A women's studies major may also go on to advanced academic work preparing for a career as a women's studies scholar.

Many women's studies majors plan double majors to enhance their career opportunities.

## Women's Studies Major

With the B.A. Degree in Liberal Arts and Sciences  
(Major Code: 49991)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in women's studies courses can apply to the degree.

Students majoring in women's studies must complete a minor in another field to be approved by the chair or major adviser of the department.

**Preparation for the Major.** Women's Studies 101 or 330, and 201 and 205. (9 units)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive semesters of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

**Upper Division Writing Requirement.** Passing the University Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units to include twelve units from Group I; six units from Group II; and Women's Studies 590 and 595 or 597.

**Group I:** Women's Studies 310, 320, 325, 335, 340, 341A-341B, 351, 352, 356, 360, 370, 375, 390.

**Group II:** (Prerequisite: Three upper division units in women's studies.) Women's Studies 485, 515, 521, 522, 536, 553, 565, 580.

## Women's Studies Minor

The minor in women's studies consists of a minimum of 18 units in women's studies to include:

Six units selected from Women's Studies 101 or 330, 201, 205.

Six to nine units selected from Women's Studies 310, 320, 325, 335, 340, 341A-341B, 351, 352, 356, 360, 370, 375, 390.

Three to six units selected from Women's Studies 485, 515, 521, 522, 536, 553, 565, 580, 590, 595.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

## Courses

### LOWER DIVISION COURSES

#### 100. New Views of Women (1) Cr/NC

Lecture series.

Overview of new research and fresh interpretation about women, feminism and changing relationships between the sexes. Presentations from the perspective of various disciplines.

#### 101. Women: Self and Society (3) I, II

Perspectives on women's personal and public lives. Emphasis on integrating individual experiences with social and cultural contexts.

#### 201. Women and the Social Sciences (3) I, II

Interdisciplinary introduction to women's studies thought and scholarship in the social sciences, to include such areas as gender-based language, personality development and self-concept, social evolution, family structures, and economic life.

#### 205. Women in Western Civilization (3) I, II

Concepts of womanhood in mythic, classic, Judeo-Christian, and major modern philosophical traditions; Images and roles of women found in the humanities; their impact and contemporary relevance.

#### 296. Experimental Topics (1-4)

Selected topics. 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.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 301. Topics in Feminism (1-3)

Feminism from varying disciplinary and cross-disciplinary perspectives to include femininity and feminism; socialism and feminism; future dreams and designs. Primarily for the general student. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

#### 310. Women in Cross-Cultural Perspective (3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors.

Women from an anthropological perspective; social, economic, legal and ideological aspects of women's position in selected preindustrial or transitional compared with industrial societies.

#### 320. Socialization of Women (3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors.

Theories of socialization; summary of studies on the impact of formal and informal social institutions on female development.

#### 325. Psychology of Women (3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors.

Theories of the psychological development of women; investigation of biological and cultural factors influencing personality and behavior.

#### 330. The Women's Movement Today (3)

Intensive study of the contemporary women's movement; feminist views of political, economic and social institutions which affect women's lives. Not open to students with credit in Women's Studies 101.

#### 335. Women-Identified Women (3)

Historical, cultural, and social exploration of lesbianism in Western civilization. Topics include myths and stereotypes, homophobia, history and literature, psychological and political theories, and current conditions.

#### 340. Women in Modern European History (3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Social, cultural, economic, political and ideological aspects of women's history in the modern period. Impact of modernization on roles of women in family and society from the eighteenth to the mid-twentieth centuries in Europe.

#### 341A-341B. Women in American History (3-3) I, II

History of American social, cultural, economic, political, and intellectual institutions, focusing on the role and perspective of women. Semester I: From colonization to 1860; Semester II: From 1860 to the present. Meets the graduation requirement in American Institutions, U.S. Constitution, and California state and local governments.

#### 351. Women in the Arts (3)

Images of women in society as reflected in the plastic, graphic and performing arts; artistic contribution of women. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

#### 352. Women in Literature (3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Literature by and about women; appraisals of women's place in various literary genres; historical and contemporary themes; evolution of forms and techniques.

#### 356. Women in Popular Culture (3)

Images and concepts of womanhood found in popular culture and mass media. Topics include critical theories, popular literature, television, women's magazines, myth and ritual, and the impact of feminism.

among sexual behavior responses and identity.

#### 360. Women's Sexuality (3)

Historical changes in women's perceived sexual natures; role of medical and scientific expertise; research and theory on psychological, social, and cultural aspects of women's sexuality; relationships among social beliefs, expectations, customs and traditions, and

#### 370. Women and the Law (3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors.

Legal factors affecting women in employment, education, health and welfare, property ownership and criminal justice, including investigation of public policy issues which affect women's lives.

#### 375. Sex, Power, and U.S. Politics (3) I, II

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors.

Social, economic and political factors which explain women's political status and participation. Topics include institutional structures, leadership and ideology, power and authority, and the women's movement as a political movement.

#### 390. Women and Education (3)

History of women in education; the educational process and female role socialization; research into personnel policies, law, and curriculum; women and girls as consumers and producers of education; feminist research and pedagogy.

#### 485. Women's Work (3)

Prerequisites: Three upper division units in women's studies; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Conditions and factors affecting women's paid and unpaid work. Marriage, divorce, fertility, and childcare; women's occupations; earnings and education; the economics of sex discrimination; government economic policies and women's welfare.

#### 496. Experimental Topics (1-4)

Selected topics. 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.

#### 498. Field Internship (3) I, II Cr/NC

Prerequisites: Three upper division units in women's studies and consent of instructor.

Observation and analysis of public and private agencies which deal primarily with women in the San Diego area. Maximum credit six units.

#### 499. Special Study (1-3)

Prerequisites: Three upper division units and consent of the department chair and instructor.

Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 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 (Formerly numbered Women's Studies 415.)

#### 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. (Formerly numbered Women's Studies 421.)

#### 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. (Formerly numbered Women's Studies 422.)



**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. (Formerly numbered Women's Studies 453.)

**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. (Formerly numbered Women's Studies 365.)

**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. (Formerly numbered Women's Studies 480.)

**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**

Refer to the Graduate Bulletin.



# Addenda

Faculty and Administration

Index

SDSU Campus Map



# Faculty and Administration 1991-1992

Day, Thomas B. (1978) ..... *President, Professor of Physics*  
B.S., University of Notre Dame; Ph.D., Cornell University.

Abbott, Mitchell T. (1964) ..... *Professor of Chemistry*  
B.Sc., Ph.D., University of California, Los Angeles.

Abbott, Patrick L. (1971) ..... *Professor of Geological Sciences*  
B.S., San Diego State University; M.A., Ph.D., University of Texas at Austin.

Abut, Huseyin (1981) ..... *Professor of Electrical and Computer Engineering*  
B.S.E.E., Robert College; M.S.E.E., Ph.D., North Carolina State University.

Adams, Elsie B. (1971) ..... *Professor of English and Comparative Literature*  
B.S., M.A., Ph.D., University of Oklahoma.

Addo, Theophilus (1987) ..... *Assistant Professor of Information and Decision Systems*  
B.Sc., University of Ghana; M.B.A., Indiana University; M.S.T.M., American University; Ph.D., Indiana University, Bloomington.

Adelman, Edward J. (1992) ..... *Assistant Professor of Aerospace Studies*  
B.S., University of Arizona; M.P.A., Angelo State University.

Aguado, Edward (1982) ..... *Associate Professor of Geography*  
B.A., M.A., University of California, Los Angeles; Ph.D., University of Wisconsin.

Aitken, Stuart C. (1986) ..... *Associate Professor of Geography*  
B.Sc., Glasgow University; M.A., Miami University; Ph.D., University of Western Ontario.

Ajemian, James A. (1970) ..... *Assistant Professor of Social Work*  
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Alcosser, Sandra B. (1986) ..... *Professor of English*  
B.A., Purdue University; M.F.A., University of Montana.

Allen, Barbara E. (1969, except S'70) ..... *Lecturer in Teacher Education*  
A.B., M.A., San Diego State University.

Allen, Brocknrough S. (1982) ..... *Professor of Educational Technology*  
A.B., M.A., University of California, Berkeley; Ph.D., University of Southern California.

Allen, Elizabeth J. (1971) ..... *Professor of Communicative Disorders*  
A.B., Seattle Pacific College; M.A., Ph.D., Louisiana State University.

Allen, Michael F. (1988) ..... *Professor of Biology*  
B.S., Southwestern College, Kansas; M.S., Ph.D., University of Wyoming.

Allison, Alida L. (1990) ..... *Assistant Professor of English and Comparative Literature*  
B.A., M.A., San Diego State University; Ph.D., University of California, Riverside.

Almond, Frank W. (1968) ..... *Professor of Music*  
A.B., M.A., San Diego State University; Ph.D., Florida State University.

Alvarado, Elizabeth R. (1974) ..... *Counselor, Educational Opportunity and Ethnic Affairs*  
A.B., California State University, Northridge; M.S., San Diego State University.

Anantha, Kasi (1981) ..... *Professor of Mathematical Sciences*  
B.A., M.Sc., Ph.D., Madras University.

Andersen, Janis F. (1981) ..... *Professor of Speech Communication*  
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Andersen, Peter A. (1981, except 1983-85) ..... *Professor of Speech Communication*  
B.A., University of Illinois; M.S., Illinois State University; Ph.D., Florida State University.

Anderson, Dwight G. (1969) ..... *Professor of Political Science*  
A.B., University of Montana; M.A., Ph.D., University of California, Berkeley.

Anderson, Hayes L. (1966) ..... *Professor of Telecommunications and Film*  
A.B., Oregon State University; M.A., Ph.D., Michigan State University.

Andrain, Charles F. (1964) ..... *Professor of Political Science*  
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Angione, Ronald J. (1969) ..... *Professor of Astronomy*  
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Aninger, Thomas (1967) ..... *Assistant Professor of English*  
A.B., M.A., Ph.D., University of California, Los Angeles.

Annas, Alicia M. (1970) ..... *Professor of Drama*  
A.B., University of Detroit; M.F.A., University of Texas.

Archibald, J. David (1983) ..... *Professor of Biology*  
B.S., Kent State University; Ph.D., University of California, Berkeley.

Armstrong, Barbara (1988) ..... *Assistant Professor of Teacher Education*  
B.S., Illinois State University; M.Ed., Ph.D., University of Arizona.

Atchason, Gregory L. (1991) ..... *Assistant Professor of Naval Science*  
B.A., Illinois State University.

Atchison, Thomas J. (1965) ..... *Professor of Management*  
A.B., Stanford University; M.B.A., University of California, Los Angeles; Ph.D., University of Washington.

Atkins, Bobbie J. (1989) ..... *Professor of Administration, Rehabilitation and Postsecondary Education*  
B.A., Southern University in Baton Rouge; M.S., Ph.D., University of Wisconsin, Madison.

Atkins-Kaplan, Catherine J. (1988) ..... *Associate Professor of Health Science*  
A.B., M.S., San Diego State University; Ph.D., University of California, Riverside.

Aufesser, Peter M. (1975) ..... *Professor of Physical Education*  
B.S., Springfield College; Ed.M., State University of New York, Buffalo; Ph.D., University of Maryland.

Austin, Joan F. (1970) ..... *Professor of Art*  
A.B., California State University, Long Beach; M.F.A., Cranbrook Academy of Art.

Avila, Vernon L. (1973) ..... *Associate Professor of Biology*  
B.S., University of New Mexico; M.A., Northern Arizona University; Ph.D., University of Colorado.

Awbrey, Frank T. (1964) ..... *Professor of Biology*  
A.B., University of California, Riverside; M.A., Ph.D., University of Texas.

Ayala, Reynaldo (1969) ..... *Professor of Geography, Imperial Valley Campus*  
B.A., University of Minnesota; M.L.S., Texas Woman's University; M.A., Ph.D., Southern Illinois University.

Baase, Sara (1972) ..... *Professor of Mathematical Sciences*  
A.B., New York University; M.A., Ph.D., University of California, Berkeley.

Baber, Carolyn D. (1987) ..... *Senior Assistant Librarian*  
B.S., Illinois State University; M.S., University of Illinois at Urbana-Champaign.

Bacon, Elizabeth A. (1975) ..... *Director, Disabled Student Services*  
A.B., M.S., San Jose State University.

Bailey, Allan R. (1968) ..... *Dean, College of Business Administration; Professor of Accountancy*  
B.S., San Diego State University; M.B.A., Ph.D., University of California, Los Angeles.

Bailey, G. W. (1982) ..... *Associate Professor of Industrial Technology*  
B.A., M.A., San Diego State University; Ed.D., Arizona State University.

Bailey, Gerald D. (1964) ..... *Professor of Industrial Technology*  
A.B., M.A., Central Washington State College; Ed.D., University of Missouri.

Baker, Richard J. (1978) ..... *Professor of Art*  
B.F.A., Kansas City Art Institute; M.F.A., University of Cincinnati.

