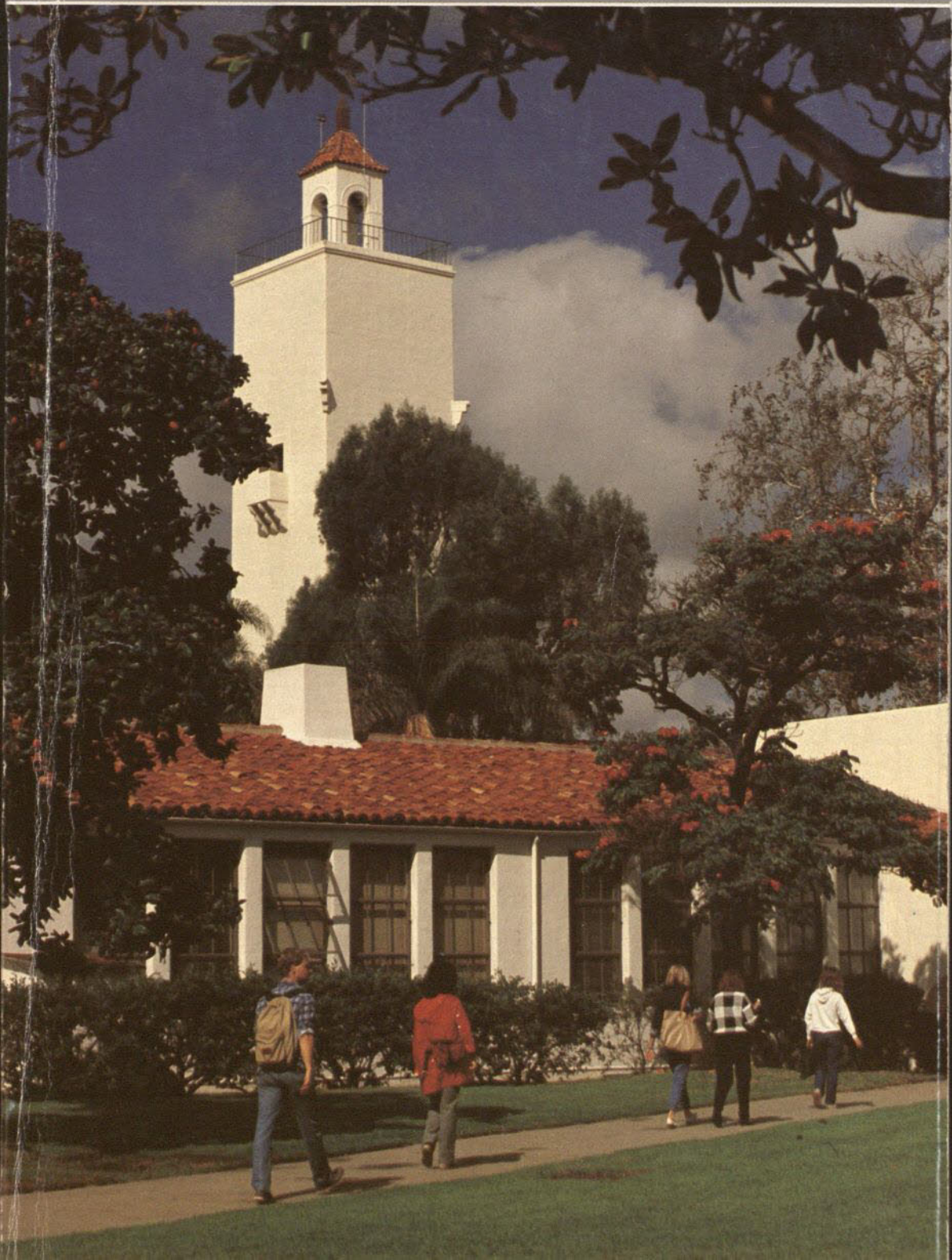


**1985-86**

**General Catalog**

**San Diego State University**

**SDSU**





UNIVERSITY ADVISING CENTER  
 CAMPUS LAB SCHOOL, 107  
 SAN DIEGO STATE UNIV.  
 SAN DIEGO, CA 92182  
**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.

### For additional information

on	consult
Admissions	Director of Admissions and Records, AD-1st Floor
Athletics	Director of Athletics, MPE-114
Campus Activities	Student Resource and Information Center, CL-114
Counseling	Counseling Services and Placement, 5850 Hardy
Extension Classes	College of Extended Studies, 5630 Hardy
Financial Aid	Director of Financial Aid, CL-122
Fraternities and Sororities	Director of Housing, 6050 Montezuma
Grades	Admissions and Records, AD-1st Floor
Graduate Study	Dean of the Graduate Division, AD-220
Health Services	Director of Health Services, 5300 Campanile Dr.
Housing	Director of Housing, 6050 Montezuma
Imperial Valley Campus	Dean, 720 Heber Ave., Calexico, CA
Library Facilities	University Librarian, Love Library
Parking	Parking Coordinator, 5850 Hardy
Placement	Counseling Services and Placement, 5850 Hardy
Registration	Admissions and Records, AD-1st Floor
ROTC	
Air Force	Chair, Aerospace Studies, T-56
Army	Chair, Military Science, T-63
Navy	Chair, Naval Science, PSFA-160
Scholarships	Scholarship Office, CL-109
Student Employment	Counseling Services and Placement, 5870 Hardy
Study Abroad (Academic Year)	Division of Undergraduate Studies, AD-223
Summer Study	College of Extended Studies, 5630 Hardy
Teaching Credentials	Credentials Office, College of Education, ED-100
Transcripts	Admissions and Records, AD-1st Floor
Veterans Benefits	Admissions and Records, AD-1st Floor

General Catalog 1985-1986, volume 72, San Diego State University, San Diego, California 92182.

Preparation of this catalog, completed in January of each year, is under the direction of the Associate Dean, Academic Services. The Catalog may be purchased, starting in May of each year, at the Aztec Shops on campus for \$3.74 plus 6% sales tax, a price established by the Board of Trustees of The California State University. To order by mail, send \$6.25 directly to Information Services, Student Resource and Information Center, San Diego State University, San Diego, CA 92182; or telephone (619) 229-2466.

*Catalog photos* by Reg Castro and Purcell Woodard of SDSU Learning Resource Center.

*Cover photo:* Pictured in the foreground is Hepner Hall, named in 1976 in honor of Walter R. Hepner who served as the third president of the institution, 1935-52. In the background is Hardy Memorial Tower, named in 1975 in memory of Edward L. Hardy who served as the second president of the institution, 1910-35.

UNIVERSITY ADVISING CENTER  
 CAMPUS LAB SCHOOL, 107  
 SAN DIEGO STATE UNIV.  
 SAN DIEGO, CA 92182

# General Catalog

and

## Announcement of Courses

Volume 72

1985-1986

**San Diego State University**  
**5300 Campanile Drive**  
**San Diego, California**  
**92182-0763**  
**(619) 265-5200**



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# Academic Calendar

## 1985-86

### SUMMER SESSIONS, 1985

May 27	Holiday—Memorial Day. Campus closed (no classes).
June 3-June 21	Term A (3 weeks).
July 4	Holiday—Independence Day. Campus closed (no classes).
June 24-August 2	Term B (6 weeks).
June 24-July 26	Term C (5 weeks).
August 5-August 23	Term D (3 weeks).
June 3-July 12	Term E (6 weeks).

### FALL SEMESTER, 1985

August 1	Applications for admission or readmission to San Diego State University for the spring semester 1986 accepted. Applications are accepted after August 30 only until enrollment quotas are met.
August 2	Last day to apply for leave of absence for fall semester.
August 26	Opening date of the academic year.
August 26	Schedule Adjustment Day.
August 27-28	Walk-Through Registration.
August 29-30	Testing and advising days.
September 2	Holiday—Labor Day. Campus closed (no classes).
September 3	First day of classes.
September 3-6	Late Registration.
September 16	Last day to drop classes.
September 17	Last day to apply for refunds.
September 20	Last day to file application for bachelor's degree for December 1985 graduation.
September 23	Last day to add classes or change grading basis.
September 23	Last day to officially withdraw from the University for fall semester 1985 without penalty.
November 1	Application for admission or readmission to San Diego State University for the fall semester 1986 accepted. Applications are accepted after November 29 only until enrollment quotas are met.
November 28-30	Thanksgiving recess (no classes).
December 12	Last day of classes before final examinations.
December 13	Study and consultation day.
December 14-21	Final examinations.
December 20	Last day to file application for bachelor's degree for May and August 1986 graduation.
December 23	Winter recess begins.
December 23-27	Holiday—Winter recess. Campus closed (no classes).
December 30	Last date for nonresident students to change residence for spring semester 1986.
December 30	Grades due from instructors. (Noon deadline.)
December 30	Last day of fall semester.
January 1	Holiday—Winter recess. Campus closed (no classes).

### WINTERSESSION, 1986

January 6-24

Wintersession.

### SPRING SEMESTER, 1986

August 1	Applications for admission or readmission to San Diego State University for the spring semester 1986 accepted. Applications are accepted after August 30 only until enrollment quotas are met.
January 17	Last day to apply for a leave of absence for spring semester.
January 20	Holiday—Martin Luther King's Birthday. Campus closed (no classes).
January 21	First day, second semester.
January 21	Schedule Adjustment Day.
January 21-22	Walk-Through Registration.
January 23-24	Testing and advising days.
January 27	First day of classes.
January 27-30	Late Registration.
February 7	Last day to drop classes.
February 10	Last day to apply for refunds.
February 10	Applications for bachelor's degree for December 1986 graduation accepted.
February 14	Last day to add classes or change grading basis.
February 14	Last day to officially withdraw from the University for spring semester 1986 without penalty.
March 22	Last day of classes before spring recess.
March 24-30	Spring recess.
March 31	Classes resume.
May 6	Applications for bachelor's degree for May and August 1987 graduation accepted.
May 15	Last day of classes before final examinations.
May 16	Study and consultation day.
May 17-24	Final examinations.
May 25	Commencement.
May 26	Holiday—Memorial Day. Campus closed (no classes).
May 30	Grades due from instructors. (Noon deadline.)
May 30	Last day of spring semester.
August 1	Last day to apply for a leave of absence for fall semester.

### SUMMER SESSIONS, 1986

May 26	Holiday—Memorial Day. Campus closed (no classes).
June 2-June 20	Term A (3 weeks).
July 4	Holiday—Independence Day.
June 23-August 1	Term B (6 weeks).
June 23-July 25	Term C (5 weeks).
August 4-22	Term D (3 weeks).
June 2-July 11	Term E (6 weeks).



## Schedule of Fees

1985-86

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

FEES MUST BE PAID AT TIME OF REGISTRATION. CHECKS OR CHARGE SLIPS ACCEPTED FOR EXACT AMOUNT OF FEES. OVERPAYMENTS OF \$5.00 OR LESS ARE REFUNDED ONLY UPON REQUEST. IF YOUR CHECK OR CHARGE SLIP IS RETURNED BY THE BANK FOR ANY REASON, YOUR REGISTRATION MAY BE CANCELED AND YOU WILL BE BILLED \$20.00 (Dishonored payment charge and late fee of \$10.00 each). PAYMENT OF FEES FOR ADVANCE REGISTRATION OR WALK-THROUGH REGISTRATION SHOULD BE MADE BY CHECK, MONEY ORDER, OR CHARGE CARD. CHECKS TO BE MADE PAYABLE TO SDSU. DO NOT ENCLOSE CASH.

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

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

Units Attempted	Registration Fee
0 units — 6.0 units	\$210.50
6.1 or more units	\$330.50

The above fee also includes a Student Activity Fee of \$10.00, a Student Union Fee of \$16.00, a Facilities Fee of \$3.00, an Instructionally Related Activities Fee of \$15.00, and a State University Fee of either \$166.50 or \$286.50, depending on unit load.

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 \$126.00

(Tuition is payable in addition to registration fees listed above. For fee-paying purposes, zero 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 125.00

### Parking Fees

Nonreserved parking space, per semester ..... \$33.75

Car pool—see Cashiers Office.