Balch, Pamela M. (1988) ..... *Associate Dean, Imperial Valley Campus; Professor of Teacher Education, Imperial Valley Campus*  
B.A., West Virginia Wesleyan College; M.A., Ed.D., West Virginia University.

Balkwell, Carolyn K. (1981) ..... *Professor of Family Studies and Consumer Sciences*  
B.S., Michigan State University; M.S., Kansas State University; Ph.D., University of Georgia.

Ball, Joseph W. (1975) ..... *Professor of Anthropology*  
A.B., Fordham University; M.A., Ph.D., University of Wisconsin.

Ballesteros, David (1983) ..... *Dean, Imperial Valley Campus; Professor of Spanish and Policy Studies in Language and Cross-Cultural Education, Imperial Valley Campus*  
B.A., University of Redlands; M.A., Middlebury College; Ph.D., University of Southern California.

Banks, James H. (1976) ..... *Professor of Civil Engineering*  
B.E., Vanderbilt University; M.S., Ph.D., University of California, Berkeley.

Barba, Robertta H. (1990) ..... *Assistant Professor of Teacher Education*  
B.S., M.S., University of Delaware; Ph.D., Pennsylvania State University.

Bar-Lev, Zev (1979) ..... *Professor of Linguistics*  
A.B., Columbia College; M.A., Cornell University; Ph.D., Indiana University.

Barnes, Stephen F. (1977) ..... *Assistant Vice President for Student Affairs*  
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Barnett, Andrew H. (1983) ..... *Professor of Accountancy*  
B.B.A., M.B.A., Baylor University; D.B.A., Texas Technological University.

Barnett, Carol A. (1971) ..... *Professor of Biology*  
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Baron, Lawrence (1988) ..... *The Nasatir Professor of Modern Jewish History*  
B.A., University of Illinois; M.A., Ph.D., University of Wisconsin.

Barone, Joan F. (1960) ..... *Associate Professor of Physical Education*  
B.S., Sargent College, Boston University; M.S., Springfield College, Massachusetts.

Barra, Donald P. (1983) ..... *Professor of Music*  
A.B., University of Rochester; M.S., Juilliard School of Music; Ed.D., Columbia University.

Barrera, Ernesto M. (1969) ..... *Professor of Spanish*  
Doctor en Leyes, University of Cartagena, Colombia; M.A., Ph.D., University of Southern California.

Bartholomew, Francis M., Jr. (1967) ..... *Associate Professor of History*  
A.B., University of California, Berkeley; M.A., Ph.D., Princeton University.

Bartolome, Lilia I. (1988) ..... *Assistant Professor of Policy Studies in Language and Cross-Cultural Education*  
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Basile, Donald D. (1976) ..... *Assistant Dean for Student Affairs, College of Arts and Letters; Director, Academic Skills Center; Professor of Academic Skills*  
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Bassoff, Betty Z. (1979) ..... *Lecturer in Public Health*  
B.S.W., University of Toronto; M.S.W., Western Reserve University; D.S.W., University of Pennsylvania.

Baxter, William L. (1963) ..... *Professor of Biology*  
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Bayasi, M. Ziad (1990) ..... *Assistant Professor of Civil Engineering*  
B.S., Damascus University, Syria; M.S., South Dakota State University; M.S., Ph.D., Michigan State University. Registered Professional Engineer.

Beach, Wayne A. (1984) ..... *Associate Professor of Speech Communication*  
B.A., Drake University; M.A., University of Montana; Ph.D., University of Utah.

Beatty, James R. (1973) ..... *Professor of Information and Decision Systems*  
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Beck, Lawrence A. (1982, except F'85-S'86) ..... *Assistant Professor of Recreation, Parks and Tourism*  
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Beck, Leland L. (1980) ..... *Professor of Mathematical Sciences*  
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Becklund, Lester A. (1967) ..... *Professor of Teacher Education*  
B.S., M.Ed., Ph.D., University of Minnesota.

Bedore, Robert L. (1959) ..... *Professor of Mechanical Engineering*  
B.S.M.E., M.S.M.E., Purdue University. Registered Professional Engineer.

Bee, Clifford P. (1969) ..... *Professor of Teacher Education*  
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Belasco, James A. (1971) ..... *Professor of Management*  
B.S., Cornell University; M.B.A., Hofstra University; Ph.D., Cornell University.

Belch, George E. (1980) ..... *Professor of Marketing*  
B.S., Pennsylvania State University; M.S., University of Colorado; Ph.D., University of California, Los Angeles.

Belch, Michael A. (1976) ..... *Professor of Marketing*  
B.S., Pennsylvania State University; M.B.A., Drexel University; Ph.D., University of Pittsburgh.

Bell, Charles B. (1981) ..... *Professor of Mathematical Sciences*  
B.S., Xavier University; M.S., Ph.D., University of Notre Dame.

Bellinghiera, Joseph J. (1973) ..... *Assistant Professor of Drama*  
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Bender, Stephen J. (1970) ..... *Professor of Health Science*  
B.S., Brockport State University; M.S., H.S.D., Indiana University; M.P.H., University of California, Los Angeles.

Benenson, Abram S. (1982) ..... *Lecturer in Public Health*  
A.B., M.D., Cornell University.

Benkov, Edith J. (1983) ..... *Associate Professor of French*  
B.A., M.A., Ph.D., University of California, Los Angeles.

Bennett, Larry E. (1970) ..... *Professor of Chemistry*  
B.S., San Diego State University; Ph.D., Stanford University.

Benson, Jackson J. (1966) ..... *Professor of English*  
A.B., Stanford University; M.A., San Francisco State University; Ph.D., University of Southern California.

Berg, Marlowe J. (1970) ..... *Professor of Teacher Education*  
B.S., M.A., Ph.D., University of Minnesota.

Berg, Robert V. (1963) ..... *Professor of Art*  
B.S., Moorhead State College, Minnesota; M.F.A., University of Minnesota.

Berge, Dennis E. (1963) ..... *Professor of History*  
A.B., M.A., San Diego State University; Ph.D., University of California, Berkeley.

Bernstein, Sanford I. (1983) ..... *Professor of Biology*  
B.S., State University of New York at Stony Brook; Ph.D., Wesleyan University.

Berry, Richard W. (1961) ..... *Professor of Geological Sciences*  
B.S.E.M., Lafayette College; M.A., Ph.D., Washington University.

Berta, Annalisa (1982) ..... *Associate Professor of Biology*  
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Bertine, Kathe K. (1973) ..... *Professor of Geological Sciences*  
A.B., Vassar College; M.A., M.Ph., Ph.D., Yale University.

Betancourt, Ramon (1984) ..... *Associate Professor of Electrical and Computer Engineering*  
B.S., University of Guadalajara; M.A., Technological Institute of Monterrey; M.A., Ph.D., University of Wisconsin, Madison.

Beuchat, Carol (1990) ..... *Associate Professor of Biology*  
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Bezuk, Nadine S. (1987) ..... *Associate Professor of Teacher Education*  
B.S., University of Pittsburgh; M.A., Ph.D., University of Minnesota.

Bhattacharjee, Subrata (1991) ..... *Assistant Professor of Mechanical Engineering*  
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Bizzoco, Richard L. (1977) ..... *Professor of Biology*  
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Blenner, Janet L. (1986) ..... *Associate Professor of Nursing*  
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Block, Martin J. (1979) ..... *Assistant Dean, College of Education*  
B.A., Indiana University; J.D., DePaul University.

Block, Russell L. (1969) ..... *Associate Professor of Finance*  
A.B., San Diego State University; J.D., University of California, Berkeley.

Blue, Carroll Parrott (1984) ..... *Associate Professor of Telecommunications and Film*  
B.A., Boston University; M.F.A., University of California, Los Angeles.

Bober, James (1984) ..... *Associate Director, Admissions and Records*  
B.S., State University of New York.

Boddy, Ralof D. (1980) ..... *Professor of Economics*  
A.B., University of California, Riverside; Ph.D., University of Michigan.

Boe, Alfred F. (1968) ..... *Associate Professor of English and Comparative Literature*  
A.B., M.A., Ph.D., University of Arizona.

Boostrom, Ronald L. (1971) ..... *Professor of Public Administration and Urban Studies*  
A.B., California State University, Long Beach; M.Crim., D.Crim., University of California, Berkeley.

Borges, Marilyn A. (1974) ..... *Professor of Psychology*  
A.B., University of Hawaii; M.A., Ohio Wesleyan University; Ph.D., University of California, San Diego.

Borkat, Roberta F. (1969) ..... *Professor of English*  
A.B., Cornell University; Ph.D., University of California, San Diego.

Boskin, Warren D. (1965) ..... *Associate Professor of Health Science*  
B.S., Brooklyn College; M.S., University of Illinois; Ed.D., West Virginia University.

Bosseau, Don L. (1982) ..... *University Librarian*  
B.S., Kansas State University; M.S., University of Kansas; M.L.S., University of Hawaii.



- Bost, John C. (1979)** ..... Associate Professor of Finance  
B.S., San Diego State University; J.D., Hastings College of the San Francisco Law.
- Boyd, William D. (1986)** ..... Director, Financial Aid  
B.A., M.Ed., Pennsylvania State University.
- Brady, F. Neil (1982)** ..... Professor of Management  
B.S., M.P.A., Brigham Young University; Ph.D., University of Texas at Austin.
- Brady, Richard C. (1977)** ..... Associate Professor of Special Education  
B.S., University of Southern California; M.A., Fresno State; Ph.D., University of Southern California.
- Branan, Alvord G. (1969)** ..... Professor of French  
B.S., University of Florida; B.F.T., Thunderbird American Graduate School of Management; M.A., Middlebury College; Ph.D., Tulane University.
- Branca, Nicholas A. (1976)** ..... Professor of Mathematical Sciences  
B.S., Iona College; M.A.T., Harvard University; Ed.D., Teachers College, Columbia University.
- Brandt, Charles L. (1957)** ..... Professor of Biology  
A.B., Ph.D., Stanford University.
- Brashear, Howard C. (1968)** ..... Professor of English  
A.B., University of California, Berkeley; M.A., San Francisco State University; Ph.D., University of Denver.
- Bray, Henry G. (1962)** ..... Professor of Mathematical Sciences  
A.B., San Diego State University; M.S., Ph.D., Iowa State University.
- Breindl, Michael J. (1986)** ..... Professor of Biology  
M.S., University of Hamburg; Ph.D., Kiel University.
- Brewer, Cynthia A. (1991)** ..... Assistant Professor of Geography  
B.A., University of Guelph; M.A., Ph.D., Michigan State University.
- Broderick, William A. (1977)** ..... Director, Media Technology Services  
A.B., Iowa State Teachers College; M.A., State College of Iowa; Ed.D., Indiana University, Bloomington.
- Broom, Betty L. (1979, except F'85-S'86)** ..... Lecturer in Nursing  
B.S.N., University of Illinois; M.S.N., University of Wisconsin, Madison; Ph.D., University of Texas at Austin.
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B.S., M.S., University of Illinois; Ph.D., University of Wisconsin.
- Brown, Harold K. (1971)** ..... Associate Dean for External Relations,  
College of Business Administration  
A.B., San Diego State University; M.B.A., Fordham University.
- Brown, Lee (1978)** ..... Professor of Journalism  
A.B., California State University, Long Beach; M.A., Ph.D., University of Iowa.
- Brown, Robert E. (1979)** ..... Professor of Music  
B.Mus., Ithaca College; Ph.D., University of California, Los Angeles.
- Bruderer, Conrad (1963)** ..... Professor of Music  
B.M., Oberlin Conservatory; M.M., D.M., Indiana University.
- Bryson, Jeff B. (1970)** ..... Professor of Psychology  
A.B., University of Texas; M.S., Ph.D., Purdue University.
- Bryson, Rebecca B. (1972)** ..... Associate Dean, College of Sciences;  
Professor of Psychology  
A.B., Queens College; M.S., Ph.D., Purdue University.
- Buck, Robert E. (1969)** ..... Associate Professor of Sociology  
B.S., M.S., Trinity University; Ph.D., University of Texas.
- Buckalew, James K. (1967)** ..... Professor of Journalism  
A.B., M.A., Indiana State College; Ph.D., University of Iowa.
- Bumpus, Jerry D. (1971)** ..... Professor of English  
A.B., University of Missouri; M.F.A., University of Iowa.
- Buono, Michael J. (1982)** ..... Professor of Physical Education  
B.S., East Stroudsburg State College; M.S., University of Nevada; Ph.D., University of Arizona.
- Burdick, David L. (1968)** ..... Associate Professor of Mathematical Sciences  
A.B., University of California, Berkeley; M.A., Ph.D., University of New Mexico.
- Burgess, William C. (1961)** ..... Professor of Health Science  
A.B., M.A., University of North Carolina; Ed.D., Teachers College, Columbia University.
- Burkett, Richard A. (1989)** ..... Assistant Professor of Art  
B.A., Lawrence University; M.F.A., Indiana University, Bloomington.
- Burnett, Lowell J. (1972)** ..... Professor of Physics  
B.S., Portland State University; M.S., Ph.D., University of Wyoming.