Less than four-wheeled, self-propelled vehicle (motorcycle, moped) ..... 8.45

**Miscellaneous Fees** (Fees payable when service is rendered.)

Application for admission or readmission (nonrefundable) ..... \$35.00

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

Failure to meet administratively required appointment or time limit (late fee) ..... 25.00

Photo-identification card (One-time cost to both new undergraduate and graduate students at time of registration. Valid only when accompanied by current semester validation card.) ..... 10.00

Lost identification card ..... 3.00

Photo I.D. card only ..... 2.00

Registration validation card only ..... 2.00

Photo I.D. card and validation card ..... 4.00

Transcript of record (official or unofficial) ..... 4.00

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

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

R.O.T.C. deposit (Unexpended portion is refundable.) ..... 50.00

Check or charge slip returned for any cause\* ..... 10.00

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

Graduation fee\*\* ..... 9.00

Evaluation and diploma fee\*\* ..... 10.00

\* Late fee also charged when applicable.

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

Credential application fee	35.00
Credential evaluation fee	25.00
Musical instrument repair fee	10.00
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

### Miscellaneous Instructional Course Charges

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

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

**Development, Administration and Technology** 404, 532, 540, 541, 542, 544, 553, 571, 641, 642, 671, 676, 775.

**Family Studies and Consumer Sciences** 205A, 205B, 301, 302, 405, 480, 605.

**Industrial Arts** 115, 121, 131, 140, 151, 161, 171, 181, 301, 315, 321, 331, 341, 351, 361, 371, 381, 402, 422, 432, 443, 444, 452, 462, 472, 482, 491, 492, 498, 499, 503, 517, 523, 533, 540, 542, 553, 573, 583.

**Music** 345.

**Physical Education** 116A-116B, 119A-119B, 124A-124B, 128A-128B, 138, 145, 146, 147, 150A-150B.

### CREDIT CARDS

Only VISA and MasterCard bank credit cards may be used for payment of Student Fees.

### LIABILITY FOR PAYMENT

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.

Foreign students must pay or sign an installment agreement for a minimum of 6 units at time of registration. (Students participating in Advance Registration must make payment or submit an installment agreement to Cashiers prior to the first day of class.) Foreign students wishing to pay for fewer than 6 units at registration must submit to Cashiers written approval to do so from the International Students Office.

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.

### DISHONORED CHECK OR CHARGE SLIP

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

**Advance Registration Payments.** You will be disenrolled from all classes received through Advance Registration; it will then be necessary to re-register during Walk-Through or Late Registration. You will be notified that this action was taken and billed for the \$10.00 dishonored payment charge by Cashiers.

**Other Registration/Miscellaneous Fee Payments.** You will be billed for the \$10.00 dishonored payment charge, and the \$10.00 Late Fee when applicable. Nonpayment of fees or tuition may result in cancellation of your registration and withholding of further services until all financial liabilities have been resolved.



**REFUND OF FEES**

Details concerning fees which may be refunded, the circumstances under which fees may be refunded, and the appropriate procedure to be followed in seeking refunds may be obtained by consulting Section 41803 (parking fees), 41913 (nonresident tuition), 42019 (housing charges), and 41802 (all other fees) of Title 5, *California Administrative Code*. 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**

**Complete Withdrawal.** To be eligible for refund of registration fees, a student withdrawing completely from the University (from *all* classes) MUST obtain a withdrawal card from the Office of Admissions and Records and file a refund application with the Cashiers Office, CL-108, not later than 14 days following the commencement of instruction (Refund Deadline). All but \$5.00 will be refunded. YOUR REGISTRATION VALIDATION 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.)

**Reduction of 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, CL-108, not later than 14 days following the commencement of instruction (Refund Deadline). All but \$5.00 will be refunded. FOR ADDITIONAL INFORMATION, CONTACT THE CASHIERS OFFICE OR TELEPHONE 265-5253.

**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 registration validation card and application for refund to the Cashiers Office.

**Refund of Nonresident and Foreign Student Tuition**

Tuition paid for a course scheduled to continue for an entire semester may be refunded in accordance with the following schedule, if application is received by the 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
Nonreserved space per semester:	
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 sticker or a receipt indicating that the sticker was removed from the vehicle by a University Police Officer (Information Booth, Campanile Drive) must be turned in to the Cashiers Office (CL-108) at the time you file your refund application. Refund applications are available at the Cashiers Office.

**LATE REGISTRATION FEE**

This nonrefundable fee pertains to those students who register after classes begin. The Cashiers Office should be consulted for further details.

**APPEALS PROCESS**

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.

**SUMMER SESSION FEES**

Tuition and fees	(per unit) \$64.00
Parking fees (nonreserved spaces)	22.50
Entire summer period	11.25
Five-week term	13.50
Six-week term	6.75
Three-week term	

**EXTENSION COURSE FEES**

Extension/Open University	(approximately per unit) \$60.00
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**EXEMPTIONS**

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

**ALAN PATTEE SCHOLARSHIPS**

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

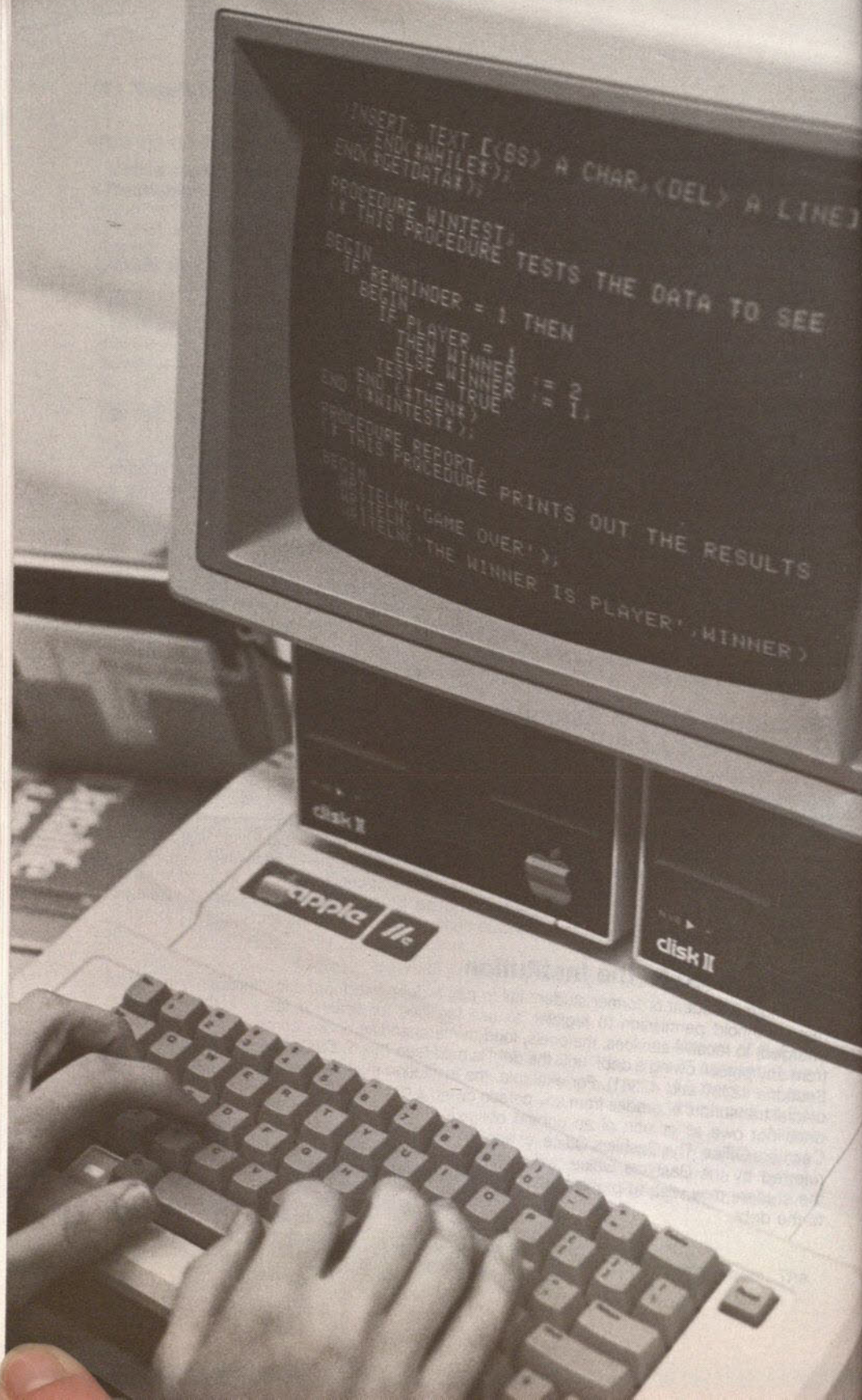
**Procedure for the Establishment or Abolishment of a Student Activity Fee**

The law governing The California State University provides that a student activity fee may be established by student referendum with the approval of two-thirds of those students voting. The Student Activity Fee was established at San Diego State University by student referendum in 1955. The same fee can be abolished by a similar two-thirds approval of students voting on a referendum called for by a petition signed by 10 percent of the regularly enrolled students. (*Education Code*, Section 89300.) The level of the fee is set by the Chancellor. An increase 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 Administrative Code*, 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.





```
INSERT: TEXT: C(BS) A CHAR, (DEL) A LINE)  
END (WHILEX)  
END (GETDATA)  
  
PROCEDURE WINTEST  
( THIS PROCEDURE TESTS THE DATA TO SEE  
BEGIN  
  IF REMAINDER = 1 THEN  
    BEGIN  
      IF PLAYER = 1 THEN  
        THEN WINNER := 1  
      ELSE WINNER := 2  
      TEST := TRUE  
    END (THEN)  
  END (WINTEST)  
  
PROCEDURE REPORT  
( THIS PROCEDURE PRINTS OUT THE RESULTS  
BEGIN  
  WRITELN 'GAME OVER')  
  WRITELN 'THE WINNER IS PLAYER', WINNER )
```

# Organization and Administration

The California State University  
Board of Trustees  
Office of the Chancellor  
San Diego State University  
Advisory Board  
Administration  
Colleges, Schools  
Departments, Programs



## The California State University

### The California State University

The individual California State Colleges were brought together as a system by the Donahoe Higher Education Act of 1960. In 1972 the system became The California State University and Colleges and in 1982 the system became The California State University. Today, 17 of the 19 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 College, Bakersfield—began instruction in 1970.

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

The Trustees, the Chancellor and the Presidents develop systemwide policy, with actual implementation at the campus level taking place through broadly based consultative procedures. The Academic Senate of The California State University, made up of elected representatives of the faculty from each campus, recommends academic policy to the Board of Trustees through the Chancellor.

Academic excellence has been achieved by The California State University through a distinguished faculty, whose primary responsibility is superior teaching. While each campus in the system has its own unique geographic and curricular character, all campuses, as multi-purpose institutions, offer undergraduate and graduate instruction for professional and occupational goals as well as broad liberal education. All of the campuses require for graduation a basic program of "General Education—Breadth Requirements" regardless of the type of bachelor's degree or major field selected by the student.

The CSU offers more than 1,500 bachelor's and master's degree programs in some 200 subject areas. Nearly 500 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.

The Consortium of the CSU draws on the resources of the 19 campuses to offer regional and statewide off-campus degree, certificate, and credential programs to individuals who find it difficult or impossible to attend classes on a campus. In addition to Consortium programs, individual campuses also offer external degree programs.

System enrollments total approximately 314,000 students, who are taught by a faculty of 18,500. 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 900,000 persons have been graduated from the nineteen campuses since 1960.

### The Consortium of The California State University

The Consortium of the CSU—"The 1,000-Mile Campus"—is a separate, fully accredited, degree-granting institution of the CSU. It draws on the combined resources of the 19 campuses to offer external statewide and regional degree, certificate, and teaching credential programs.

The Consortium was established in 1973 to meet the needs of adults who find it difficult or impossible to participate in regular on-campus programs. Instruction is thus provided students in convenient places at convenient times. Currently, programs are offered in more than 50 sites throughout California.