- Burt, Sharon D. (1987)** ..... Lecturer in Nursing  
B.S., San Francisco State University; M.S.N., University of San Diego.
- Butler, David H. (1981)** ..... Professor of Accountancy  
B.S., University of Cincinnati; M.B.A., Indiana University; Ph.D., University of Cincinnati.
- Butler, Gerald J. (1968)** ..... Professor of English  
A.B., University of California, Berkeley; M.A., Ph.D., University of Washington.
- Butler, Mark C. (1981)** ..... Associate Professor of Management  
B.A., M.A., San Diego State University; Ph.D., Texas Christian University.
- Calavita, Nico (1980)** ..... Associate Professor of Public Administration  
and Urban Studies  
Ph.D., University of Florence, Italy.
- Callender, Lucinda R. (1988)** ..... Assistant Professor of Political Science  
B.A., M.A., Ph.D., Ohio State University.
- Capettini, Robert J. (1985)** ..... Professor of Accountancy  
B.B.A., M.B.A., University of Toledo; Ph.D., University of Illinois at Urbana-Champaign.
- Car, Michael A. (1981)** ..... Judicial Coordinator  
B.A., California State University, Los Angeles; M.A., Ph.D., Claremont Graduate School.
- Carande, Robert J. (1987)** ..... Senior Assistant Librarian  
B.A., M.L.S., State University of New York at Buffalo; M.A., State University of New York at Stony Brook.
- Cardenas, Miguel A. (1981)** ..... Director, International Training Center,  
College of Extended Studies  
B.S.E.E., San Diego State University; M.S., Ph.D., University of California, Los Angeles.
- Carella, Michael J. (1967)** ..... Professor of Philosophy  
B.S., St. Patrick's College, California; M.A., St. Louis University; Ph.L., Ph.D., University of Louvain, Belgium.
- Cargille, Douglas A. (1978)** ..... Associate Librarian  
A.B., University of California, Irvine; M.A., M.L.S., University of California, Los Angeles.
- Carlson, B. Robert (1978)** ..... Professor of Physical Education  
B.A., Trinity University; M.Ed., Ph.D., University of Texas at Austin.
- Carlson, David H. (1982)** ..... Professor of Mathematical Sciences  
A.B., San Diego State University; M.S., Ph.D., University of Wisconsin.
- Carmichael, Nancy M. (1968)** ..... Assistant Professor of Biology  
A.B., Barnard College, Columbia University; M.A., Ph.D., Columbia University.
- Carnevale, James P. (1967)** ..... Professor of Counseling and School Psychology  
A.B., University of California, Los Angeles; M.A., San Diego State University; Ph.D., University of Southern California.
- Carpenter, John J. (1975)** ..... Director, Public Safety  
A.B., Eastern Washington State College.
- Carpenter, Roger E. (1963)** ..... Professor of Biology  
A.B., University of Arizona; Ph.D., University of California, Los Angeles.
- Carr, Jeffrey C. (1991)** ..... Professor of Aerospace Studies  
B.A., San Diego State University; M.A., University of Northern Colorado.
- Carroll, John L. (1979)** ..... Professor of Mathematical Sciences  
B.S., Northern Arizona University; M.S., Ph.D., University of Nebraska.
- Carson, Ann T. (1983)** ..... Lecturer in Nursing  
B.S., San Diego State University; M.S., University of Oregon; Ph.D., California School of Professional Psychology.
- Carter, J. E. Lindsay (1962)** ..... Professor of Physical Education  
Diploma in Physical Education, University of Otago, New Zealand; Teaching Certificate, Auckland Teachers College, New Zealand; M.A., Ph.D., University of Iowa.
- Case, Thomas E. (1961)** ..... Professor of Spanish  
A.B., St. Thomas College; M.A., Ph.D., University of Iowa.
- Castillo, José (1987)** ..... Assistant Professor of Mathematical Sciences  
B.S., Universidad Central de Venezuela; M.A., University of Texas at Austin; Ph.D., University of New Mexico.
- Castillo, Susana D. (1985)** ..... Professor of Spanish  
B.A., M.A., Ph.D., University of California, Los Angeles.
- Castro, Felipe G. (1988)** ..... Associate Professor of Public Health  
B.A., University of California, Santa Barbara; M.S.W., University of California, Los Angeles; Ph.D., University of Washington.

- Caves, Roger W. (1983)** ..... Professor of Public Administration and Urban Studies  
B.A., M.U.S., Old Dominion University; Ph.D., University of Delaware.
- Cayleff, Susan E. (1987)** ..... Associate Professor of Women's Studies  
B.A., University of Massachusetts at Amherst; M.A., Sarah Lawrence College; M.A., Ph.D., Brown University.
- Cegelka, Patricia T. (1980)** ..... Professor of Special Education  
B.S., M.S., Ed.D., University of Kansas.
- Chaffin, Deborah G. (1984)** ..... Associate Professor of Philosophy  
B.A., University of Oklahoma; Ph.D., State University of New York, Stony Brook.
- Chambers, Martin J. (1986)** ..... Professor of Music  
B.M., M.M., University of British Columbia.
- Chambers, Norman E. (1972)** ..... Professor of Africana Studies  
A.B., Lincoln University; M.A., San Diego State University; Ph.D., United States International University.
- Chamley, John D. (1969)** ..... Professor of Administration,  
Rehabilitation and Postsecondary Education  
A.B., Pacific Lutheran University; M.A., Ed.D., Arizona State University.
- Chan, Lillian L. (1969)** ..... Librarian  
B.S., M.A.L.S., University of Michigan.
- Chandler, Shelly E. (1966)** ..... Associate Professor of Sociology  
A.B., M.A., Ph.D., University of California, Los Angeles.
- Chang, Albert (1991)** ..... Professor of Public Health  
B.A., Harvard University; M.P.H., University of California, Berkeley; M.D., University of Rochester.
- Chang, Ching-Ten (1979)** ..... Professor of Electrical and Computer Engineering  
B.S., National Taiwan Normal University; M.S., North Dakota State University; Ph.D., University of Washington.
- Chang, Howard H. (1967)** ..... Professor of Civil Engineering  
B.S., Cheng Kung University, China; M.S., Ph.D., Colorado State University. Registered Professional Engineer.
- Chase, Winifred Wong (1973)** ..... Counselor  
A.B., M.S., University of Wisconsin.
- Chatfield, Dale A. (1978)** ..... Associate Professor of Chemistry  
A.B., M.S., Oakland University, Michigan; Ph.D., University of North Carolina, Chapel Hill.
- Chavez, Augustine S. (1974)** ..... Coordinator of Affirmative Action;  
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A.B., Jacinto Trevino College.
- Cheek, William F. (1968)** ..... Professor of History  
A.B., Hampden-Sydney College; M.A., University of Richmond; Ph.D., University of Virginia.
- Chen, Lo-chai (1969)** ..... Professor of Biology  
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- Chen, Milton M. (1977)** ..... Professor of Information and Decision Systems  
B.S., National University, Taipei; M.B.A., DePaul University, Chicago; Ph.D., New York University.
- Cheng, Li-rong Lilly (1984)** ..... Assistant Dean for Student Affairs, College of  
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A.B., Wheaton College; M.S., University of Southern California; Ph.D., Michigan State University.
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- Curry, Joan F. (1972) ..... Professor of Teacher Education  
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- Cutter, Charles H. (1968) ..... Associate Professor of Political Science  
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- Daugherty, Wayne F., Jr. (1966) ..... Associate Professor of Biology  
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B.S., University of Reading; Ph.D., University of Bristol.
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B.A., M.F.A., University of California, San Diego.
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A.B., M.S., University of Michigan; Ph.D., University of Minnesota.
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- Dutton, Brenton P. (1981) ..... Professor of Music  
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B.S., M.S.W., Ph.D., University of Illinois at Urbana-Champaign.
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- Van de Wetering, R. Lee (1960)** ..... Professor of Mathematical Sciences  
B.S., University of Washington; Ed.M., Western Washington College of Education; Ph.D., Stanford University.
- Vanier, Dinoo T. (1970)** ..... Professor of Marketing  
B.Com., Sydenham College of Commerce & Economics, Bombay; M.B.A., M.A., Ph.D., University of California, Berkeley.
- Van Sickle, Douglas J. (1978)** ..... Director, Counseling and Psychological Services  
B.S., University of Washington; M.A., Bradley University; Ph.D., University of Utah.
- Varaiya, Nikhil P. (1988)** ..... Professor of Finance  
B.S., Bombay University; M.B.A., Ph.D., University of Washington.
- Vartanian, Pershing (1968)** ..... Professor of History  
B.S., Wayne State University; M.A., Columbia University; Ph.D., University of Michigan.
- Velasquez, Roberto J. (1987)** ..... Associate Professor of Counseling  
and School Psychology  
A.B., University of California, Riverside; M.S., Harvard University; Ph.D., Arizona State University.
- Venieris, Yiannis P. (1967)** ..... Assistant Professor of Accountancy  
B.S., M.Ac., Ph.D., University of Arizona.
- Veneris, Yiannis P. (1967)** ..... Professor of Economics  
A.B., Graduate School of Economics and Business Administration, Athens, Greece; Ph.D., University of Oregon.
- Verderber, Anne (1971)** ..... Associate Professor of Nursing  
B.S., Saint John College; M.Ed. Nurs. Ed., University of Minnesota; Ph.D., University of Southern California.
- Vergani, Gianangelo (1963)** ..... Professor of Italian  
Dottorato in Lettere, University of Pavia, Italy.
- Verity, Larry S. (1984)** ..... Associate Professor of Physical Education  
B.S., State University of New York, Cortland; M.Ed., University of Virginia; Ph.D., Purdue University.
- Vik, Gretchen N. (1975)** ..... Professor of Information and Decision Systems  
A.B., Rice University; M.A., University of South Dakota; Ph.D., University of Florida.
- Villarino, José R. (1969)** ..... Associate Professor of Mexican American Studies  
B.S., M.A., Northern Arizona University; Ph.D., Union Graduate School.
- Villone, Arnold L. (1968)** ..... Professor of Mathematical Sciences  
B.S.E.E., University of Buffalo; M.A., Ph.D., University of California, Los Angeles.
- Vinge, Vernon S. (1972)** ..... Associate Professor of Mathematical Sciences  
B.S., Michigan State University; M.A., Ph.D., University of California, San Diego.
- Virginia, Ross A. (1985)** ..... Professor of Biology  
B.S., SUNY College of Environmental Science and Forestry; M.S., Ph.D., University of California, Davis.
- Vuskovic, Marko I. (1986)** ..... Professor of Mathematical Sciences  
B.S., M.S., University of Belgrade; Ph.D., University of Zagreb.



- Wahl, Patricia R. (1990) ..... Professor of Nursing  
B.S., M.S., Ph.D., University of Cincinnati.
- Walawender, Michael J. (1972) ..... Professor of Geological Sciences  
B.S., Syracuse University; M.S., South Dakota School of Mines and Technology;  
Ph.D., Pennsylvania State University.
- Walker, Ann P. (1991) ..... Assistant Professor of Naval Science  
B.A., University of South Dakota.
- Walker, Carolyn L. (1986) ..... Associate Professor of Nursing  
B.S.N., California State University, Fullerton; M.S.N., California State University,  
Los Angeles; Ph.D., University of Utah.
- Wall, Carey G. (1971) ..... Professor of English  
A.B., University of Michigan; Ph.D., Stanford University.
- Wallace, William J. (1969) ..... Associate Professor of Natural Science  
A.B., St. Michael's College, Vermont; M.S., Tuskegee Institute; M.S., Ph.D.,  
Oregon State University.
- Walshok, Marco G. (1969) ..... Assistant Professor of Public Administration  
and Urban Studies  
A.B., University of Southern California; M.A., Ph.D., Indiana University.
- Wang, Kuo Chang (1980) ..... Professor of Aerospace Engineering and  
Engineering Mechanics  
B.S., Ordinance Eng. College; M.S., Virginia Polytechnic Institute; Ph.D., Rensselaer  
Polytechnic Institute.
- Ward-Steinman, David (1961) ..... Professor of Music  
B.M., Florida State University; M.M., D.M.A., University of Illinois.
- Warman, Harold D. (1977) ..... Lecturer in Music  
A.B., M.A., University of Redlands.
- Warschauer, Thomas M. D. (1977) ..... Associate Dean for Academic Affairs  
and for Graduate Studies, College of Business Administration; Professor of Finance  
B.S., M.S., D.B.A., University of Colorado.
- Watson, Lawrence C. (1967) ..... Professor of Anthropology  
A.B., University of California, Los Angeles; M.A., University of Southern California;  
Ph.D., University of California, Los Angeles.
- Watson, Maria-Barbara (1976) ..... Professor of Women's Studies  
M.A., Goethe Universitat; Ph.D., University of Vienna.
- Wauchope, Mary M. (1989) ..... Assistant Professor of German  
B.A., M.A., University of California, Riverside; Ph.D., University of California,  
Berkeley.
- Webb, Charlotte (1975) ..... Associate Professor of Linguistics  
A.B., Ph.D., University of Texas.
- Weber, Shirley N. (1972) ..... Associate Professor of Africana Studies  
A.B., M.A., Ph.D., University of California, Los Angeles.
- Weeks, John R. (1974) ..... Professor of Sociology  
A.B., M.A., Ph.D., University of California, Berkeley.
- Weitzel, Al R. (1973) ..... Professor of Speech Communication  
A.B., Bradley University; M.A., South Illinois University; Ph.D., University of  
Southern California.
- Wells, Richard W. (1961) ..... Associate Professor of Physical Education  
A.B., Occidental College; M.A., San Diego State University.
- Werner, Joan T. (1965) ..... Associate Professor of Sociology  
B.S., State College, Pennsylvania; M.E., Pennsylvania State University; Ph.D.,  
Syracuse University.
- Wessel, Leland G. (1987) ..... M.D., Student Health Services  
B.A., M.D., University of Pennsylvania; M.P.H., San Diego State University.
- Westermo, Bruce D. (1980) ..... Professor of Civil Engineering  
B.S., Illinois Institute of Technology; M.S., Ph.D., California Institute of Technology.
- Weston, Thomas S. (1974) ..... Professor of Philosophy  
S.B., Ph.D., Massachusetts Institute of Technology.
- Wheeler, James L. (1968) ..... Associate Professor of English  
and Comparative Literature  
A.B., M.A., Ph.D., University of California, Los Angeles.
- Whitby, Joan A. (1968) ..... Assistant Professor of Physical Education  
B.S., Carthage College; M.S., Arizona State University.
- White, Phillip M. (1985) ..... Associate Librarian  
B.A., University of Houston; M.L.S., University of Texas.
- Whitman, David G. (1969) ..... Associate Professor of Mathematical Sciences  
A.B., M.S., Emory University; Ph.D., University of California, Riverside.
- Whitney, Dan (1966) ..... Professor of Anthropology  
A.B., M.A., Ph.D., Michigan State University; J.D., Western State University.
- Whitney, Mark F. (1992) ..... Assistant Professor of Family Studies and  
Consumer Sciences  
B.S., San Diego State University; M.S., University of California, Davis.
- Whitney, Roger E. (1985) ..... Associate Professor of Mathematical Sciences  
B.S., North Dakota State University; Ph.D., University of California, San Diego.
- Whittenburg, Gerald E. (1976) ..... The KPMG Peat Marwick/Charles W. Lamden  
Professor of Taxation  
B.S., M.S., Ph.D., University of Houston. Certified Public Accountant.
- Whittington, O. Ray (1978) ..... Professor of Accountancy  
B.B.A., Sam Houston State University; M.S., Texas Tech University; Ph.D.,  
University of Houston. Certified Public Accountant.
- Wickham, Clarence W. (1991) ..... Assistant Professor of Military Science  
B.A., University of South Florida.
- Wilbur, Robert W. (1974) ..... Associate Professor of Finance  
A.B., University of California, Riverside; M.S., San Diego State University; Ph.D.,  
University of Washington.
- Williams, Candace M. (1989) ..... Lecturer in Business Administration  
E.M.B.A., Claremont Graduate School.
- Williams, Diane R. (1975) ..... Assistant Professor of Communicative Disorders  
A.B., University of Kentucky; M.A., Northwestern University.
- Williams, Kathy S. (1987) ..... Assistant Professor of Biology  
B.A., University of Texas at Austin; Ph.D., Stanford University.
- Williams, Richard K. (1989) ..... Professor of Military Science  
B.S., Pennsylvania State University; M.A., Salve Regina-The Newport College;  
M.B.A., Ph.D., Claremont Graduate School.
- Williams, Stephen J. (1980) ..... Professor of Public Health  
B.S., Carnegie-Mellon University; M.S., Massachusetts Institute of Technology;  
S.M., Sc.D., Harvard University.
- Williams, Susan L. (1990) ..... Associate Professor of Biology  
B.S., University of Michigan; M.S., University of Alaska; Ph.D., University of  
Maryland.
- Williams, Terry A. (1986) ..... Lecturer in Academic Skills  
B.A., College of Wooster; M.A., San Diego State University.
- Williamson, James E. (1968) ..... Professor of Accountancy  
A.B., Northland College; M.S., Ph.D., University of Minnesota. Certified Public  
Accountant.
- Willis, George C. (1967) ..... Associate Professor of Physical Education  
A.B., M.A., California State University, Los Angeles; M.F.A., Arizona State  
University.
- Willis, Winnie O. (1984) ..... Associate Professor of Public Health  
B.A., Jersey City State College; M.S., Harvard University; Sc.D., Johns Hopkins  
University.
- Wilson, Carlos G. (1992) ..... Professor of Spanish  
B.A., Loyola Marymount University; M.A., Ph.D., University of California, Los  
Angeles.
- Wilson, Carole (1981) ..... Associate Librarian  
B.A., Ohio Wesleyan University; M.R.E., Union Theological Seminary, New York  
City; M.L.S., University of California, Los Angeles.
- Wilson, Donald G. (1982) ..... Lecturer in Electrical and Computer Engineering  
B.E., Rensselaer Polytechnic Institute; M.S., Ph.D., Harvard University.
- Wilson, Michael J. (1991) ..... Assistant Professor of Naval Science  
B.A., Southeastern Massachusetts University.
- Wilson, Patricia A. (1990) ..... Assistant Professor of Public Administration  
and Urban Studies  
B.A., M.A., University of Michigan; D.P.A., George Mason University.
- Wilson, Wilfred J. (1963) ..... Professor of Biology  
A.B., California State University, Sacramento; M.A., Ph.D., University of California,  
Davis.
- Winstow, Robert W. (1965) ..... Professor of Sociology  
A.B., California State University, Long Beach; M.A., Ph.D., University of California,  
Los Angeles.
- Witherspoon, John P. (1979) ..... Professor of Telecommunications and Film  
A.B., University of Pacific; M.A., Stanford University.
- Woff, R. Craig (1987) ..... Associate Professor of Drama  
B.A., Knox College; M.F.A., Stanford University.
- Wong-Boren, Adrian (1983) ..... Professor of Accountancy  
C.P.A., E.C.A., Universidad de Coahuila; M.B.A., Instituto de Estudios Superiores  
de Monterrey; Ph.D., Virginia Polytechnic Institute.

- Woo, Catherine Yi-yu Cho (1970) ..... Professor of Chinese  
A.B., M.A., San Diego State University; Ed.D., University of San Francisco.
- Wood, James L. (1975) ..... Professor of Sociology  
A.B., M.A., Ph.D., University of California, Berkeley.
- Woodson, John H. (1961) ..... Professor of Chemistry  
A.B., Wesleyan University, Connecticut; Ph.D., Northwestern University.
- Wotruba, Thomas R. (1962) ..... Professor of Marketing  
B.B.A., M.B.A., Ph.D., University of Wisconsin.
- Wozniak, Dolores A. (1976) ..... Associate Dean, College of Health and  
Human Services; Professor of Nursing  
B.S., Hunter College; M.A., Ed.M., Ed.D., Columbia University.
- Wright, Penny L. (1972) ..... Associate Dean (Acting), Graduate Division  
and Research; Professor of Management  
A.B., M.B.A., San Diego State University; Ph.D., University of California, Irvine.
- Wright, Richard D. (1964) ..... Professor of Geography  
A.B., A.M., Indiana University; Ph.D., University of Kansas.
- Wulbern, Julian H. (1966) ..... Professor of German  
A.B., University of California, Berkeley; M.A., University of Colorado; Ph.D.,  
Northwestern University.
- Wulfemeyer, K. Tim (1976, except F'80-S'87) ..... Professor of Journalism  
A.B., San Diego State University; M.S., Iowa State University; Ed.D., University of  
California, Los Angeles.
- Wylie, Donald G. (1966) ..... Professor of Telecommunications and Film  
A.B., University of Michigan; M.A., Ph.D., Michigan State University.
- Yang, Yeong-Ling (1988) ..... Assistant Professor of Information and Decision Systems  
B.A., Cheng-Kung University, Taiwan; M.S., Ph.D., University of Florida.
- Yapelli, Tina Marie (1985) ..... Assistant Professor of Art  
B.A., Loyola Marymount University; M.A., California State University, Fullerton.
- Yaremko, Robert M. (1969) ..... Professor of Psychology  
A.B., University of Florida; M.A., Ph.D., Ohio University.
- Yates, Charles D. (1970) ..... Professor of Music  
A.B., San Diego State University; M.A., California State University, Long Beach.
- Yeager, Bill (1985) ..... Professor of Music  
B.M., M.M., North Texas State University.
- Yerger, Leslie F. (1977) ..... Vice President for University Relations and Development  
B.A., University of California, San Diego.
- Young, Arthur (1967) ..... Professor of Astronomy  
B.S., Allegheny College; M.A., Ph.D., Indiana University.
- Young, Ronald R. (1971) ..... Associate Professor of Spanish  
A.B., Wisconsin State University; A.M., Ph.D., University of Illinois.
- Young, Russell L. (1987) ..... Assistant Professor of Policy Studies in  
Language and Cross-Cultural Education  
B.A., University of California, San Diego; M.Ed., University of Hawaii; Ph.D., San  
Diego State University and Claremont Graduate School.
- Yu, Elena S. H. (1990) ..... Professor of Public Health  
M.S., University of Notre Dame; M.P.H., Columbia University in the City of New  
York; Ph.D., University of Notre Dame.
- Zedler, Joy B. (1972) ..... Professor of Biology  
B.S., Augustana College; M.S., Ph.D., University of Wisconsin.
- Zedler, Paul H. (1969) ..... Professor of Biology  
B.S., University of Wisconsin, Milwaukee; M.S., Ph.D., University of Wisconsin.
- Zimmerman, Bonnie (1978) ..... Professor of Women's Studies  
A.B., Indiana University; Ph.D., State University of New York at Buffalo.
- Zuniga, Maria E. (1985) ..... Professor of Social Work  
B.A., University of San Diego; M.S.W., University of California, Berkeley; Ph.D.,  
Brandeis University.
- Zupko, John A. (1989) ..... Assistant Professor of Philosophy  
B.A., University of Waterloo; M.A., Ph.D., Cornell University.
- Zyskind, Judith W. (1982) ..... Professor of Biology  
B.S., University of Dayton; M.S., Ph.D., Iowa State University.



# Emeritus Faculty

Golding, Brage, Ph.D. (1972-1977) ..... Professor of Chemistry and Engineering

Ackerly, Jr., Robert S., Ed.D. (1963-1990) ..... Counselor of the University Advising Center; Professor of Teacher Education

Adams, John R., Ph.D. (1928-1968) ..... Chairman, Division of Humanities; Professor of English

Adams, William J., Ph.D. (1955-1983) ..... Professor of Speech Communication

Akers, Fred C., Ph.D. (1966-1976) ..... Associate Professor of Marketing

Alexander, James V., Ph.D. (1967-1984) ..... Associate Professor of Botany

Ali, Jr., Edward F., Ph.D. (1963-1988) ..... Professor of Psychology

Altamura, Nicholas C., Ph.D. (1967-1983) ..... Associate Professor of Secondary Education

Anderson, Allan W., Ph.D. (1962-1985) ..... Professor of Religious Studies

Anderson, Arthur J. D., Ph.D. (1961-1975) ..... Professor of Anthropology

Anderson, Evans L., Ed.D. (1954-1981) ..... Professor of Education

Anderson, Graydon K., Ph.D. (1949-1979) ..... Professor of Economics

Anderson, Paul V., M.M. (1954-1983) ..... Professor of Music

Anderson, W. Carlisle, Ph.D. (1955-1981) ..... Professor of Industrial Studies

Andrus, Ruth, Ph.D. (1962-1982) ..... Professor of Physical Education

Anthony, Sally M., Ed.D. (1965-1990) ..... Professor of Educational Technology

Apple, L. Eugene, Ph.D. (1985-1991) ..... Assistant Professor of Marketing

Archer, E. C. Jack, Ed.D. (1956-1979) ..... Professor of Information Systems

Atkins, Michael D., Ph.D. (1970-1991) ..... Professor of Biology

Bablot, George, Ph.D. (1956-1991) ..... Professor of Economics

Baily, Kamilla U., M.S.W. (1966-1977) ..... Associate Professor of Social Work

Baker, Clifford H., Ph.D. (1937-1975) ..... Professor of Spanish

Baker, Douglas L., Ed.D. (1952-1979, except 1953) ..... Professor of Elementary Education

Baker, James R., Ph.D. (1956-1986, except 1961-1962) ..... Professor of English and Comparative Literature

Baker, Keefe L., M.F.A. (1965-1984) ..... Professor of Art

Baldwin, Elmer D., Ed.D. (1963-1988) ..... Professor of Education, Imperial Valley Campus