Full- and part-time CSU faculty, as well as qualified experienced practitioners, go where the students are, or provide opportunities for individualized home study. Programs can be tailored to meet the specific needs of employees in business, industry, education, or government. Consortium programs are upper division or graduate level. All courses offer residence credit leading to bachelor's or master's degrees. Credit and course work are transferable statewide. Programs are financed by student fees.

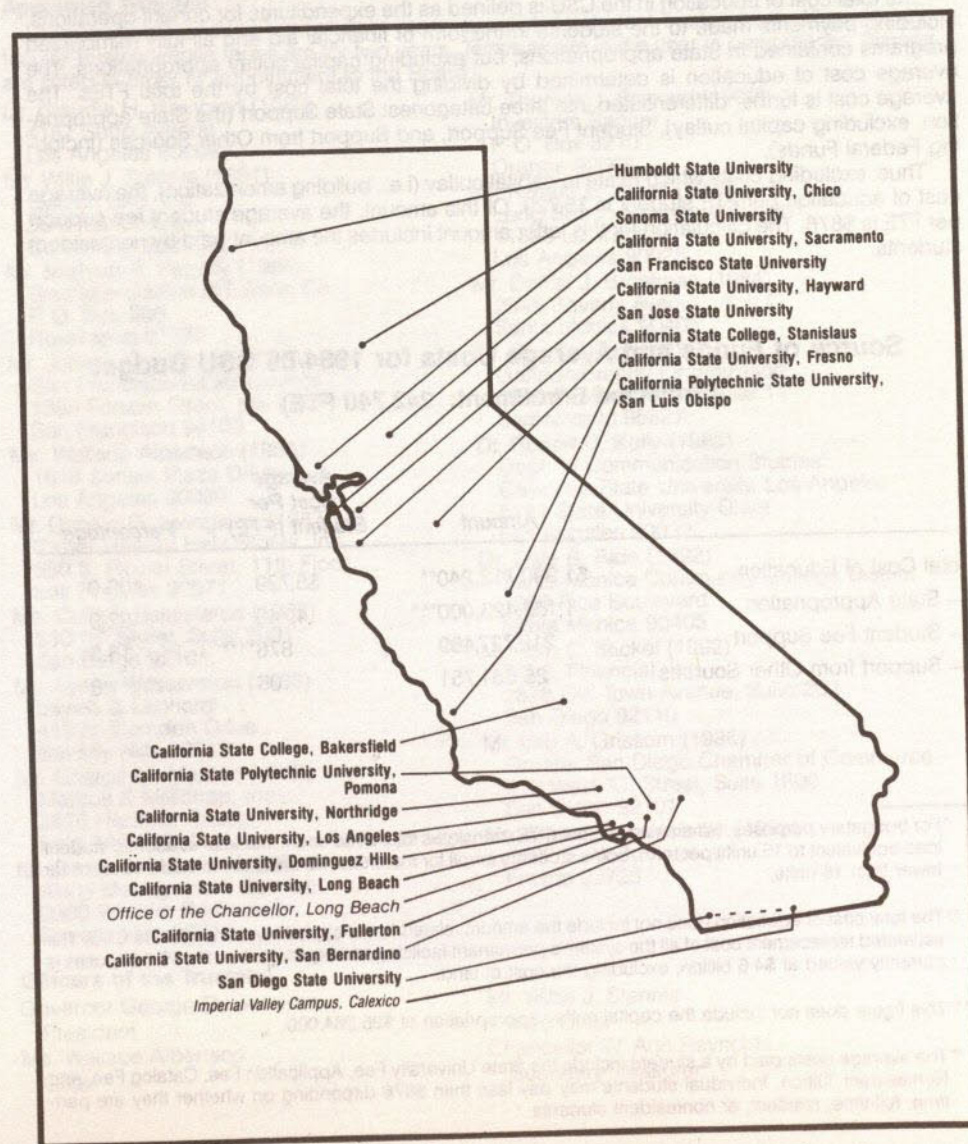
Academic policy for The Consortium is recommended by the Consortium Advisory Committee, a committee of the Academic Senate of the CSU. Degrees or certificates are awarded by

The Consortium in the name of the Board of Trustees of the CSU. The Consortium is accredited by the Western Association of Schools and Colleges.

The following consortium programs are available in the San Diego area:

- B.S. degree in Hotel and Restaurant Administration  
Contact Lynn H. Peters, Department of Management
- B.S. degree in Health Care Administration  
Contact Penny L. Wright, Department of Management
- B.S. degree in Nursing  
Contact Anna S. Mitchell, School of Nursing

For more information contact The Consortium of The California State University, 400 Golden Shore, Long Beach, California 90802-4275; (213) 590-5696. The statewide Admissions and Records Office may be reached by dialing the following numbers: Los Angeles and Long Beach areas (213) 498-4119; all other areas in California toll free (800) 352-7517.





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

The 19 campuses and the Chancellor's Office of The California State University are financed primarily through funding provided by the taxpayers of California. The total State appropriation to the CSU for 1984/85, including capital outlay and employee compensation increases, is \$1,177,687,000. The total cost of education for CSU, however, is \$1,390,712,240 which provides support for a projected 242,740 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 the 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 \$5,729. Of this amount, the average student fee support per FTE is \$876. The calculation for this latter amount includes the amount paid by nonresident students.

### Source of Funds and Average Costs for 1984/85 CSU Budget (Projected Enrollment: 242,740 FTE)

	Amount	Average Cost Per Student (FTE)*	Percentage
Total Cost of Education	\$1,390,712,240**	\$5,729	100.0
— State Appropriation	1,152,423,000***	4,748	82.9
— Student Fee Support	212,727,489	876****	15.3
— Support from Other Sources	25,561,751	105	1.8

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

\*\*The total cost of education does not include the amount related to the capital investment of the CSU. The estimated replacement cost of all the system's permanent facilities and equipment on the 19 campuses is currently valued at \$4.6 billion, excluding the cost of land.

\*\*\*This figure does not include the capital outlay appropriation of \$25,264,000.

\*\*\*\*The average costs paid by a student include the State University Fee, Application Fee, Catalog Fee, and Nonresident Tuition. Individual students may pay less than \$876 depending on whether they are part-time, full-time, resident, or nonresident students.

## Trustees of The California State University

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The Hon. Louis "Bill" Honig	721 Capitol Mall Sacramento 95814
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Dr. W. Ann Reynolds	400 Golden Shore Long Beach 90802-4275
Chancellor of The California State University	

### 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.

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San Francisco 94103	Sacramento 95827
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1618 Sunset Plaza Drive	Dept. of Communication Studies
Los Angeles 90069	California State University, Los Angeles
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Los Angeles 90071	Santa Monica Community College District
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415 N. Camden Drive	San Diego 92110
Beverly Hills 90210	Mr. Lee A. Grissom (1986)
Mr. George M. Marcus (1989)	Greater San Diego Chamber of Commerce
Marcus & Millichap, Inc.	110 West "C" Street, Suite 1600
2626 Hanover Street	San Diego 92101
Palo Alto 94304	Ms. Marian Bagdasarian (1988)
Mr. Dixon R. Harwin (1990)	6382 E. North Avenue
Alwin Management Co., Inc.	Fresno 93725
9300 Wilshire Boulevard	
Beverly Hills 90212	

### Officers of the Trustees

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## The California State University

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(805) 833-2011

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Carson, California 90747  
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Los Angeles, California 90032  
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Northridge, California 91330  
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3801 West Temple Avenue  
Pomona, California 91768-4011  
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(714) 598-4592

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Sacramento, California 95819  
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(916) 454-6011

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San Bernardino, California 92407  
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5300 Campanile Drive  
San Diego, California 92182-0763  
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Imperial Valley Campus  
720 Heber Avenue  
Calixico, California 92231  
(619) 357-3721

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San Francisco, California 94132  
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(415) 469-2141

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One Washington Square  
San Jose, California 95192-0005  
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San Luis Obispo, California 93407  
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(805) 546-0111

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Rohnert Park, California 94928  
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801 West Monte Vista Avenue  
Turlock, California 95380  
Dr. A. Walter Olson, President  
(209) 667-3122

## Office of the Chancellor The California State University

400 Golden Shore  
Long Beach, California 90802-4275  
Telephone: (213) 590-5506

Dr. W. Ann Reynolds .....	Chancellor
Dr. William E. Vandament .....	Provost and Vice Chancellor, Academic Affairs
Dr. Herbert L. Carter .....	Vice Chancellor, Administration
Mr. D. Dale Hanner .....	Vice Chancellor, Business Affairs
Dr. Caesar J. Naples .....	Vice Chancellor, Faculty and Staff Relations
Mr. Mayer Chapman .....	Vice Chancellor and General Counsel

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Sharon Considine .....	President, San Diego State University Aztec Athletic Foundation



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Vice President for Student Affairs .....	Daniel B. Nowak
Director of University Relations and Development .....	Leslie F. Yerger
Director of University Telecommunications .....	Paul J. Steen

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	Augustine S. Chavez
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Associate Vice President for Academic Affairs .....	Frank A. Medeiros
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Director of Learning Resource Center .....	William A. Broderick
University Librarian .....	Don L. Bosseau
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Director of Facilities Planning .....	Anthony Fulton
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Director of Student Resource and Information Center .....	Garold Tisue
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Director of Educational Opportunity and Minority Programs .....	Augustine S. Chavez
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Director of International Student Services .....	Ron Moffatt
Director of Health Services .....	Kevin Patrick, M.D.
Director of Housing and Residential Life .....	Michael B. Hoxter
Director of Test Office .....	Michael A. Irwin
Director of Student Athlete Academic Support Services .....	Veston Thomas
Office of the Director of University Relations and Development	
Assistant Director, Community Affairs .....	Shannon Rockcastle
Assistant Director, Administrative Services .....	Suzanne Lowell
Major Gifts, Planned Giving Officer .....	Michael Lewis
Director, Alumni Annual Fund .....	
Communications Manager .....	Susan Raney
Director of Intercollegiate Athletics .....	Mary Alice Hill
Director of Aztec Athletic Foundation .....	Steve Cushman

## Auxiliary Organizations

San Diego State University Foundation	
President .....	Thomas B. Day
Vice President .....	James W. Cobble
General Manager .....	Harry R. Albers
Aztec Shops, Ltd.	
Manager .....	Harvey J. Goodfriend
The Associated Students of San Diego State University	
President .....	Mike Sigler
Executive Director .....	Dan Cornthwaite