Barber, William F., Ph.D. (1959-1991) ..... Director, Graduate Programs, College of Business Administration; Professor of Marketing

Barckley, Robert E., Ph.D. (1955-1985) ..... Professor of Economics

Barclay, A. Bernice, M.A.L.S. (1962-1986) ..... Associate Librarian

Barnes, Alfred C., H.S.D. (1977-1981) ..... Associate Professor of Health Science

Bauer, Edward G., M.S. (1956-1976) ..... Professor of Mechanical Engineering

Becker, Gerald A., Ph.D. (1958-1986) ..... Professor of Mathematical Sciences

Benjamin, Robert L., Ph.D. (1953-1986) ..... Professor of Speech Communication

Benton, Carl W., Ed.D. (1948-1983) ..... Professor of Physical Education

Bigelow, Marybelle S., M.A. (1956-1980) ..... Professor of Art

Bigger, W. Richard, Ph.D. (1952-1981) ..... Professor of Public Administration and Urban Studies

Biggs, Millard R., Ph.D. (1958-1986) ..... Professor of Music

Bitlerman, Henry L., M.A. (1956-1977) ..... Assistant Professor of Mechanical Engineering

Birch, Aileen J., M.A. (1949-1978) ..... Assistant Professor of Elementary Education

Black, Barbara B., M.S. (1970-1988) ..... Professor of Nursing

Blanc, Sam S., Ed.D. (1966-1981) ..... Professor of Elementary Education

Blick, James D., Ph.D. (1966-1985) ..... Associate Professor of Geography

Bloomberg, Jr., Warner, Ph.D. (1973-1989) ..... Professor of Sociology

Blyth, John D., Ed.D. (1957-1983) ..... Professor of Music

Boggs, Wilma T., M.S. (1971-1977) ..... Assistant Professor of Family Studies and Consumer Sciences

Bohnsack, Kurt K., Ph.D. (1956-1983) ..... Professor of Zoology

Boney, Elaine E., Ph.D. (1963-1986) ..... Professor of German

Botkin, Patricia T., Ed.D. (1969-1988) ..... Associate Professor of Teacher Education

Bradley, Wallace W., M.A. (1961-1973) ..... Assistant Professor of Secondary Education

Branstetter, R. Deane, Ph.D. (1955-1981) ..... Professor of Mathematical Sciences

Brennen, E. Clifford, D.S.W. (1978-1983) ..... Professor of Social Work

Briggs, Robert M., Ed.D. (1957-1985) ..... Professor of Teacher Education

Broadbent, Harry H., M.S. (1949-1979) ..... Associate Professor of Physical Education

Brodshatzer, Arthur, D.B.A. (1956-1986) ..... Professor of Accountancy

Brooks, Baylor, B.A. (1931-1966) ..... Professor of Geology

Brown, Ruth M. C., Ph.D. (1971-1986) ..... Associate Professor of English and Comparative Literature

Brown, William L., B.S.E.E., Professional Degree in Electrical Engineering (1962-1983) ..... Associate Professor of Electrical and Computer Engineering

Bruce, Paul, Ph.D. (1957-1989) ..... Professor of Counselor Education

Brunson, Theodore R., D.M.A. (1966-1991) ..... Professor of Music

Bryant, Steven J., Ph.D. (1964-1978) ..... Associate Professor of Mathematical Sciences

Burnett, Gail A., Ph.D. (1947-1968) ..... Professor of English and Classics

Burnside, Houston M., Ph.D. (1968-1991) ..... Professor of Teacher Education

Butler, Harry, Ph.D. (1975-1990) ..... Professor of Social Work

Campbell, L. Beryl, M.A. (1947-1973) ..... Associate Professor of Elementary Education

Cannon, Nona H., Ed.D. (1959-1979) ..... Professor of Family Studies and Consumer Sciences

Capp, Martin P., M.S. (1953-1975) ..... Dean, School of Engineering

Carlson, Hilding B., Ph.D. (1948-1969) ..... Professor of Psychology

Cave, Mary F., M.A. (1946-1977) ..... Associate Professor of Physical Education

Chan, S. Yun, Ph.D. (1965-1979) ..... Professor of Electrical Engineering

Charles, Carol M., Ph.D. (1961-1988) ..... Professor of Teacher Education

Chater, Elizabeth E., M.A. (1964-1977) ..... Professor of English

Clark, Margaret A., Ed.D. (1966-1986) ..... Associate Professor of Teacher Education

Clark, Mary E., Ph.D. (1969-1986) ..... Professor of Biology

Cohen, Lester M., M.S.W. (Under contract 1969-1970; 1970-1984) ..... Assistant Professor of Social Work

Colombo, Albert A., M.A. (1967-1982) ..... Assistant Professor of Geography

Cooper, Charles F., Ph.D. (1971-1988) ..... Professor of Biology

Cooper, Gwen O., Ed.D. (1966-1991) ..... Counselor

Crain, Melvin, Ph.D. (1959-1983) ..... Professor of Political Science

Crawford, Maurice L., Ed.D. (1954-1988) ..... Professor of Information and Decision Systems

Crisley, Cornelius J., M.L.S. (1962-1990) ..... Senior Assistant Librarian

Crisley, Patricia J., M.A.L.S. (1964-1989) ..... Senior Assistant Librarian

Crouch, James E., Ph.D. (1932-1973) ..... Professor of Zoology

Crum, Clyde E., Ed.D. (1955-1982) ..... Professor of Secondary Education

Cullen, F. Patricia, Ph.D. (1964-1985) ..... Professor of Physical Education

Darley, Richard D., Ph.D. (1961-1980) ..... Professor of Marketing

Davis, Craig H., Ph.D. (1967-1991) ..... Assistant Professor of Biology

DeLora, Jack R., Ph.D. (1955-1986) ..... Professor of Sociology

Dickerson, Mary E., Ph.D. (1967-1990) ..... Assistant Professor of Family Studies and Consumer Sciences

Dickinson, Fidelia R., Ph.D. (1966-1990) ..... Librarian

Dirks, John H., M.F.A. (1947-1976) ..... Professor of Art

Dodds, Lowell J., M.B.A. (1957-1975) ..... Professor of Accounting

Dorris, Helen L., M.S. (1952-1982) ..... Professor of Family Studies and Consumer Sciences

Dukas, Vytas, Ph.D. (1959-1988) ..... Professor of Russian

Dunkle, Harvey I., Ph.D. (1963-1987) ..... Associate Professor of German

Eagle, John, Ed.D. (1946-1974) ..... Professor of Mathematics

Earnest, Sue W., Ph.D. (1947-1973) ..... Professor of Speech Pathology and Audiology

Eidemiller, Donald I., Ph.D. (1956-1983) ..... Professor of Geography

Elgin, Suzette, Ph.D. (1972-1981) ..... Associate Professor of Linguistics

Elliott, Rosalie C., Ph.D. (1968-1982) ..... Professor of Elementary Education

Erickson, Paul, Ed.D. (1963-1986) ..... Professor of Teacher Education

Erzen, Paul E., Ph.D. (1978-1987) ..... Associate Professor of Management, Imperial Valley Campus

Farris, David A., Ph.D. (1960-1991) ..... Professor of Biology

Fellers, Stanford, Ed.D. (1966-1979) ..... Associate Professor of Health Science and Safety

Ferrel, Dale B., M.B.A. (1957-1977) ..... Professor of Accounting

Fisher, Horace H., Ph.D. (1955-1977) ..... Associate Professor of Finance

Fisher, J. Sherrick, Ph.D. (1953-1977) ..... Professor of Elementary Education

Fitz, Richard A., Ph.D. (1959-1991) ..... Professor of Mechanical Engineering

Flagg, Denis A., Ph.D. (1955-1986) ..... Professor of Economics

Forman, Robert B., Ed.D. (1963-1985) ..... Professor of Music

Fountain, Leonard D., Ph.D. (1960-1990) ..... Professor of Mathematical Sciences

Fox, Kathleen, Ph.D. (1962-1986) ..... Professor of Physical Education

Franklin, Robert J., Ph.D. (1967-1988) ..... Associate Professor of History, Imperial Valley Campus

Frey, Leonard H., Ph.D. (1956-1989) ..... Professor of Linguistics

Frick, Fay A., Ph.D. (1970-1990) ..... Associate Professor of Art

Friedman, Abraham M., Ph.D. (1963-1983) ..... Associate Professor of Physical Education

Friedman, Maurice Stanley, Ph.D. (1973-1991) ..... Professor of Religious Studies, Philosophy, and Comparative Literature

Friedrich, Kurt, Ed.D. (1949-1977) ..... Professor of Secondary Education

Fulcomer, David M., Ph.D. (1973-1988) ..... Professor of Family Studies and Consumer Sciences

Fulkerson, Glen E., Ed.D. (1954-1981) ..... Professor of Secondary Education

Garrison, John D., Ph.D. (1956-1983) ..... Professor of Physics

Gast, David K., Ed.D. (1963-1991) ..... Professor of Teacher Education

Gates, Gerald F., Ed.D. (1955-1986) ..... Professor of Teacher Education

Gega, Peter C., Ed.D. (1955-1987) ..... Professor of Teacher Education

Generales, Minos D., Degree in Law and Political Science (1949-1977) ..... Professor of Political Science

Genzlinger, Cleve K., M.M. (1957-1991) ..... Professor of Music

Ghilbert, Jeanne S., M.A. (1965-1982) ..... Assistant Professor of French

Gibson, E. Dana, Ph.D. (1947-1971) ..... Professor of Information Systems

Gifford, Adam, Ph.D. (1954-1989) ..... Professor of Economics

Gillette, Thomas L., Ph.D. (1961-1989) ..... Professor of Sociology

Gjerde, Clayton M., Ph.D. (1948-1974) ..... Dean of Continuing Education; Professor of Secondary Education

Goodson, Roger A., Ed.D. (1968-1988) ..... Professor of Teacher Education

Goodwin, Joann P., M.L.S. (1968-1991) ..... Senior Assistant Librarian

Granrud, Carolyn A., B.S.L.S. (1960-1987) ..... Senior Assistant Librarian

Grawunder, Ralph M., Ed.D. (1955-1991) ..... Professor of Physical Education

Gray, Robert T., Ed.D. (1956-1987) ..... Professor of Teacher Education

Greene, Joanne H., M.S.L.S., M.A. (1967-1986) ..... Catalog Librarian

Griffin, Herschel E., M.D. (1980-1987) ..... Professor of Public Health

Gripp, Richard C., Ph.D. (1958-1985) ..... Professor of Political Science

Groff, Patrick J., Ed.D. (1955-1981) ..... Professor of Elementary Education

Gross, George C., Ph.D. (1961-1985) ..... Professor of English and Comparative Literature

Guidry, Rosalind, Ph.D. (1970-1989) ..... Associate Professor of Social Work

Gulino, Claire, Ed.D. (1982-1991) ..... Professor of Nursing

Gunning, Barbara E., Ph.D. (1969-1988) ..... Professor of Family Studies and Consumer Sciences

Gulowski, Jr., Julius P., A.B. (1967-1991) ..... Assistant Professor of Physical Education

Hale, E. Alan, Ph.D. (1957-1987) ..... Professor of Marketing

Hanchett, William F., Ph.D. (1956-1987) ..... Professor of History

Hanson, Robert F., Rec.D. (1962-1983) ..... Professor of Recreation

Harari, Herbert, Ph.D. (1966-1987) ..... Professor of Psychology

Harder, Donald F., Ed.D. (1960-1983) ..... Counselor, Counseling Services

Harmon, James E., Ph.D. (1964-1981) ..... Associate Professor of Political Science, Imperial Valley Campus

Harned, W. Wallace, Ph.D. (1962-1978) ..... Professor of Accounting

Harper, Leroy A., Ed.D. (1959-1979) ..... Professor of Health Science

Harris, Vincent C., Ph.D. (1950-1976) ..... Professor of Mathematics

Harrison, Robert C., Ph.D. (1953-1986) ..... Professor of Psychology

Harvey, A. Raymond, Ph.D. (1949-1983) ..... Professor of Mathematical Sciences

Haskell, Harriet, Ph.D. (1940-1971; except 1943-1945) ..... Professor of English

Hawley, Peggy J., Ph.D. (1968-1988) ..... Professor of Counselor Education

Haworth, Glenn O., D.S.W. (1966-1987) ..... Professor of Social Work

Hazen, William E., Ph.D. (1962-1988) ..... Professor of Biology

Herman, Elsie, M.A. (1969-1982) ..... Associate Professor of Social Work

Higgins, Winifred H., Ph.D. (1964-1983) ..... Professor of Art

Hill, Wayne O., Ed.D. (1955-1983) ..... Professor of Elementary Education

Hines, Jeanette D., D.N.S. (1977-1991) ..... Associate Professor of Nursing

Hippaka, William H., Jur.D. (1957-1990) ..... Professor of Finance

Ho, Hung-Ta, Ph.D. (1966-1991) ..... Professor of Mathematical Sciences

Hodge, Stanley B., M.A. (1968-1981) ..... Associate Professor of Art

Holowach, Frank S., M.A. (1960-1986) ..... Professor of Journalism

Holt, Howard B., Ed.D. (1961-1983) ..... Professor of Educational Administration

Hoover, Grace V., B.S.L.S. (1956-1981) ..... Associate Librarian

Hopkins, Jack R., M.F.A. (1961-1986) ..... Professor of Art

Hosteller, David K., Ed.D. (1966-1982) ..... Counselor

Howard, Gordon S., Ph.D. (1968-1983) ..... Professor of Drama

Howard, Raymond C., Ed.D. (1974-1989) ..... Associate Professor of Counselor Education

Howard, Roy J., Ph.D. (1963-1988) ..... Professor of Philosophy

Huffman, Edward W., Ph.D. (1955-1980) ..... Professor of Zoology

Huls, Harry E., Ph.D. (1961-1983) ..... Professor of Elementary Education

Hungate, Robert P., Ph.D. (1961-1987; except 1965-1969) ..... Professor of Finance

Hunrichs, William A., Ph.D. (1957-1985) ..... Professor of Psychology

Hunter, Lawrence B., M.A. (1963-1989) ..... Professor of Art

Hurd, III, Lyman C., M.M. (1958-1979) ..... Professor of Music



Ingham, Muriel B., Ph.D. (1967-1981)	Professor of English
Inskip, Jr., James E., Ph.D. (1960-1990)	Professor of Teacher Education
Irgang, Frank J., Ph.D. (1956-1982)	Professor of Industrial Studies
Isensee, Robert W., Ph.D. (1948-1982)	Professor of Chemistry
Ishikawa, Wesley H., D.S.W. (1969-1988)	Professor of Social Work
Jackson, Elizabeth R., Doctorat (1969-1986)	Professor of French
Jackson, Everett Gee, M.A. (1930-1963)	Professor of Art
Janssen, Henry L., Ph.D. (1953-1988)	Professor of Political Science
Jencks, Clinton E., Ph.D. (1964-1986)	Professor of Economics
Johns, Gerald E., M.S.L.S. (1967-1986)	Associate Librarian
Johnson, Albert W., Ph.D. (1964-1991)	Vice President for Academic Affairs; Professor of Biology
Johnson, C. Dale, Ph.D. (1963-1986)	Professor of Sociology
Johnson, Philip E., M.S.C.E. (1958-1987)	Professor of Civil Engineering
Jones, Jr., Kenneth K., M.A. (1948-1983)	Professor of Telecommunications and Film
Jones, Walter D., Ph.D. (1962-1991)	Professor of Chemistry
Jordan, Jr., G. Ray, Ph.D. (1966-1987)	Professor of Religious Studies
Joseph, Lionel, Ph.D. (1947-1971)	Professor of Chemistry
Joy, Ned V., Ph.D. (1953-1982)	Dean of the College; Professor of Political Science
Kahn, Marion J., M.S. (1967-1983)	Professor of Social Work
Kaplan, Oscar J., Ph.D. (1946-1983)	Professor of Psychology
Karen, Robert L., Ph.D. (1964-1985)	Professor of Psychology
Kasch, Frederick W., Ed.D. (1948-1981)	Professor of Physical Education
Keen, Elmer A., Ph.D. (1967-1989)	Professor of Geography
Kelly, Beatrice L., Ph.D. (1967-1983)	Professor of Microbiology
Kenney, Louis A., Ph.D. (1961-1981)	University Librarian
Kessler, Lois P., M.A. (1969-1990)	Associate Professor of Health Science
Kidwell, William M., Ed.D. (1949-1970)	Director of Placement and Financial Aid; Professor of Psychology
Kiewiet De Jonge, Engbert J. C., Ph.D. (1963-1983)	Professor of Geography
King, Bonnie B., M.A. (1970-1984)	Assistant Professor of English, Imperial Valley Campus
Kinsey, Margaret E., M.A. (1961-1972)	Circulation Librarian
Kitchen, James D., Ph.D. (1957-1981)	Professor of Public Administration and Urban Studies
Kitzinger, Angela M., Ph.D. (1945-1969)	Professor of Health Science and Safety
Klann, Corinne F., M.A. (1962-1983)	Assistant Professor of Elementary Education
Klapp, Orrin E., Ph.D. (1948-1973)	Professor of Sociology
Kochanski, Adrian J., Ph.D. (1969-1983)	Professor of Public Administration and Urban Studies
Kohler, Richard C., Ph.D. (1969-1988)	Professor of English and Comparative Literature
Kopp, Harriet G., Ph.D. (1970-1983)	Professor of Communicative Disorders
Koppman, Jerry W., Ph.D. (1963-1987)	Professor of Psychology
Kozlik, Ludek A., Ph.D. (1965-1992)	Professor of Russian
Krummenacher, Daniel, Ph.D. (1968-1988)	Professor of Geological Sciences
Kukkonen, Ruth M., M.S.W. (1973-1989)	Professor of Social Work
Kummerow, Jochen, Ph.D., nat. (1973-1990)	Professor of Biology
Laiho, Ethel E., M.S. (1964-1982)	Associate Professor of Nursing
Lamb, Alma S., B.S. (1962-1988)	Assistant Librarian
Lambert, Arthur A., Ph.D. (1960-1983)	Professor of Music
Lamden, Charles W., Ph.D. (1946-1991; except 1967-1976)	Professor of Accountancy
Landis, Jean, M.S. (1968-1979)	Assistant Professor of Physical Education
Langenbach, Robert G., Ed.D. (1959-1981)	Professor of Information Systems

LaPray, Margaret H., Ph.D. (1969-1977)	Professor of Elementary Education
Lawson, Richard H., Ph.D. (1957-1984; except 1976-1984)	Professor of German
Learned, Vincent R., Ph.D. (1968-1981)	Professor of Electrical and Computer Engineering
LeBarron, Evangeline M., B.A., B.S. (1946-1975; except 1948-1949)	Professor of Information Systems
Lee, Robert E., M.A. (1956-1983)	Professor of Telecommunications and Film
Leerhoff, Ruth E., M.A. (1964-1991)	Librarian
Leiffer, Donald B., Ph.D. (1948-1971)	Professor of Public Administration and Urban Studies
Lemus, George, Ph.D. (1960-1991)	Professor of Spanish
Leslie, Norman C., M.N. (1969-1988)	Assistant Professor of Nursing
Leukel, Francis P., Ph.D. (1956-1983)	Professor of Psychology
Lienert, Charles, Ed.D. (1954-1977)	Professor of Educational Administration
Lodge, Chester R., Ph.D. (1954-1988)	Professor of Electrical and Computer Engineering
Loomis, David M., M.M. (1961-1983)	Associate Professor of Music
Lorwin, Rosalind A., Ph.D. (1964-1991)	Professor of Psychology
Lovely, Louise P., M.A., M.L.S. (1979-1988)	Librarian, Imperial Valley Campus
LuPone, Orlando J., Ph.D. (1964-1974)	Professor of Elementary Education
Lynn, Elizabeth, Ph.D. (1963-1988)	Associate Professor of Psychology
MacDonald, Gretchen, Ph.D. (1966-1981)	Associate Professor of Study Skills
Madsen, Roy P., Ph.D. (1966-1991)	Professor of Telecommunications and Film
Malcolm, David D., Ph.D. (1953-1983)	Professor of Counselor Education
Manjos, Thelma D., Ph.D. (1969-1975)	Professor of Counselor Education
Mann, Richard L., M.S.E.E. (1968-1982)	Professor of Electrical and Computer Engineering
Marosz, Wanda A., M.A. (1967-1986)	Associate Professor of Mathematical Sciences
Martin, Mary F., M.S. (1958-1980)	Assistant Professor of Family Studies and Consumer Sciences
Max, Stefan L., Ph.D. (1964-1984)	Professor of French
Maxwell, Jean M., M.S.S. (1963-1978)	Professor of Social Work
McAllister, R. Wayne, M.A. (1966-1983)	Assistant Professor of Educational Technology and Librarianship
McAmis, Lessley C., B.A. (1959-1971)	Documents Librarian
McBlair, William, Ph.D. (1948-1982)	Professor of Biology
McClard, O. Donavon, Ph.D. (1966-1986)	Professor of Special Education
McClurg, Jack, Ph.D. (1962-1991)	Professor of Philosophy
McCoy, Leone D., Ph.D. (1967-1990)	Professor of Teacher Education
McEuen, Robert B., Ph.D. (1969-1979)	Professor of Geological Sciences
McFall, John B., Ph.D. (1966-1985)	Professor of Marketing
McLean, Jr., Norman, Ph.D. (1965-1991)	Professor of Biology
McLoney, Wirt, Ed.D. (1949-1974)	Professor of Industrial Studies
McMullen, James D., Ed.D. (1958-1984)	Professor of Industrial Studies
Meek, Doris A., Ed.D. (1968-1981)	Professor of Secondary Education
Meier, Robert A., Ph.D. (1972-1986)	Professor of Accountancy
Merzbacher, Claude F., Ed.D. (1947-1978)	Professor of Natural Science
Messier, Leonard N., Ph.D. (1946-1979)	Professor of French
Mills, Jack, Ph.D. (1957-1985)	Professor of Speech Communication
Milne, David S., Ph.D. (1946-1976)	Professor of Sociology
Milne, Thair S., M.A. (1968-1979)	Associate Professor of Family Studies and Consumer Sciences
Milton, Daryl G., Ph.D. (1966-1991)	Professor of Management
Moe, Chesney R., Ph.D. (1931-1972)	Professor of Physics
Moe, Jean T., M.A. (1965-1983)	Associate Professor of Music
Monteverde, John P., Ph.D. (1954-1986)	Professor of English and Comparative Literature

Moore, Harold B., Ph.D. (1960-1991)	Professor of Biology
Morgan, Charles, M.S. (1949-1985)	Professor of Mechanical Engineering
Morris, Joyce, Ph.D. (1969-1990)	Associate Professor of Teacher Education
Mracek, Jaroslav J.S., Ph.D. (1965-1991)	Professor of Music
Munter, Robert L., Ph.D. (1964-1991)	Professor of History
Murdock, Doris G., B.S.L.S. (1960-1972)	Catalog Librarian
Nelson, Burt, Ph.D. (1957-1988)	Director of the Mt. Laguna Observatory; Professor of Astronomy
Nelson, Hilda B., Ph.D. (1965-1988)	Professor of French
Nelson, Sherwood M., Ph.D. (1956-1982)	Professor of Philosophy
Neuman, Donald R., Ph.D. (1967-1991)	Counselor
Neuner, Jr., Edward J., Ph.D. (1957-1986)	Professor of Economics
Neyndorff, Hans, Doctorandus (1962-1983)	Senior Assistant Librarian
Norland, Calvert E., M.S. (1947-1976)	Professor of Zoology
Norman, Nelson F., Ph.D. (1960-1983)	Professor of History
Nower, Leon, Ph.D. (1963-1990)	Associate Professor of Mathematical Sciences
O'Day, Edward F., Ph.D. (1957-1986)	Professor of Psychology
Oglesby, Allan C., M.D. (1984-1990)	Professor of Public Health
Olsen, Albert W., Ed.D. (1957-1983)	Professor of Physical Education
Olsen, Lyle I., Ed.D. (1961-1989)	Professor of Physical Education
Olson, Jr., Andrew C., Ph.D. (1946-1980)	Professor of Zoology
Onell, Robert, D.S.W. (1965-1979)	Professor of Social Work
O'Reilly, Nathalia Crane, Special Study at Barnard College, University of Madrid, and Sorbonne (1958-1983)	Assistant Professor of English and Comparative Literature
O'Reilly, Peter, Ph.D. (1968-1983)	Professor of Philosophy
Parsons, John A., Ph.D. (1965-1990)	Professor of Biology
Paulin, Harry W., Ph.D. (1962-1991)	Professor of German
Pelsner, Earl F., Ed.D. (1961-1990)	Counselor
Penn, Robert, Ph.D. (1960-1991)	Professor of Psychology
Perczel, Csilla F., Ph.D. (1970-1990)	Associate Professor of Art
Perkins, William A., Ph.D. (1955-1984)	Professor of English and Comparative Literature
Person, Gerald A., Ph.D. (1957-1981)	Professor of Secondary Education
Pfaff, Paul L., Ph.D. (1931-1971)	Professor of Speech Pathology and Audiology
Phelps, Leroy N., Ph.D. (1966-1990)	Associate Professor of Biology
Phillips, Jr., William H., Ed.D. (1963-1991)	Professor of Physical Education
Pierson, Albert Chad, Ph.D. (1954-1983)	Professor of Management
Pinceti, Jr., Stanley J., Ph.D. (1955-1986)	Professor of History
Piatz, Marvin H., Ed.D. (1955-1983)	Professor of Secondary Education
Plymale, Harry H., D.V.M. (1962-1991)	Associate Professor of Biology
Poroy, Ibrahim I., Ph.D. (1967-1987)	Professor of Economics
Posner, Walter H., M.A., M.A.L.S. (1962-1988)	Senior Assistant Librarian
Povenmire, E. Kingsley, M.F.A. (1946-1971)	Professor of Drama
Price, O. Lee, Ph.D. (1966-1986)	Associate Professor of Family Studies and Consumer Sciences
Prouty, Helen L., Ph.D. (1950-1976)	Professor of Secondary Education
Psomas, Themistocles, Ph.D. (1952-1982)	Associate Professor of Psychology
Qulett, Fredrick T., M.S., J.D. (1957-1981)	Professor of Civil Engineering
Rader, Daniel L., Ph.D. (1954-1983)	Professor of History
Ramage, Jean C., Ph.D. (1975-1989)	Professor of Counselor Education
Rao, M. V. Rama, Ph.D. (1957-1982)	Professor of Mechanical Engineering
Rasmussen, Aaron P., Ph.D. (1971-1980)	Associate Professor of Industrial Studies
Ratty, Frank J., Ph.D. (1954-1984)	Professor of Biology
Redding, Mary Worden, Ph.D. (1967-1983)	Associate Professor of English and Comparative Literature