## Colleges, Schools, Departments and Programs

	<b>Chairs</b>
COLLEGE OF ARTS AND LETTERS .....	Robert C. Detweiler, Dean
Associate Dean .....	Marilyn J. Boxer
Asst. Dean for Student Affairs & Special Instructional Prog. ....	Edward R. Mendez
Academic Skills Center .....	Donald D. Basile
Afro-American Studies .....	Shirley N. Weber
American Indian Studies .....	Clifford E. Trafzer
Anthropology .....	Larry L. Leach
Classical and Oriental Languages and Literatures .....	Charles D. Hamilton
Economics .....	Robert E. Barkley
English and Comparative Literature .....	Elsie Adams
French and Italian Languages and Literatures .....	Alvord G. Branan
Geography .....	Ernst C. Griffin
German and Russian Languages and Literatures .....	Julian H. Wulbern
History .....	Dennis E. Berge
Linguistics .....	Charlotte Webb
Mexican-American Studies .....	José B. Cuellar
Philosophy .....	Roy Howard
Political Science .....	James J. Conniff
Religious Studies .....	Irving Alan Sparks
Sociology .....	John R. Weeks
Spanish and Portuguese Languages and Literatures .....	Ernesto Barrera
Women's Studies .....	Barbara Watson
COLLEGE OF BUSINESS ADMINISTRATION .....	Allan R. Bailey, Dean
Associate Dean, Academic Affairs .....	Thomas Warschauer
Associate Dean, Graduate Studies .....	William F. Barber
Associate Dean, External Relations .....	Harold K. Brown
Assistant Dean for Undergraduate Studies and Student Affairs .....	Anna R. Newton
School of Accountancy .....	Gerald E. Whittenburg
Finance .....	Pieter A. Vandenberg
Information Systems .....	Norman E. Sondak
Management .....	James R. Beatty
Marketing .....	Dinoo T. Vanier
COLLEGE OF EDUCATION .....	Lawrence B. Feinberg, Acting Dean
Associate Dean .....	John D. Chamley
Assistant Dean .....	Jean Ramage
Counselor Education .....	Gordon M. Thompson
Development, Administration, and Technology .....	Patrick J. Harrison
Graduate Programs and Research .....	Peggy Hawley
Policy Studies in Language and Cross-Cultural Education .....	Ana Maria Rodriguez
Special Education .....	Patricia T. Cegella
Teacher Education .....	Monica Murphy
Community College Program .....	Patrick J. Harrison
COLLEGE OF ENGINEERING .....	George T. Craig, Dean
Associate Dean .....	Nihad A. Hussain
Assistant Dean for Student Affairs .....	Frank E. Stratton
Aerospace Engineering and Engineering Mechanics .....	Nihad A. Hussain (Acting)
Civil Engineering .....	Fang-Hui Chou
Electrical and Computer Engineering .....	Mao-Shiu Lin
Mechanical Engineering .....	Robert L. Bedore
COLLEGE OF HUMAN SERVICES .....	Peter A. Dual, Dean
Associate Dean .....	Dolores A. Wozniak
Assistant Dean for Student Affairs .....	Barry W. Jones
Communicative Disorders .....	Robert E. Novak (Acting)
Graduate School of Public Health .....	Douglas Scutchfield
Health Science .....	Warren D. Boskin (Acting)
School of Nursing .....	Joan M. Flagg (Acting)



School of Social Work .....	Anita S. Harbert
Clinical Training Center .....	Marilyn Rumelhart
University Center on Aging .....	E. Percil Stanford
<b>COLLEGE OF PROFESSIONAL STUDIES AND FINE ARTS</b> .....	Merrill J. Lessley, Dean
Associate Dean .....	Stephen W. King
Assistant Dean for Academic Affairs .....	Barbara W. Hartung
Assistant Dean for Student Affairs .....	Carole Robasciotti
Assistant Dean for Physical Resources .....	Fred Hammond
Director of Development and Public Affairs .....	Michael Lewis
Aerospace Studies .....	Lt. Col. Ronald Merino
Art .....	Fredrick J. Orth
Drama .....	Margaret McKerrow
School of Family Studies and Consumer Sciences .....	Audrey A. Spindler (Acting)
Industrial Studies .....	Dennis Dirksen
Journalism .....	Lee M. Brown
Military Science .....	Lt. Col. Robert L. Ford
Music .....	Millard Biggs
Naval Science .....	Capt. Cornelius O'Keefe
Physical Education .....	B. Robert Carlson
School of Public Administration and Urban Studies .....	Louis M. Rea
Recreation .....	Daniel L. Dustin
Speech Communication .....	Al R. Weitzel
Telecommunications and Film .....	Hayes L. Anderson
<b>COLLEGE OF SCIENCES</b> .....	Donald R. Short, Dean
Associate Dean .....	James W. Neel
Associate Dean .....	James W. Brown
Associate Dean for External Relations .....	Gordon L. Shackelford
Assistant Dean for Student Affairs .....	Celia L. Marshak
Astronomy .....	C. T. Daub
Biology .....	Paul Paolini
Chemistry .....	Stephen B.W. Roeder
Geological Sciences .....	Patrick L. Abbott
Mathematical Sciences .....	David H. Carlson
Natural Science .....	Dale E. Ingmanson
Physics .....	Lowell J. Burnett
Psychology .....	Alan J. Litrownik
<b>NORTH COUNTY CENTER</b> .....	Richard R. Rush, Director
Assistant Dean for Student Affairs .....	Sandra R. Kuchler
<b>IMPERIAL VALLEY CAMPUS</b> .....	David Ballesteros, Dean
Associate Dean for Academic Affairs .....	Armando Arias, Jr.
Special Assistant to the Dean .....	Dana W. Murphy
Assistant Dean for Student Affairs .....	Cynthia D. Flores
Director of Admissions and Records .....	Kathleen Russum
<b>OFFICE OF THE DEAN OF THE GRADUATE DIVISION AND RESEARCH</b> .....	James W. Cobble, Dean
Associate Dean .....	Bradley N. Bartel
Associate Dean .....	Arthur W. Schatz (Acting)
<b>OFFICE OF THE DEAN OF UNDERGRADUATE STUDIES</b> .....	Bonnie H. Neumann, Dean
Associate Dean .....	Carole A. Scott
Assistant Dean .....	Charlotte B. Yesselman
<b>OFFICE OF THE DEAN OF EXTENDED STUDIES</b> .....	William P. Locke, Dean
Associate Dean for Distant Learning Programs .....	Robert J. Behm
Director of Special Sessions and Extension .....	Larry G. Cobb
Assistant Dean for Professional Development .....	Karen Horn
Assistant Dean for Administrative Services and Foreign Student Programs .....	Paula Kelly
Director of American Language Institute .....	Paula Kelly
Director of Retired Adults Program .....	Peggy Covert

# General Information

General Information  
Special Programs and Services  
Financial Aid  
Student Services



## General Information

### San Diego State University

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

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

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

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

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

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

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

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

The University now offers bachelor's degrees in 69 areas, the master's in 55, and the joint doctorate in 5. A remarkable 88 percent of the teaching faculty possess the doctorate in those disciplines where it is the standard terminal degree.

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

### Mission and Goals of San Diego State University

San Diego State University is a multipurpose institution of higher education located in a large and diverse urban setting. The University recognizes its obligations to serve in the several capacities of teaching, research, and service. The fundamental aim of the University is excellence and distinction in these pursuits.

The University seeks to provide an environment that encourages the intellectual development of students. Through its program in the liberal arts and sciences the University aspires to

have students understand themselves and their world; learn about their cultural, social, physical, and institutional surroundings; and understand the ways in which people of this and other societies, past and present, interact with each other and their environments. The professional programs of the University are designed to prepare students for the proficient and successful practice of a profession. At the graduate level the University is concerned with developing potential leaders in a wide spectrum of social, economic, scientific, technical, educational, and cultural fields.

Closely related to its teaching mission are the University's diverse research efforts. Student and faculty involvement in research exemplifies the manner in which knowledge is obtained and also expands the boundaries of our collective understanding. Graduate study at San Diego State University, both at the master's and doctoral level, places particular emphasis on creative scholarship, original research, and the development and utilization of research techniques.

Located in the heart of a large and diverse metropolitan center, the University makes use of the vast social, cultural, scientific, and technical resources of this region to enrich its programs and spur its research. Conversely, through its teaching, research, and various services, the University endeavors to identify and be responsive to the needs of the regional, national, and international communities that it serves. Furthermore, San Diego State University seeks cooperative efforts and programs with other institutions of higher education.

In sum, the mission of San Diego State University is to provide the best possible education for its undergraduate and graduate students, to contribute to knowledge and the solution of significant problems through its research, and to serve the people of California and the nation.

### Institutional and Financial Assistance Information

The following information concerning student financial assistance may be obtained from the Financial Aid Office, CL-122, 265-6323.

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 progress for the purpose of establishing and maintaining eligibility for financial assistance.

The following information concerning the cost of attending San Diego State University is available from the Financial Aid Office, CL-122, 265-6323.

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

Information concerning the refund policy of San Diego State University for the return of unearned tuition and fees or other refundable portions of costs is available from the University Cashiers Office, CL-108; 265-5253.

Information concerning the academic programs of San Diego State University may be obtained from the Office of the Vice President for Academic Affairs, AD-206, 265-6542, and may include:

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



- The names of associations, agencies, or governmental bodies which accredit, approve, or license the institution and its programs, and the procedures under which any current or prospective student may obtain or review upon request a copy of the documents describing the institution's accreditation, approval, or licensing.

Information regarding special facilities and services available to handicapped students may be obtained from the Director of Disabled Student Services, Campus Lab 110A, telephone 265-6473.

## Career Placement

The campus will furnish, upon request, information concerning the subsequent employment of students who graduate from San Diego State University. This information includes data concerning average starting salary and the percentage of previously enrolled students who obtained employment. The information provided may include data collected from either graduates of the campus or graduates of all campuses in The California State University. Copies of the published information are available in the office of the School Relations Officer, CL-114, 265-6966.

## 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

Phi Beta Kappa and Phi Kappa Phi are two of the national honor societies recognizing academic excellence for undergraduate students. Election to membership in the Nu chapter of Phi Beta Kappa is based on high scholarship and professional integrity. To be considered for election students must ordinarily be enrolled in the College of Arts and Letters or the College of Sciences and be eligible for the Liberal Arts and Sciences bachelor's degree. They must have completed work in university-level mathematics and foreign languages. Weight is given to breadth and depth of program as evidenced by the number and variety of upper division courses taken outside the major as well as to grades earned. No right of election shall adhere to any student solely by reason of fulfillment of grade point requirements. For further information, consult the Secretary of the chapter.

Phi Kappa Phi elects to membership qualified students in all disciplines but with a ten percent limit among graduating seniors and graduate students. A maximum of five percent of juniors may be invited to membership. The national society awards a number of fellowships annually to first-year graduate students in national competition. The SDSU chapter also grants an additional fellowship to a local candidate. Phi Kappa Phi publishes for its members a newsletter and the *National Forum*, a prestigious journal presenting articles in depth on serious and controversial issues.

There are over fifteen national honor societies, in addition, which accord recognition to students who demonstrate superior scholarship and leadership in specific academic fields.

## Accreditation

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

- American Home Economics Association
- American Chemical Society
- American Council on Education for Journalism/Mass Communication
- American Speech and Hearing Association Educational Training Board
- California Commission on Teacher Credentialing
- Council on Education for Public Health (candidacy)
- Council on Education of the Deaf
- Council on Rehabilitation Education

- Council on Social Work Education
- 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

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.

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 level. The clinical services area of communicative disorders is in the process of being accredited by the American Speech and Hearing Association Professional Services Board.

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 and National League for Nursing.

In addition, high quality preparation for many other professions is provided. It is suggested that the student refer to the various courses of study listed in the catalog. The bachelor's degree is offered in 69 areas, the master's degree in 55 areas, and the joint doctorate in 5 areas.

## Degrees and Certificates

San Diego State University offers the following degrees and certificates:

Bachelor of Arts	Master of Music
Bachelor of Science	Master of Public Administration
Bachelor of Music	Master of Public Health
Bachelor of Vocational Education	Master of Social Work
Master of Arts	Doctor of Philosophy in Biology
Master of Science	Doctor of Philosophy in Chemistry
Master of Business Administration	Doctor of Philosophy in Ecology
Master of City Planning	Doctor of Philosophy in Education
Master of Fine Arts (Art, Drama)	Doctor of Philosophy in Genetics *

Nondegree programs leading to certificates in Applied Linguistics and English as a Second Language (ESL), Bilingual (Spanish) Special Education, Business Administration (Imperial Valley Campus only), Cartography, Children's Literature, Creative Writing (advanced), Human Services Paraprofessional, Instructional Technology, Language Development Specialist, Preventative Medicine Residency, Professional Services Bilingual/Bicultural, Public Administration (Imperial Valley Campus only), Public History, Quantitative Analysis in the Social Sciences, Recombinant DNA Technology, Spanish Translation and Court Interpreting, Teaching the Emotionally Disturbed, and Technical and Scientific Writing 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.

\* Admission to this program is closed.



**(3) Professional curricula:** The College of Business Administration offers the Bachelor of Science degree in business administration with majors in eight 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 pre dentistry, prelegal, premedical, and preveterinary 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 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, ecology, education, and genetics.



SCUBA Diving Class, SDSU Swimming Pool.