Redding, Robert W., Ph.D. (1966-1985)	Associate Professor of English and Comparative Literature
Reel, Jane E., Ph.D. (1958-1991)	Associate Professor of Teacher Education
Reichert, Kurt, Ph.D. (1970-1981)	Professor of Social Work
Richardson, Robert W., Ph.D. (1939-1972; except 1946-1947)	Professor of Geography
Riehman, Lynne, D.S.W. (1976-1986)	Associate Professor of Social Work
Riggs, Dorothy J., Ed.D. (1966-1986)	Professor of Teacher Education
Riggs, Lester G., Ph.D. (1950-1978; except 1951-1952)	Professor of Mathematical Sciences
Rixman, Eunice E., D.M.A. (1960-1991)	Professor of Teacher Education
Roberts, Ellis E., Ph.D. (1949-1979)	Professor of Geological Sciences
Rodney, Joseph A., Ed.D. (1957-1976)	Dean, Imperial Valley Campus; Professor of Education
Rogers, Spencer L., Ph.D. (1930-1971)	Professor of Anthropology
Rohlfisch, Kramer, Ph.D. (1947-1974)	Professor of History
Rohlfisch, Marjorie C., M.A. (1966-1975)	Associate Professor of Music
Romano, Albert, Ph.D. (1963-1990)	Professor of Mathematical Sciences
Rost, Norman, M.M. (1951-1977)	Professor of Music
Roth (Longenecker), Martha, M.F.A. (1955-1981)	Professor of Art
Rowe, Robert D., Ph.D. (1946-1971)	Professor of Chemistry
Ruetten, Richard T., Ph.D. (1960-1991)	Professor of History
Ruja, Harry, Ph.D. (1947-1979)	Professor of Philosophy
Sandelin, Mary Lee, M.L.S. (1968-1983)	Senior Assistant Librarian
Sanderlin, George W., Ph.D. (1954-1983)	Professor of English and Comparative Literature
Sanders, Frederick C., Ph.D. (1967-1981)	Associate Professor of Speech Communication
Sandstrom, Glenn A., Ph.D. (1956-1983)	Professor of English and Comparative Literature
Sanner, Richard L., Ed.D. (1965-1981)	Media Specialist
Santaló, Joaquín, Ph.D. (1968-1989)	Associate Professor of Spanish
Sardinas, Maria A., M.T., M.S.W. (1968-1989)	Associate Professor of Social Work
Schalles, Frances I., A.B. (1950-1968)	Education and Curriculum Materials Librarian
Schapiro, Harriette C., Ph.D. (1966-1990)	Professor of Biology
Schmidt, Mary Gwynne, Ph.D. (1978-1991)	Professor of Social Work
Schmier, Walter D., J.D. (1967-1975)	Associate Professor of Business Law
Schrupp, Manfred H., Ph.D. (1948-1974)	Dean, School of Education; Professor of Secondary Education
Schutte, William H., M.S. (1947-1975)	Professor of Physical Education
Schwob, Marion L., M.S. (1934-1960)	Associate Professor of Physical Education
Sebold, Frederick D., Ph.D. (1969-1987)	Professor of Economics
Segal, Evalyn F., Ph.D. (1973-1983)	Professor of Psychology
Sender, Florence H., M.A. (1964-1973)	Associate Professor of Spanish
Settle, Robert B., Ph.D. (1972-1988)	Professor of Marketing
Shepard, David C., Ph.D. (1956-1991)	Professor of Biology
Shields, Allan E., Ph.D. (1949-1977; except 1969-1970)	Professor of Philosophy
Shira, Jr., Donald W., M.A.L.S. (1958-1986)	Senior Assistant Librarian
Shouse, Claude F., Ph.D. (1946-1972)	Professor of English
Shull, Jr., Charles M., Ph.D. (1969-1983)	Professor of Natural Science
Shutts, William H., Ph.D. (1958-1977)	Professor of Aerospace Engineering
Singer, Jr., Arthur, Ph.D. (1959-1983)	Professor of Special Education
Skaar, Donald L., M.S. (1960-1981)	Professor of Electrical and Computer Engineering
Sloan, William C., Ph.D. (1961-1990)	Professor of Biology



## Emeritus Faculty

Smith, Alan C., Ed.D. (1963-1989)	Professor of Education, Imperial Valley Campus
Smith, Deane F., M.Mus. (1939-1970)	Associate Professor of Music
Smith, Hayden R., Ph.D. (1957-1981)	Professor of Secondary Education
Smith, John R., Ph.D. (1957-1986)	Associate Professor of Psychology
Smith, Jr., Louis E., Ph.D. (1946-1979)	Professor of Physics
Smith, Newton B., Ph.D. (1954-1986)	Professor of Mathematical Sciences
Snider, Mervin S., M.A. (1953-1983)	Professor of Music
Snudden, Leslie W., D.B.A. (1959-1987)	Professor of Accountancy
Snyder, William S., Ph.D. (1960-1990)	Professor of Philosophy
Somerville, Rose M., Ed.D. (1967-1977)	Professor of Family Studies and Consumer Sciences and Sociology
Sonntag, Ilana L., M.L.S., M.A. (1980-1991)	Librarian
Sorensen, George W., Ph.D. (1967-1986)	Professor of Journalism and Sociology
Sorenson, George N., M.A. (1946-1976)	Professor of Art
Sorochan, Walter D., H.S.D. (1969-1991)	Professor of Health Science
Spangler, John A., Ph.D. (1946-1981)	Professor of Chemistry
Spaulding, Jr., William E., Ph.D. (1970-1985)	Professor of Information Systems
Spencer, Marjorie J., M.A. (1969-1978)	Associate Professor of Art, Imperial Valley Campus
Sportsman, Charles C., M.S. (1947-1968)	Associate Professor of Physical Education
Springston, Christine, M.A. (1930-1966)	Professor of Music
Srbich, Alexander L., Ph.D. (1959-1983)	Professor of Management
Stautland, Sigurd, Ph.D. (1966-1991)	Professor of Teacher Education
Stephenson, Clarence E., Ph.D. (1963-1991)	Professor of Drama
Stephenson, III, John S., Ph.D. (1969-1986)	Professor of Sociology
Stevens, Larry P., Ed.D. (1986-1991)	Assistant Professor of Administration, Rehabilitation and Postsecondary Education
Stevens, Walter R., Ph.D. (1956-1990)	Professor of Psychology
Stone, Hamilton L., B.S. (1947-1971)	Associate Professor of Mechanical Engineering
Stone, Sanford H., M.S.E., M.S. (1956-1990)	Professor of Civil Engineering
Storm, Alvena S., M.A. (1926-1966)	Professor of Geography
Stough, Morrow F., Ph.D. (1950-1976; except 1966-1971)	Professor of Education
Stout, Zoe E., Ph.D. (1965-1977)	Associate Professor of Family Studies and Consumer Sciences
Strand, Marguerite R., Ph.D. (1955-1977)	Counselor, Professor of Secondary Education
Straub, Lura Lynn, M.C.S. (1948-1978)	Professor of Information Systems
Strong, Douglas H., Ph.D. (1964-1990)	Professor of History
Stuart, Robert J., Ph.D. (1969-1987)	Professor of Electrical and Computer Engineering
Stumpf, Jack E. A., Ph.D. (1965-1983)	Professor of Social Work
Sullivan, Edward D. S., Ph.D. (1967-1983)	Assistant Professor of English and Comparative Literature
Szabo, Andrew, Ph.D. (1955-1978)	Collection Development Librarian
Tanzer, JoAnn L., Ed.D. (1956-1986)	Professor of Art
Taylor, Jr., Hawley C., Ph.D. (1964-1990)	Associate Professor of English and Comparative Literature
Taylor, James W., Ph.D. (1950-1980)	Professor of Geography
Taylor, Kenneth M., Ph.D. (1949-1978)	Professor of Biology
Teasdale, John G., Ph.D. (1956-1982)	Professor of Physics
Thiel, Donald W., Ph.D. (1957-1986)	Professor of Industrial Studies
Thomas, Beatrice A., M.A. (1954-1977)	Professor of Nursing
Thompson, Willis H., M.A. (1967-1991)	Assistant Professor of Natural Science
Threet, Richard L., Ph.D. (1961-1981)	Professor of Geological Sciences

Tollefsen, Dorothy J., M.A. (1946-1972)	Professor of Physical Education
Tossas, Leila de Irizarry, Ed.D. (1961-1977)	Professor of Elementary Education
Tozer, Lowell, Ph.D. (1954-1986)	Professor of English and Comparative Literature
Trimmer, Russell L., Ph.D. (1955-1976)	Professor of Special Education
Turner, Marjorie S., Ph.D. (1954-1977)	Professor of Economics
Turner, Merle B., Ph.D. (1950-1974)	Professor of Psychology
Vanderbilt, Kermit, Ph.D. (1962-1988)	Professor of English and Comparative Literature
Varela-Ibarra, José L., Ph.D. (1976-1991)	Associate Professor of Spanish, Imperial Valley Campus
Vergani, Luisa M., Dottorato in Lettere (1969-1983)	Professor of Italian
Wadsworth, Jr., Earl P., Ph.D. (1956-1990)	Professor of Chemistry
Walba, Harold, Ph.D. (1949-1986)	Professor of Chemistry
Walch, Jr., Henry A., Ph.D. (1955-1985)	Professor of Biology
Wallace, Robert D., Litt. D. (1957-1986)	Professor of Art
Warburton, John T., Ed.D. (1968-1982)	Associate Professor of Educational Administration
Warner, Margery B., Ph.D. (1956-1976)	Professor of Family Studies and Consumer Sciences
Warren, Edward W., Ph.D. (1963-1990)	Professor of Philosophy and Classics
Warren, Leroy J., Ph.D. (1955-1988)	Professor of Mathematical Sciences
Webb, Charles R., Ph.D. (1949-1972; except 1965)	Professor of History
Wedberg, Hale L., Ph.D. (1959-1983)	Professor of Botany
Weeter, Raymond D., Ph.D. (1966-1991)	Associate Professor of Spanish
Weir, Mary Jane, Ph.D. (1970-1982)	Assistant Professor of Educational Technology and Librarianship
Weissman, Stanley N., Ph.D. (1962-1991)	Professor of Philosophy
Wendling, Aubrey, Ph.D. (1954-1982)	Professor of Sociology
West, John J., M.S. (1969-1989)	Senior Assistant Librarian
Wetherill, William H., Ph.D. (1957-1982)	Professor of Educational Administration
Whitney, Frederick C., Ph.D. (1970-1979)	Associate Professor of Journalism
Widmer, Kingsley, Ph.D. (1956-1991)	Professor of English and Comparative Literature
Wijnholds, Heiko J., Jur.D. (Econ.) (1967-1980)	Professor of Finance
Wilding, John H., Ed.D. (1960-1986)	Professor of Teacher Education
Wilhelm, Betty Jane, M.A. (1961-1980)	Assistant Professor of Physical Education
Willerding, Margaret F., Ph.D. (1956-1976)	Professor of Mathematics
Williamson, Gloria R., M.A. (1961-1979)	Associate Professor of Physical Education
Wilson, Galen, D.M.A. (1969-1989)	Professor of Music, Imperial Valley Campus
Wimer, Arthur C., M.A. (1950-1971)	Professor of Journalism
Wolf, Ernest M., Ph.D. (1947-1976)	Professor of German
Wolter, Gerhard, M.S. (1957-1975)	Professor of Physics
Yahr, Charles C., Ph.D. (1955-1988)	Professor of Geography
Yarborough, John M., Ph.D. (1959-1972)	Director of Housing, Professor of Education
Yesselman, Charlotte B., Ph.D. (1967-1988)	Professor of Teacher Education
Ziegenfuss, George, Ed.D. (1948-1980)	Professor of Physical Education

## Part-Time Faculty 1991-1992

### ARTS AND LETTERS

Adler, Frances P., M.F.A., Women's Studies
Allister, Shirley L., M.A., Academic Skills
Anderson, Richard E., M.A., Anthropology
Begler, Elsie B., Ph.D., Arts and Letters, General
Bergstrom, George W., Jr., Ph.D., Political Science
Brown, Nancy, M.A., Political Science
Butler, Maria G., M.A., Mexican-American Studies
Butler, Raymond J., M.A., Economics
Butler, Renate F., Ph.D., German
Chamberlain, Charles T., Ph.D., Classics
Christenson, Lynne E., Ph.D., Arts and Letters, General; Anthropology
Chu, Andrea Wong, M.A., Linguistics
Felix, Ricardo R., M.A., Mexican American Studies
Fixmer, Clyde H., Ph.D., English
Freeman, Roderick A., Ph.D., Philosophy
Friberg, Runa R., M.A., Academic Skills
Gil, Yair, B.A., Linguistics
Greene, Myron, M.A., History
Guthrie, Wayne L., Ph.D., History
Hashemipour, Margaret M., Ph.D., Linguistics
Hill, Richard B., Jr., Ph.D., Mexican American Studies
Johnson, Leslie S., M.S., Arts and Letters, General
Kulkarni, Vijayalakshmi C., Ph.D., Economics
Mackey, Linda C., J.D., Women's Studies
Martinez, Alexander D., M.A., Mexican American Studies
McNulty, Mark A., M.A., Economics
Miller, Elise, M.A., Academic Skills
Miyamoto, Yumi, M.A., Linguistics
Nunez, Rene, M.A., Mexican American Studies
Paynter, Edward L., Ph.D., History
Phillips, Ashley E., M.A., Women's Studies
Quinn, Ronald J., Ph.D., History
Rockland, Steven G., M.A., M.S., Economics
Rodriguez, Barbara, M.A., German
Rodriguez-Gonzalez, Raul, M.A., Mexican American Studies
Schlesinger, Steven A., M.A., Philosophy
Shahrokhi, Shahrokh, Ph.D., Economics
Shaver, Barbara M., Ph.D., Women's Studies
Spaulding, Robert F., M.S., Economics
Spirito, Donald P., M.A., Economics
Stoddard, Michael Mathis, Ph.D., Political Science
Thomas, Marie D., Ph.D., Women's Studies
Thompson, Mary J., M.A., Academic Skills
Velasco, Alfredo F., Ph.D., Mexican American Studies
Wawrytko, Sandra A., Ph.D., History, Philosophy
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### BUSINESS ADMINISTRATION

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### EDUCATION

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### ENGINEERING

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 Luera, Maryann, M.F.A., Art  
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 Taylor, Donna L., B.A., Art  
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 Woolsey, Ralph A., Telecommunications and Film  
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## SCIENCES

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 Meckstroth, Phyllis J., M.A.T., Mathematical Sciences  
 Polichik, Allan L., Ph.D., Psychology  
 Sabbadini, Gail A., M.A., Biology  
 Singer, Phillip A., Ph.D., Biology  
 Sobko, Gregory M., Ph.D., Mathematical Sciences  
 Stephany, Gary R., B.S., Biology  
 Terry, Ann H., M.S., Geological Sciences  
 Wingerd, Mala S., M.S., Biology  
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## ATHLETICS

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 Burns, Beth, M.A.  
 Clegg, Charles P., B.A.  
 Dietz, James C., M.S.  
 Fairchild, Stephen T., M.A.  
 Gabel, Myles J., B.A.  
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 Johnson, Curtis, B.A.  
 Kubala, Susan, M.S.  
 Lamb, Barry, B.A.  
 Luginbill, John A., M.Ed.  
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 Ohton, David P., B.S.  
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 Plunkett, Carol S., M.S.  
 Schmidt, Edward A., B.A.  
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 Suwara, Rudolph, M.S.  
 Underwood, Dan D., M.A.  
 Warner, James M., B.S.  
 Warner, Mark A., B.A.  
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## IMPERIAL VALLEY CAMPUS

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 Balch, Patrick E., M.A.  
 Bowen, Von L., M.S.T.

Briggs, John H., M.S.  
 Carpenter, Jane S., M.A.  
 Carrasco, Santos Arellanes, Ph.D.  
 Edlund, Carol J., Ph.D.  
 Elizondo, Sergio D., Ph.D.  
 Ferson, Sylvia E., M.A.  
 Fragale, Richard P., M.A.  
 Fuentes, Suzanna, M.A.  
 Gomez-Montero, Sergio, B.A.  
 Gonzalez-Lopez, Horacio, M.A.  
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 Shaver, Barbara M., Ph.D.  
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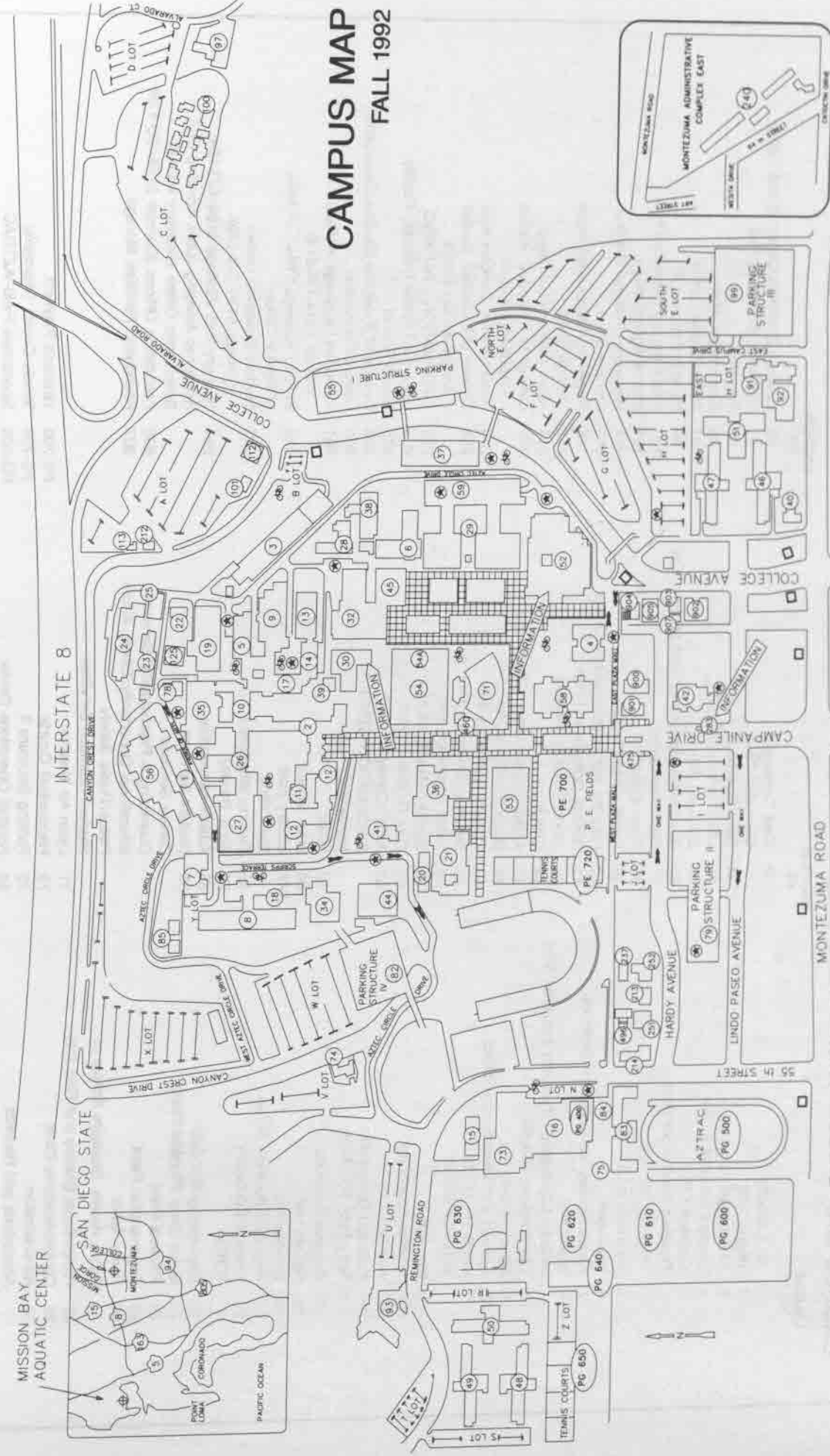


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LOCATION NO.	
904	Academic Advising (Univ. Advising Ctr.) (College 5194/CO-194)
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15	Athletics
15	Aztec Athletic Foundation
52	Aztec Center
45	Aztec Shops (Campus Store)
23	Boiler Shop, Physical Plant
37	Business Administration and Mathematics
85	Campus Children's Center (Child Care)
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4	Cashiers Office
93	Chapultepec Hall
3	Chemistry-Geology
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28	Communications Clinic
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36	Dramatic Arts
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5	Engineering Lab
22	Engineering Test Cell
30	Evaluations
	Extended Studies — see College of
39	Faculty Staff Centre
7	Family Studies and Consumer Sciences
4	Financial Aid

LOCATION NO.	
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9	Industrial Technology (Formerly Industrial Arts)
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900	Leisure Connection
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11	Little Theatre
54	Love Library
240	Mail Room, Central (ACE-102)
101	Maintenance Garage
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52	Montezuma Hall
53	Music
18	Nasatir Hall
38	North Education
47	Olmecca Residence Hall
71	Open Air Theater
460	Open Air Theater Dressing Facility
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79	Parking Structure II
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16	Peterson Gymnasium
21	Physical Education
20	Physical Education Annex
24	Physical Plant
17	Physical Sciences
13	Physics
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LOCATION NO.	
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	(East) Maya, Olmecca, Tenochca,
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16	Terry Pool (PG-400)
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49	Toltec Residence Hall
475	Transit Shelter
92	Tula Hall
30	Veterans Affairs
100	Villa Alvarado Residence Hall
84	Weightroom (Athletics)
34	West Commons
PE 700	Women's Playfield
50	Zapotec Residence Hall
51	Zura Residence Hall





# CAMPUS MAP INDEX — Numerical Listing

LOCATION NO.		LOCATION NO.		LOCATION NO.	
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2	Hepner Hall		Courtyard Cafe	91	Tenochca Residence Hall
3	Chemistry-Geology	34	West Commons	92	Tula Hall
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7	Family Studies and Consumer Sciences	40	Housing and Residential Life Office	113	Storage Shed
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10	Life Sciences (South)	44	Chill Plant	214	Aztec Athletic Foundation
11	Little Theatre	45	Aztec Shops (Campus Store)	237	College of Extended Studies
12	Speech and Telecommunications	46	Maya Residence Hall		Registration Office
	KPBS-FM Studio	47	Olmecca Residence Hall	240	Administrative Complex East
	KPBS-TV Studio	48	Tarastec Residence Hall	252	College of Extended Studies
13	Physics	49	Toltec Residence Hall		Administration (CES)
14	Physics-Astronomy	50	Zapotec Residence Hall	283	INFORMATION — PARKING
15	Athletics	51	Zura Residence Hall	460	Open Air Theater Dressing Facility
16	Peterson Gymnasium	52	Aztec Center	475	Transit Shelter
	Terry Pool (PG-400)		INFORMATION CENTER	496	College of Extended Studies Classrooms
17	Physical Sciences		Montezuma Hall	900	Leisure Connection
18	Nasatir Hall	53	Music	901	American Language Institute
19	Engineering	54	Love Library		(Hardy 5814/HA-814)
20	Physical Education Annex	54A	Library East	902	El Nido (College 5164/CO-164)
21	Physical Education		Test Office		KPBS-TV Offices
	ROTC	55	Parking Structure I	903	Student Resource Center
22	Engineering Test Cell	56	Art II (North)		(College 5170/CO-170)
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25	Cogeneration Plant		Career Services		Scholarship Office (Seabury Annex)
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27	Professional Studies and Fine Arts	71	Police/Public Safety		
28	Communications Clinic		Student Outreach Services		
30	Administration	73	Open Air Theater		
	Admissions and Records	79	Racquetball Courts		
	Evaluations		Parking Structure II		
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			Football Coaches Offices		
			Weightroom (Athletics)		
				PE-700	Women's Playfield
				PE-720	Tennis Courts (Women's)
				PG-500	Sportsman Field-AZTRAC
				PG-630	Smith Field and Baseball Clubhouse
				PG-650	Tennis Courts (Men's)



The Gublein Equatorial Sundial, sometimes called a "teaching shadow," was built by the House of Gublein in Lucerne, Switzerland, and combines functional values of astronomical and mathematical data with artistic sculpture. A Gublein sundial can be used to tell time within two minutes, the day, year, season, the phase of the moon, and the sign of the zodiac.

The instrument was given to the university as a memorial to the late George A. Koester, Professor of Education and Executive Dean at San Diego State University. While on campus, Dr. Koester was responsible for the growth of many structures from blueprint to completion, including the library, music, and drama buildings, Aztec Center, Zura Residence Hall, and Health Services.