## Special Programs and Services

### University Library

#### Librarians

Emeritus: Hoover, Kenney, Kinsey, McAmis, Murdock, Neyndorff, Samples, Sandelin, Sanner, Schalles, Szabo

University Librarian: Bosseau

Assistant University Librarians: Palsson, Rapp

Librarians: Coleman, Dintrone, Pease

Associate Librarians: Barclay, Cargille, Chan, Fikes, Fitt, Goyne, Gwinup, Harkanyi, Martinez, Sonntag

Senior Assistant Librarians: Crisley, Fields, Goodwin, Granrud, Greene, Harris, Johns, Moore, Posner, Rose, Shira, West, Wilson, Zyroff

Assistant Librarians: Lamb, Muroi, Turhollow

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

The collection comprises 843,000 volumes including books and bound periodicals, and 426,000 government documents. Additional resources include 2.1 million microfiche and microopaque cards, 50,300 reels of microfilm, 805 college catalogs, 137,000 maps, 4,950 phonograph records, 50,000 curriculum items and 1,500 linear feet of archival papers. The library receives 9,200 periodical and serial titles, excluding government documents. It is a depository for United States and California government publications. It receives all United Nations and Organization of American States publications, as well as many publications of other national and international bodies.

Significant research collections in the social sciences and humanities include: Asian studies; business; public administration; American, Civil War, California, Latin American, Mexican history; Chicano resource materials; the literatures of the United States, Spanish America, Europe, Asia and Africa; music, with special strength in the Middle Ages and the nineteenth century; dramatic arts, including classic films; philosophy, especially medieval and American. Research collections held in the sciences include: chemistry, biochemistry, ecology, biology, mathematics, physics, astronomy, anthropology, entomology, paleontology, geology, the geological history of Pacific Ocean invertebrate fauna, and the geology of San Diego County and Baja California. The Center for Regional History's extensive archival collections from the San Diego area support original research. Special collections, among them many rare editions, include: science fiction, H. L. Mencken, orchidology, the history of science with emphasis on astronomy and botany, German culture and civilization.

The library provides general reference service, separate service points for sciences and engineering, government publications, maps, and media and curriculum resources. Reference librarians assist students and faculty in their research and study, and librarians with advanced degrees in many subject areas are available for reference consultation. Computerized bibliographic searching is available, as are tours, term paper clinics, and other instruction in the use of the library.

Among conveniences provided library patrons are a current periodicals reading room and microforms and newspaper center; photocopying machines, including several for microfiche and microfilm; ditto machine; coin-operated electronic calculators; listening equipment for cassettes, discs and open-reel tape; and a special facility for the visually handicapped.

### University Computer Center

The University Computer Center provides equipment, software, and technical personnel to support the instructional, research and administrative computing activities of the University.

The principal computer on campus is a Control Data Corporation CYBER 170-750 which runs on the NOS operating system in batch, transactional, and timesharing modes. Language compilers provided include BASIC, FORTRAN, COBOL, PASCAL, APL, and PL/I. Also available are over 150 software packages for applications that include statistics, mathematics, science and business.

Additional instructional computing capacity is supplied by a Digital Equipment Corporation



VAX 11-780 computer which runs on the VMS operating system in timesharing and batch modes. The language compilers on the VAX include FORTRAN, BASIC, PASCAL, and VAX-11 MACRO. The software package on the VAX emphasizes statistical programs and graphics packages. A Digital Equipment Corporation PDP 11/44 that runs on the UNIX Operating System is also available. It has FORTRAN and C compilers. A fourth computer, a Digital Equipment Corporation PDP 11-45, is devoted exclusively to administrative users. The campus computers can be accessed from any of over 200 interactive terminals dispersed throughout the campus. Terminal labs are located in the Business Administration, Engineering, Life Sciences, and Social Sciences buildings. The CYBER can also be accessed from a card reader located in the Business Administration building.

Specialized computing services are also available. Two popular instructional laboratories are equipped with Apple microcomputers that can be programmed in BASIC or PASCAL and can run software written for Apple DOS or CP/M based systems. A third microcomputer laboratory is equipped with IBM PCs that can be programmed in BASIC and can run software written for MS-DOS. Another instructional laboratory contains terminals designed specifically for the APL programming language. A User Services Group provides system programming support and consulting service for faculty, staff, and students.

In addition to the campus computing systems, SDSU computer users have access to a powerful statewide computing network centered at Los Angeles. This network can be accessed from any campus terminal via a high-speed data link. It is served by a dual CYBER 170/730-2 and a 170/760 computer. The statewide system provides many additional software packages and large data bases.

## Learning Resource Center

The Learning Resource Center 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: Media Distribution, Media Production, and Instructional Development. The director provides leadership to the University in identifying new approaches in the use of instructional technology.

Media Distribution provides support in the selection and use of instructional materials and the distribution and maintenance of audiovisual equipment. Services include booking and scheduling of films and videotapes for classroom use. Films may be shown by means of classroom projection or over the campus closed circuit system. Videotapes are housed in a central master control facility and are shown via an 18-channel closed circuit system. The acquisition of new videotapes, films and videodiscs related to instruction and maintenance of these libraries is a part of this service.

Media Production aids in 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. Graphics design for instruction and for research reports 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.

## 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 three areas: Latin America and the United States-Mexican Border; aging; and regional studies of the Pacific Southwest. In addition to books, the Press also publishes under its imprint the annual *Proceedings of the Pacific Coast Council on Latin American Studies*, the distinguished literary magazine *Fiction International*, and *Arete: The Journal of Sport Literature*. It publishes or distributes for departments on campus several occasional and serial publications, including the *Proceedings*

of the annual Conference on Minority Aging for the Center on Aging, *Pacific Review*, for the Department of English and Comparative Literature, and *Theatre Products Report* for the Department of Drama.

The San Diego State University Press imprint is controlled by an Editorial Committee of San Diego State University faculty scholars, appointed by the Vice President for Academic Affairs and the Academic Senate. Financial support for Press activities is provided almost entirely by sales of books and by ancillary services to the University community. Financial accounting and coordination is provided by the San Diego State University Foundation.

## 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 was chartered specifically to provide and augment essential services which are an integral part of the educational program 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. Currently, the Foundation is the largest of the auxiliaries in The California State University System.

The purpose of the Foundation is to promote the development, implementation, and coordination of those activities that aid and supplement the fundamental mission of San Diego State University. The Foundation serves the University in the following major areas:

- Development and administration of grants and contracts for faculty and staff research and educational projects;

- Administration of funds for more than 500 special programs including KPBS educational television and radio stations, the College of Extended Studies and the SDSU Rehabilitation Center;

- 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 provides space for grant and contract activity within its aegis, and leases property to the University and other campus auxiliaries;

- Provides funds for the support of the University's Development Office, the Summer Faculty Fellowship Program, and the Grant-in-Aid for Research Program for faculty;

- Administration of other activities as requested by the University. An example is ownership of the computer equipment used by the University, and assistance to the University in acquiring new equipment.

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.

## 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, the Alumni Placement Service, travel tours, 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 bimonthly *SDSU Report*.

For further information, phone the Alumni and Development Office at (619) 265-6907.



## Financial Aid

### 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, CL-122, (619) 265-6323. A financial aid brochure which describes the programs available and the eligibility requirements is available from the Financial Aid Office.

### Applying for Aid

To be considered for first priority funding for the 1985-86 academic year, aid applicants must file a *Student Aid Application for California (SAAC)* by March 1, 1985 and submit all required supporting documents to the Financial Aid Office by April 15, 1985. SAACs may be obtained from high schools and any college financial aid office in California.

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

### Cost of Living

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

#### Actual Expenses for the 1984-85 Academic Year

	Living off Campus	Living on Campus	Commuting from Home
Registration fee for materials, service, student activity, student union, facilities .....	\$ 661	\$ 661	\$ 661
Books and supplies .....	336	336	336
Room and board .....	3960	2964	1100
Transportation .....	630	0	558
Personal .....	1139	994	849
Total .....	\$6726	\$4955	\$3504

In addition to the registration fee, foreign students and out-of-state students paid tuition of \$117.00 per unit in 1984-85. **All fees and costs are subject to change without notice.**

### California Grants, California State Fellowships, and Bilingual Grants

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

### 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, Fifth Floor, Love Library.

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

Competition is based on outstanding academic achievement, campus and extracurricular activities, employment, and an essay. Undergraduates must have a 3.5 overall GPA or a 3.7 in the last 30 units of university work. Graduates must have a 3.5 overall graduate GPA or, in the absence of completed graduate units, a 3.5 overall undergraduate GPA or a 3.7 in the last 30 units of university work. High school seniors must have a 3.5 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, (619) 265-6180.

Applications are available each year during one application period, November through February. The SDSU scholarship application must be filed not later than February for the following academic year. Students should submit only one application for the SDSU scholarship program. Individual results will be mailed to all applicants during May 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:** Entering freshmen may receive a \$2,500 scholarship, awarded as \$500 each academic year for up to five years of undergraduate study.

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 September.



## Restricted Departmental Awards

### COLLEGE OF ARTS AND LETTERS

#### Economics Department

- Alumni, CPE
- \*Anonymous, CPE
- \*Henry Cramer, CPE
- \*Sidney Evans, CPE
- \*Henry George, CPE
- \*Walter Weiss, CPE

#### English and Comparative Literature Department

- George Gross
- D. C. and K. W. Stott Memorial

#### History Department

- \*Andrew Bell Appleby Memorial
- D. C. and K. W. Stott Memorial
- Jon Sutherland Memorial

#### Religious Studies Department

- Louis Lieblich Memorial

#### Women's Studies Department

- Friends of Women's Studies

### COLLEGE OF BUSINESS ADMINISTRATION

- California First Bank
- Robert F. Driver Co.
- \*Mayor's Bridges to Business
- \*\*San Diego Mortgage Bankers Association
- WAFB

#### School of Accountancy

- American Society of Women Accountants
- Burnham
- California Society of C.P.A.'s, Women's
- Auxiliary, San Diego Chapter
- Carnation
- \*Considine
- Edward K. M. Sue Memorial
- \*Getty Oil Company
- \*Haskins & Sells
- National Association of Accountants, San
- Diego Chapter
- Southern California Society of Certified
- Public Accountants, San Diego Chapter
- \*Touche Ross & Co.

#### Financial Services

- Robert F. Driver Co.
- Professional Insurance Agents CA/NV
- \*\*San Diego Mortgage Bankers Association

#### Information Systems Department

- Georgia Amsden Memorial
- \*Robert Hess Memorial
- Alvin Morrison Memorial

#### Management Department

- \*\*Boise Cascade
- Personnel Management Association
- Frances Torbert Memorial

#### Marketing Department

- American Marketing Association
- \*\*Boise Cascade
- Harry Calloway
- Connie Fotinos Memorial
- H. M. Stansbury
- \*Elbridge Stuart

### COLLEGE OF EDUCATION

- Martha S. Biehl Memorial
- California PTA
- California Retired Teachers
- Delta Kappa Gamma, Delta Iota Chapter
- Delta Kappa Gamma, Nu Chapter
- Halfaker Memorial
- Linkletter Foundation
- Catherine Yuhon Lodge Memorial
- Madden
- Pi Lambda Theta Alumnae
- Lauren C. Post Scholarship for Geographic
- Education
- John Paul Stone Memorial

### COLLEGE OF ENGINEERING

- American Concrete Institute
- American Public Works Association
- American Society of Civil Engineers
- Association of California Water Agencies
- California Council of Civil Engineers
- California Society of Professional
- Engineers and Land Surveyors
- California Society of Professional
- Engineers, Ladies' Auxiliary
- Civil Engineering Faculty Scholarship
- E. F. Cook and Associates, Ltd.
- Electrical Engineering
- Engineers Club of San Diego
- S. L. Frankel
- Frank Hope and Associates
- Klagge, Stevens and Associates
- Institute of Electrical and Electronic
- Engineers
- James R. Libby and Associates
- Walter M. Lowe Memorial
- Nasland Engineering
- National Electrical Contractors Association
- S. Falck Nielsen Family
- Craig, Bulthuis and Nothomb
- North Island Professional Engineers
- Association
- San Diego Chapter CSPE/Redelsheimer
- San Diego Chapter CSPE Auxiliary/
- Redelsheimer
- San Diego Rock Producers
- San Diego Section ASCE/Merrill B.
- Wittman Memorial
- Society of Military Engineers

- Cheng-Mo Sun Memorial
- Testing Engineers of San Diego
- Unit Masonry Association of San Diego
- Robert Young Engineering
- Zinser-Furby, Inc.

### COLLEGE OF HUMAN SERVICES

#### Communicative Disorders Department

- Dorothy Baronofsky Memorial
- \*California State Association of Emblem
- Clubs and Nevada-Hawaii Clubs
- Lowell Davies
- Epsilon Epsilon, Sigma Alpha Sorority
- Nella Feldman Gross Memorial
- George Kopp Memorial
- Paul Pfaff
- Sigma Alpha, Gamma Upsilon Chapter
- Sigma Delta, Zeta Pi Chapter

#### Health Science

- Dental Health Internship

#### School of Nursing

- Allstate Foundation
- Fraternal Order of Eagles, Ladies Auxiliary
- Lottie E. Olberg Trust

#### School of Public Health

- Morton Schweitzer Memorial
- California PTA

### COLLEGE OF PROFESSIONAL STUDIES AND FINE ARTS

#### Art Department

- \*\*Frances Boyd Ellsworth
- California China Painters Art Association
- M. K. Hill
- \*\*Isabel Kraft Sculpture

#### Drama Department

- Jeweldeen Brodie
- Sharon Crossley Memorial
- Simon Edison Foundation
- Sybil Elisa Jones Memorial
- \*Marion Ross
- Huntton Sellman
- Henry Stanton Memorial

#### Family Studies and Consumer Sciences

- Thair Milne
- Victoria Smart Memorial
- Georgia Tait Stooke

#### Industrial Arts Department

- James "Chris" Nichols Memorial

#### Journalism Department

- James Copley Foundation
- Faculty and Alumnae
- Harold Keen Journalism
- KFMB
- \*\*McGraw-Hill Broadcasting
- Lee Neill Memorial
- Jane Nelson

### Music Department

- Elsie Hilland Fox Memorial
- M.H. Golden Memorial
- Lieber-Flower
- Jan Lowenbach, Graduate - Musicology
- Alvin Morrison Memorial
- Music Department
- Bessie S. Purdy Memorial
- Edith Savage
- Sigma Alpha Iota
- Sigma Alpha Iota, Student Chapter
- SPEBSQSA
- Paul C. Stauffer Memorial
- Symphony Orchestra
- University Band
- Marvin Yerkey Memorial

### Physical Education Department

- George William Ellis
- Guadalajara National Philharmonic
- James B. Harker
- Mable Hodgetts Memorial
- Miriam Paine Memorial
- James Tripp Memorial
- George Willis "Dance"

### Recreation Department

- \*Ray R. Butler
- \*California Parks and Recreation Society,
- Local District 12
- Bonnie Jean Gore Memorial
- Jill Ramos

### Speech Communication Department

- Percie Belle Senn Memorial

### Telecommunications and Film Department

- KFMB
- Linkletter Foundation
- \*\*McGraw-Hill Broadcasting

### COLLEGE OF SCIENCES

#### Astronomy Department

- Awona Harrington Memorial

#### Biology Department

- Crouch Scholarship for Avian Behavior
- Harwood Memorial

#### Computer Science

- NCR Corporation

#### Geological Sciences Department

- \*Baylor Brooks
- \*Geology Scholarship Fund
- Michael Ptasek Memorial

#### Physics Department

- Optics-Physics
- Physics Summer Research

\* Application must be made directly through the department.  
 \*\* Special application required. Qualified students will be notified.

\* Application must be made directly through the department.  
 \*\* Special application required. Qualified students will be notified.



### 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.

Ambassadors  
American Society of Military Comptrollers,  
San Diego Chapter  
Anonymous B  
Anonymous H  
Aztec Shops  
Mary Earnest Bean Memorial  
Brenda Beitner Memorial  
\*\*Clair Burgener Foundation  
Delta Kappa Gamma, Theta Gamma  
Chapter  
Clara Escudero Fund  
\*\*Fleet Foundation  
Amelia Fontaine Memorial  
Johanna Muench Fox Memorial  
William Fox Memorial  
General Dynamics  
Arthur C. Harris  
David K. Hostetler  
Raymond and Margaret Houck Memorial  
Lee Hubbard  
Hughes Aircraft-GO Club

International Students  
Mary Melton Kantor Memorial  
Philip Kantor Memorial  
Kappa Beta Nu  
Kiwanis Club Univ-SD  
William and Edna Lasalle Memorial  
Lipinsky Family  
Mortar Board Alumnae of San Diego  
Pittman Memorial  
Foster S. Post Memorial  
Residence Hall Association  
San Diego State University Alumni and  
Associates  
San Diego State University Memorial  
San Diego State University Women's Club  
Etta Schweider Memorial  
Robert Patterson Shields Memorial  
Slim Solheid Memorial  
Frank G. Tait  
Terry Lynn Thompson Memorial  
Wilmia Tyler Trott Memorial  
Mr. and Mrs. John Zweck Memorial

\*\* Special application required. Qualified students will be notified.

### Imperial Valley Campus Scholarships

The Imperial Valley Campus awarded \$2,000 in scholarships for the 1984-85 academic year. Scholarships have been established by Imperial Valley Campus Chapter, SDSU Alumni & Associates; Soroptomists International, Calexico; and Imperial Valley Campus faculty contributions. Information and applications for these scholarships are available from the Holtville Rotary and the Financial Aid Counselor on the campus.

## Student Services

### Student Outreach Services

The Student Outreach Services office includes School and College Relations, the recruitment component of the Educational Opportunities Program, and Core Student Affirmative Action, which provides recruitment and retention services for non-EOP students from underrepresented ethnic groups. Through these programs, information and guidance are provided to prospective students about college selection and preparation, including admission requirements and procedures, academic programs, general education requirements, financial aid, student services and other aspects of university life.

Student Outreach Services staff visit high schools and community colleges, meeting with counselors, students and parents. The staff assists SDSU colleges and departments with their provision of information to prospective students and distributes newsletters and other materials to counselors. Requests for these services and programs for prospective students are welcomed. For more information, please call 265-6966.

### The Ambassadors

The San Diego State University Ambassadors is a campus organization devoted to providing excellent volunteer services. These carefully selected and trained University students specialize in campus tours and assisting in campus and community service events. Call the Ambassadors at 265-6868 for a campus tour designed specifically for you.

### Counseling Services and Placement

Counseling Services and Placement provides, without charge, the following services: (1) life planning and decision-making workshops; (2) educational and vocational assistance; (3) counseling for personal, psychological, and social development; (4) consultation with student groups, faculty, staff, and administration; and (5) placement services. California state laws pertaining to confidentiality of psychological services apply.

For the convenience of all students, a marriage and family clinic is regularly scheduled. Additional programs and work experiences are provided through student employment, summer and part-time employment, job referrals, campus recruiting program, skill development, resume writing, interviewing workshops, and job search strategy. An extensive career library is available.

For a nominal fee, alumni may receive placement assistance through job mailings, maintaining an updated individual placement file, utilizing current resources in the library, and participating in workshops.

Services are available on a walk-in basis or by appointment, from 8:00-4:30 p.m., Monday through Friday. Services after 4:30 p.m. are available by special appointment only. For additional information, please call 265-5218.

### Health Services

Student Health Services provides a full range of medical care to SDSU students. The staff of over 75 personnel includes physicians board certified in family practice, gynecology, pediatrics, dermatology, internal medicine, orthopedics, psychiatry, and radiology. Primary care nurse practitioners along with nursing, X-ray, laboratory and physical therapy staff also provide services. A pharmacy located in the Student Health Center dispenses at reduced cost most of the medications prescribed by Health Services staff.

Student Health Services is open twelve months a year. During the fall and spring semesters, the Center is open from 8:00 a.m. until 5:00 p.m., Monday through Friday. During intersession and summer, the Center closes at 4:15 p.m.

Services are available to all regularly registered students. Individuals may use Student Health Services on a walk-in basis. Those without acute or urgent problems are encouraged to call to make an appointment.

There is no charge at the time of services for almost all medical care provided at Student Health Services. Fees have been prepaid through regular registration fees. Some services require a minimal additional fee such as pharmacy, special lab work, physical therapy treatments, and so forth. Charges associated with these services are usually dramatically lower than those found elsewhere.



All medical care provided at Student Health Services is **strictly confidential**. No one, on or off campus, has access to any medical information on a student without the student's written permission.

Many special programs are available, such as special clinics in family planning, weight control nutrition, health education topics, sexuality workshops and cold prevention.

An Audiology Clinic operated by the faculty and students of the Department of Communicative Disorders provides diagnostic information regarding hearing loss, hearing aid earmold, swim plug and noise suppressor plug fabrication, and referral and counseling services for those individuals with confirmed or suspected hearing difficulty. A minimal fee is charged for diagnostic and earmold fabrication services.

Prior to enrollment at SDSU it is recommended that students obtain a physical examination and health history from their physician and forward a copy of the examination to the Student Health Center or bring a copy to the Health Center. Students should update their immunization status to ensure that they are protected from the following diseases: rubeola (measles), rubella (German measles, "three-day" measles), tetanus, diphtheria, polio, and mumps.

All of these infections are potentially more severe in college students than they are in other groups of individuals. These immunizations are available at little or no cost at Student Health Services.

Entering students are also strongly encouraged to have a screening test for tuberculosis.

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

### Accidents and Student Insurance Coverage

Under Trustee policy, first aid or emergency 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, 265-5955.

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, health, or liability insurance coverage for students 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 **prepaid health insurance** program 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 program may be purchased by semester or on a yearly basis. An open enrollment period is available the first thirty days of each semester. With the exception of international students, participation in this health insurance program is voluntary.

### 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 must enroll in appropriate course work in the Academic Skills Center during their first semester at SDSU and continue in such course work until successfully completing it.

### Test Office

The Test Office serves both students and faculty through administering a wide variety of tests, including placement tests, competency tests for graduation, admissions tests for graduate programs, and inventories for counseling and career planning. A library of 1000 different tests is maintained for use by faculty and students in testing classes, and test scoring and analysis services are provided for classroom tests.

### International Students

The International Students Office provides services to help international students gain the greatest possible benefit from their studies in this country and to help promote friendship, understanding and cultural exchanges, both with American students and the community. The Office informs the students of procedures of the U.S. educational system and helps with various problems that may be encountered. The staff acts as the liaison with government (especially immigration) and San Diego State University administration, departments, faculty, and community.

### Ombudsman

The Ombudsman is an independent and impartial agent who helps individuals and groups seeking the resolution and correction of complaints. The Ombudsman acts as a liaison between students and the University, assisting students through formal grievance procedures and functioning to mediate and reinforce other means of redress when possible.

The office of the Ombudsman is located in Aztec Center, room 168; telephone (619) 265-6578.

### Audiology Diagnostic Center

The Audiology Diagnostic Center in the College of 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. 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 information call 265-6477.

### Speech, Language and Hearing Clinics

The Communications Clinic in the College of 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, faculty and their families free of charge. Minimal fees are charged for services to individuals from the community. 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 provided for limited English proficient 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 information call 265-6477.

### Clinical Training Center

The Clinical Training Center in the College of Human Services provides a supervised training and service facility which includes, but is not limited to direct involvement by undergraduate and graduate students of separate disciplines in multidisciplinary experiences such as prevention, assessment, rehabilitation and treatment of behavioral, communicative, reading, learning and personal-social difficulties. Students are supervised directly by faculty from their respective disciplines. The Clinical Training Center encourages interdisciplinary educational and research opportunities for faculty and students. Provision for interdisciplinary components of the curricula of participating schools and departments is an integral part of the Clinical Training Center. For further information call 265-6121.



## Student Resource and Information Center

The Student Resource and Information Center (SRIC) develops and supports special programs and learning opportunities to encourage personal growth of students and allow them to meet their academic, social, and governance responsibilities effectively.

Supervision of student organizations at the Center includes registration of campus organizations and clubs, program development, room reservations and scheduling of student activities, advising Associated Students Boards, and supervision of Campus Lab School Lawn Sellers area.

The Center develops campus publications and manages information delivery to prospective, new, and continuing students. Research conducted through the office serves as basis for new and improved publications and services for students.

Educational and experiential programs offered to students through the Center are new student orientation programs, the mentor program for ethnic students, leadership training for student leaders, and internships. The SRIC also coordinates programs for parents of new and continuing students. A Visitor/Hospitality Center is operated by and located adjacent to the SRIC.

## New Hampshire Exchange Program

Students eager to attend a university on the East Coast for a semester may take advantage of the exchange program established between San Diego State University and the University of New Hampshire. The program permits participants to pay normal fees at their home campus while involved in the exchange, thus relieving them of additional tuition costs. Students must provide their own travel and room and board expenses; however, those currently receiving financial aid may continue to be qualified for it. Credits earned at New Hampshire are transferable to the home campus. To be eligible, the student 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 must apply to the Student Resource and Information Center before March 1, 1985 for the fall 1984 semester and by October 11, 1985 for the spring 1985 semester.

## New Student Programs

The Student Resource and Information Center offers a wide variety of programs designed to introduce new students (first-time freshmen, transfer students, and graduate students) to San Diego State University. Although each program is uniquely designed, all contain academic advising, registration assistance, and a campus tour. Academic Information Day is held prior to preregistration deadline each semester. CONTACT, a campuswide orientation, is held the week before classes begin in the fall. For information, write the Student Resource and Information Center, CL-114, or call (619) 265-5223.

## Student Government

The Associated Students of San Diego State University, which is the official organization for student government, is a nonprofit corporation and is designed to provide special student programs, services, and activities which are funded by the student activities fee. The Associated Students Council is made up of three executive officers and one representative per 1500 students. This body formulates policy and handles the business affairs of the student body.

## Aztec Center

San Diego State University was the first of The California State University campuses to build and operate a permanent university center. Since its completion in September 1966, Aztec Center has served as a model facility to various college and university unions across the nation.

All facilities, budgets, staffing, and other matters which affect the union's operation are governed by the Aztec Center Board.

The Center houses a multitude of conference rooms and lounges which are available at no charge for student use. Room reservations can be placed in the Aztec Center Office, lower level of Aztec Center.

The Associated Students offers a varied range of job opportunities to students of SDSU. If you are interested in becoming an A.S. employee, all job opportunities are posted in the Aztec Center Office.

## 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. First priority is given to families with the greatest financial need and to earliest applicants regardless of race, religion, creed or sex. Faculty/staff children are accepted as space permits.

Tuition for students 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 students. Parents make a weekly contribution of time as teachers in the classroom plus attend a weekly parent class or serve on a fund-raising or 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 which will foster the child's social, emotional, intellectual and physical development and help the child view himself/herself and the environment positively.

The hours of operation are 7:45 a.m. to 5:00 p.m. for the preschool center (children 28 months through 5 years) and noon to 5:00 p.m. for the infant center (children 6 months to 28 months). Kindergartners may attend the preschool between 1:00 p.m. and 5:00 p.m. if they were enrolled in the Center the previous semester.

## Aztec Shops

Aztec Shops, Ltd. is a California nonprofit corporation which has existed since 1931 to serve San Diego State University. Its primary purpose is to provide bookstore and food services. Other services of the Shops include ticket sales, a contract post office, vending machines, copy centers, automatic tellers, popcorn, ice cream, and pizza sales.

The Bookstore provides required textbooks, assigned class materials and reference works, and offers a large selection of general interest books and supplies. It is open on weekdays and Saturdays when classes are in session. A satellite Art Supply Store is located in the Art Building. There is also a branch bookstore at the Imperial Valley Campus. The copy center, located behind the bookstore, provides xerox copying, binding, and typewriter rental. Also a wordprocessing center has Dec-Mate wordprocessors for rent. Lecture Notes, a note-taking service, provides weekly notes taken with the approval of the faculty member, which are sold on a subscription basis. Paper Chase, located in the basement of the Bookstore, provides typewriters, copy machines and everything needed to prepare written materials for class.

Food services operates the satellite snack bar, the Hotdogger, the mini snack bar, East Commons, West Commons, Dining Commons, and Monty's Den cafeterias. In addition, a meal ticket program is available to any enrolled student, as well as campus faculty and staff, with 14- and 10-meal options. The meal ticket allows the bearer to eat in any campus facility. The East Commons is also open to the campus community on Saturday and Sunday when classes are in session.

## Housing and Residential Life

### Residence Halls

Accommodations for 2,133 single students are available in seven coeducational residence halls on campus. Five halls are three-story, red-brick buildings accommodating 223 students each; the sixth and seventh halls, both high-rise buildings, accommodate 594 and 424 students respectively. All of the halls provide sleeping and study facilities on a two-students-per-room basis or in a small number of single rooms in Zura Hall. Student governments and staff in each of the halls recommend standards for basic behavior in the residence halls. Participation in campus activities is encouraged.

For 1984-85, the cost for room and board was approximately \$2,700 (14-meal plan, double occupancy) per academic year. Rates are reviewed annually; you may anticipate cost-of-living increases to this rate. Three food service plans (10, 14 or 19 meals per week) are offered.

IT IS THE RESPONSIBILITY OF EACH STUDENT TO CONTACT THE HOUSING AND RESIDENTIAL LIFE OFFICE IF ONE WISHES TO OBTAIN ON-CAMPUS HOUSING. APPLICATIONS ARE SUBJECT TO A PRIORITY SYSTEM AS THE DEMAND EXCEEDS THE NUMBER OF SPACES ON THIS CAMPUS. To apply for housing, the student should send a self-addressed



envelope to the Housing and Residential Life Office at the University. For the coming academic year, housing applications are available in the preceding November and December. For spring semester, applications are available in September and October. A room reservation is confirmed after the student is admitted to the University, when a contract is received, and the first payment is received as specified. Though consideration will be given to a student's request for an individual hall and roommate, a specific assignment cannot be guaranteed.

No reservation can be confirmed until the student is accepted for admission to San Diego State University. Receipt of a housing contract does not mean that the University is committed to admitting the student.

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

### Off-Campus Housing

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

Because off-campus housing is limited, students are advised to begin their housing search at least one month before the first day of classes. The Housing and Residential Life Office organizes programs to assist students in locating off-campus housing. Workshops are also organized to educate students in tenant rights and responsibilities. For additional information please write: Off-Campus Housing, Housing and Residential Life Office, San Diego State University, San Diego, CA 92182.

### Greek Letter Organizations

There are eleven national sororities at San Diego State University which provide housing accommodations for approximately 290 women. A formal rush program is held during the fall semester while informal rush continues throughout the entire year. For further information contact Panhellenic, c/o Housing and Residential Life Office, San Diego State University, San Diego, California 92182.

The 18 national fraternities invite students for membership at the beginning of each semester. Fraternities provide men opportunities to participate in a wide variety of social and recreational activities, to expand leadership abilities, to develop enduring friendships, to receive scholastic assistance, and to participate in community service organizations. Fraternities provide housing for about 300 men, although living in the chapter house is not a requirement for membership. Interested students may obtain further information by writing to the Interfraternity Council, c/o Housing and Residential Life Office, San Diego State University, San Diego, CA 92182.

### Transportation and Parking

San Diego Transit has seven bus routes that service the University Transit Center, connecting with all areas of the metropolitan area. These are routes 11, 13, 15, 36, 80, 105, and 115.

Information concerning bus routes, fares and services can be obtained by calling San Diego Transit at 233-3004. Bus schedule racks are located on campus at the Aztec Center Information desk and the Student Resource and Information Center (CL-114).

On-campus parking is by permit only, and is very scarce during the fall and spring semesters. Where possible, car-pooling or use of alternative modes of transportation is recommended. For further information on parking, contact the Campanile Drive Information Booth or the Department of Public Safety, 265-6671.

### Navy Officer Programs

The Nuclear Power Officer Collegiate Program is a financial assistance program which pays over \$1,000 per month to qualifying students completing their final two years of undergraduate or final year of graduate work in engineering, mathematics, chemistry or physics. It can be worth over \$27,000 in the final two years of undergraduate study followed by a job operating Naval Nuclear Propulsion plants. Application for the Nuclear Propulsion Officer Collegiate Program (NUPOC-C) can begin after completion of the sophomore year or during the master's program. The Division of Naval Reactors will determine initial eligibility by screening the college transcripts of interested applicants.

The Nuclear Power Instructor Collegiate Program offers financial assistance for men and women, paying over \$1,000 per month to qualifying students completing their final two years of undergraduate or last year of graduate work in engineering, mathematics, chemistry or physics. It can be worth as much as \$27,000 in the last two years followed by a teaching position in the Navy's Nuclear Power School. Applications for the Nuclear Power Instructor Program (11051-C) can begin after the sophomore or during the junior or senior years. The Division of Naval Reactors will determine initial eligibility by screening the college transcripts of interested applicants.

The Navy Officer Information Team visits the campus several times during the school year. Interested students are encouraged to see them for further information. Additional information may also be received by sending transcripts or calling the Officer Programs Office, NRD, San Diego, NTC San Diego, California 92133; telephone: 293-6444.

### Educational Opportunity Program

This program is designed to assist undergraduate students from educationally disadvantaged or low-income groups who wish to acquire a college education but have not been able to realize their potential because of economic, educational or cultural environments. In cooperation with various federal, state and local agencies, the program recruits and enrolls students and provides scholastic and personal counseling during their undergraduate careers. Financial aid is disbursed through the Financial Aid Office to those students who prove financial need in accordance with federal and state guidelines. EOP attempts to ensure that each student shall have the opportunity to reach his or her fullest potential.

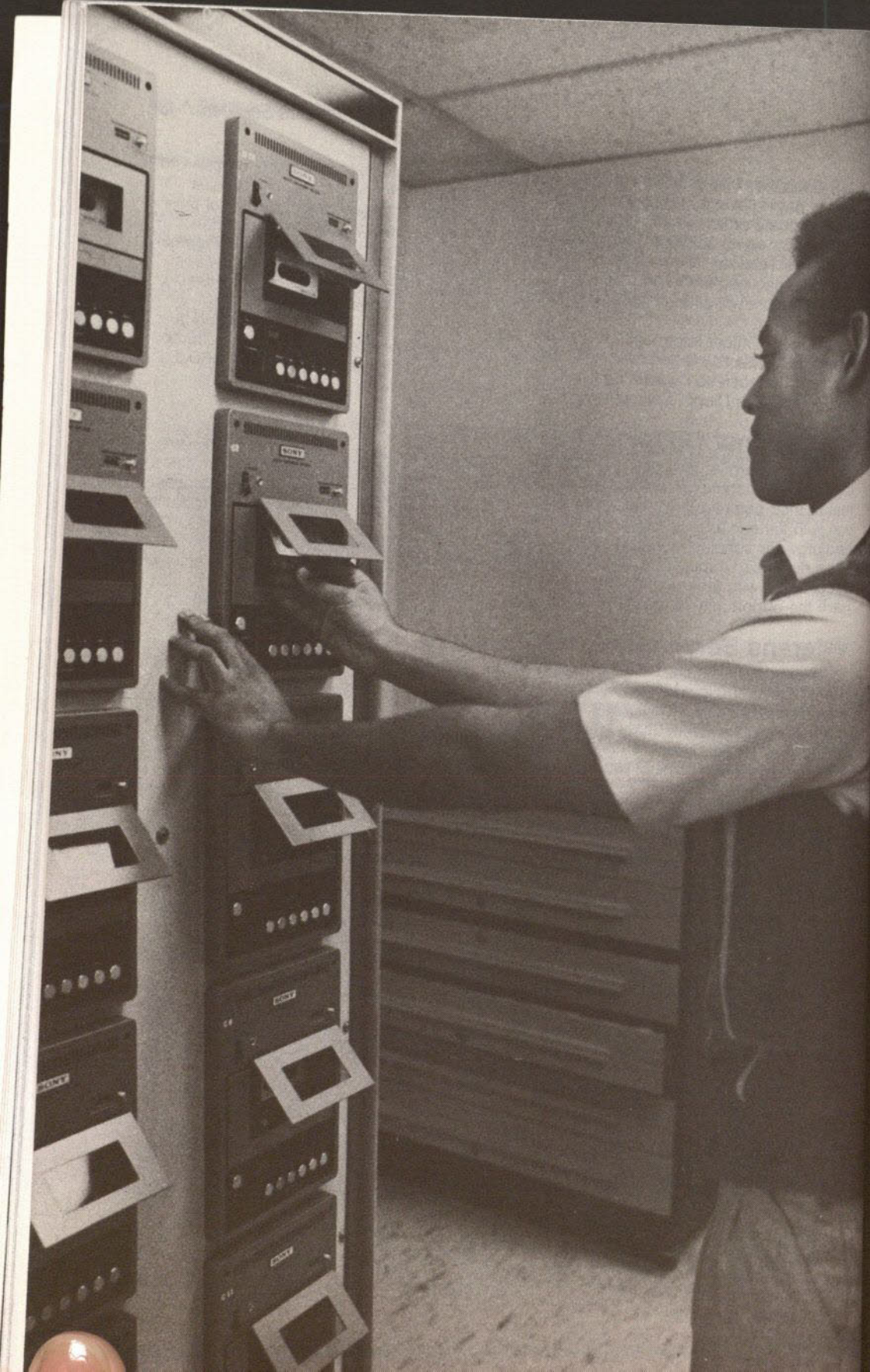
### Veterans Services

The Veterans Affairs Office is located in Admissions and Records on the first floor of the Administration Building. The office assists veterans and eligible dependents in applying for V.A. educational benefits. Additionally, the office administers a tutoring program and assists veterans in finding V.A. Work Study positions. Students interested in applying for advance payment of the first GI Bill check should contact Veterans Affairs at least two months before the beginning of each school year. For more information, come in to the office or telephone 265-5813.

### Disabled Student Services

Disabled Student Services provides the support services needed by students with physical disabilities for equal access to the educational process. Services include orientation for new students, priority registration for students with special needs, close-in parking, transportation on and off campus and loan of special equipment. Accessibility information, maps and elevator keys are available. The office provides interpreters for the deaf, readers and notetakers, as well as in-classroom testing assistance. Information on attendants and accessible housing in the campus area is available. Staff at Disabled Student Services provide government benefits counseling and assistance for personal, academic and vocational problems. A specialist provides evaluation and support services to learning disabled students. Special programs are scheduled throughout the semester. Students are also provided assistance with off-campus agencies. Medical documentation of disability is required. For more information contact Disabled Student Services, Campus Lab School 110; 265-6473 Voice or TTY.





# Academic Organization

## Colleges

Arts and Letters  
Business Administration  
Education  
Engineering  
Human Services  
Professional Studies  
and Fine Arts  
Sciences

Imperial Valley Campus

North County Center

*Opposite page:* Language Laboratory Facilities, College of Arts and Letters.



## College of Arts and Letters

### Administration

Dean: Robert C. Detweiler  
Associate Dean: Marilyn J. Boxer  
Assistant Dean for Student Affairs  
and Special Instructional Programs: Edward R. Mendez

### 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.

### Liberal Arts Courses

The College of Arts and Letters sponsors General Studies courses 101 and 301 which are interdisciplinary courses. They fall into two main categories: (1) lecture series on topics of current interest for which the humanities and social sciences bring insight; and (2) workshops designed to give liberal arts students skills desirable for advancement in their major, but not normally offered by their departments.

Students interested in enrolling in General Studies 101 and 301 should contact the faculty adviser of the department(s) offering the course or the College of Arts and Letters Assistant Dean for further details.

### 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.

#### Master's Degrees

American Studies (M.A.), Anthropology (M.A.), Asian Studies (M.A.), Economics (M.A.), English (M.A.), French (M.A.), Geography (M.A.), \*German (M.A.), History (M.A.), Latin American Studies (M.A.), Linguistics (M.A.), Philosophy (M.A.), Political Science (M.A.), Public History (M.A.), Russian (M.A.), Sociology (M.A.), Spanish (M.A.).

\* No students will be admitted into this program during the current academic year.

#### Bachelor's Degrees

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

#### Minors

African Studies, Afro-American Studies, American Indian Studies, American Studies, Anthropology, Asian Studies, Classical Humanities, Classics, Comparative Literature, Economics, English, Environment and Society, European Studies, French, Geography, German, Gerontology, History, Humanities, Italian, Jewish Studies, Latin American Studies, Linguistics,

Mexican-American Studies, Middle East Studies, Philosophy, Political Science, Portuguese, Religious Studies, Russian, Sociology, Spanish, Women's Studies.

### Preprofessional Curricula

Prelegal

### Certificate Programs

Applied Linguistics and English as a Second Language (ESL), Cartography, Children's Literature, Creative Writing (Advanced), Public History, Quantitative Analysis in the Social Sciences, Spanish Translation, Spanish Court Interpreting, Technical and Scientific Writing.

### 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 an Asian/Pacific American Archive on campus and to carry on programs of research, seminars, colloquia, and other public activities of benefit to Asian and Pacific American communities in the San Diego area.

In particular, the Consortium maintains close relations with the Center for Regional History located in the University Library. The Center will house the Asian/Pacific American Archive and acquire permanent collections of organizational records and personal memorabilia donated by local Asian and Pacific American communities. The Center welcomes donations of personal correspondence, diaries, family memoirs, photographic collections, and other old or rare materials. An oral history collection of tapes and transcripts is being developed.

The Consortium maintains connections with campus organizations including the Center for Asian Studies, the American Studies Committee, the Social Science Research Laboratory, the Asian-American Student Alliance, and the San Diego State University Foundation. General liaison is maintained with the College of Arts and Letters, the College of Education, the School of Social Work, and the University Library.

#### Asian Studies

Paochin Chu, 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. The Center's reading room and study facility, located in AH-3172, contains Asian periodicals, books, pamphlets, dictionaries and maps.

#### Economics Research Center

Walter Vogt, Director

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

#### European Studies Center

Leon Rosenstein, Director

The European Studies Center coordinates and supports teaching and research related to the European area. It supervises the major and the minor in European studies for the A.B. degree. It sponsors the annual San Diego State University Summer Seminar and Travel Study Tours to Europe at various times in the year. It administers the European Studies Center Laboratory in AH-3172 which contains books, pamphlets, English and foreign language periodicals, and a slide collection on European art and geography. The laboratory room is open



several hours each day for study and research by students and instructors in courses dealing with any aspect of European studies. The Center also assists in the development of the university library's holdings in the European area and has created a special collection of library materials on European integration and unification which is being steadily and systematically expanded.

### **Japan Studies Institute**

**Elmer A. Keen, Director**

The Japan Studies Institute coordinates 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-Japanese relations. It develops and fosters student and faculty exchanges between San Diego State University and Japanese institutions of higher learning; tuition-free exchange arrangements exist at present with six 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 courses, seminars, and workshops offered by the University. The Institute operates under the jurisdiction of the College of Arts and Letters and is closely affiliated with the University's Center for Asian Studies.

### **Institute of Labor Economics**

**Adam Gifford, Director**

The Institute of Labor Economics is a facility of the Department of Economics which encourages research by students and faculty in all phases of labor problems, collective bargaining, labor legislation and social security. The Institute is designed to complement the curricular and degree programs in the Department of Economics and to be of service to related disciplines. Publications are exchanged with 75 similar institutes at other universities. Research materials, both printed and machine readable, in the area of labor economics are maintained in the Social Science Research Laboratory, located on the lower level of the West Commons.

### **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 ten Latin American language and area centers. The Center was also designated one of eleven "National Resource Centers for Latin America" by the Department of Education. In conjunction with this award, the Center administers programs that focus on: (1) initiation of a problem-oriented approach to Latin American studies through the creation of courses dealing with urbanization and modernization of the area; (2) development of innovative methods of instruction in Spanish and Portuguese; (3) provision of services for the general public through the sponsorship of conferences, workshops, lectures and films. The Center also assists in the development of the University library's Latin American holdings and has created a special collection of Latin American materials which is available in the Center's reading room, SS-146.

### **Lipinsky Institute for Judaic Studies**

**Irving Alan Sparks, Interim Director**

The Lipinsky Institute for Judaic Studies, located in the College of Arts and Letters, serves to coordinate and support teaching and research in Judaic studies. Established with contributions from the San Diego Community, the Institute provides financial support for an exchange program for visiting professors in modern Jewish history and contemporary Israeli affairs and for the annual Galinson-Glickman symposium in Judaic studies. It also seeks to complement regular course offerings through sponsorship of lectures, development of library resources, fostering of research, and the conduct of such other activities as will promote the advancement of Judaic studies in the University.

### **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. 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 PSFA-116.

### **Center for Regional History**

**Stephen A. Colston, Director**

The Center for Regional History is an archives and museum that has as one of its objectives the acquisition, conservation, and processing of materials for researching the development of the San Diego region. The Center's archives contain personal papers and records of public, business, labor, cultural, religious and social service organizations, and includes oral history and pictorial materials. The museum houses artifacts excavated from the Real Presidio de San Diego and Spring Valley's Bancroft Ranch House Site; these collections also include field notes, site reports, and collateral documentation. While providing resources for the study of regional history, the Center's collections support multidisciplinary research on contemporary business, economic, environmental, political, social, urban, and journalism topics. The Center also serves as a teaching laboratory for students and community groups through programs which promote the utilization of primary source materials in research, writing and teaching of local history. The Center is located in LL-362.

### **Research in Economic Development**

**M. C. Madhavan, Director**

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

### **Social Science Research Laboratory**

**Paul J. Strand, 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 behavioral and other sciences. Emphasizing public opinion polling and computer applications to social problems, 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.

Instructional Services offers consultation in computer applications to social problems, 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.

Operations offers services in the access and retrieval of computerized and other forms of quantitative data. The Section provides access to a number of large data archives, including the California Poll conducted by the Field Institute, hundreds of local, national and foreign polls, and other kinds of social data through the Interuniversity Consortium for Political and Social Research (ICPSR), certain portions of the most recent U.S. Census, and other sources.



## College of Business Administration

### Administration

Dean: Allan R. Bailey  
 Associate Dean, Academic Affairs: Thomas M. Warschauer  
 Associate Dean, Graduate Studies: William F. Barber  
 Associate Dean, External Relations: Harold K. Brown  
 Assistant Dean for Undergraduate Studies and Student Affairs: Anna R. Newton

### General Information

The College of Business Administration began in 1921 as a Department of Commerce in the Division of Social Sciences. In 1951 this department became the Division of Business and progressed to a School of Business Administration in 1961. In 1979 the name was changed to the College of Business Administration.

The programs in business administration provide high quality education and are designed to represent both general education and the theoretical and practical side of education for business. To this end, in 1959 the Division of Business Administration applied for and received accreditation for its undergraduate programs in business administration by the American Assembly of Collegiate Schools of Business (AACSB); and in 1963 the graduate programs of the School of Business Administration were accredited by AACSB. In addition, the School of Accountancy (within the College of Business Administration) received accreditation by AACSB in the first year (1982) that this special accreditation for schools of accounting was offered, being one of only twenty-two programs so recognized that year.

All undergraduate and graduate programs have enjoyed continuous accreditation since their points of first application. Furthermore, the College of Business Administration is one of only two colleges of business south of the Los Angeles metropolitan area to have had their undergraduate and graduate programs approved by AACSB.

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; and (6) 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.

### Research Bureau

#### 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.

## College of Education

### Administration

Dean (Acting): Lawrence B. Feinberg  
 Associate Dean: John D. Chamley  
 Assistant Dean: Jean Ramage

### 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 five academic units including the School of Teacher Education and the following departments: Special Education; Development, Administration and Technology; Counselor Education; and Policy Studies in Language and Cross-Cultural Education. Master of Arts degrees are offered in nine 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. The program is currently in its seventh year of operation. This unique program features a multicultural education emphasis. Approved teaching credential programs are offered for the multiple subjects credential, the single subject credential, and the community college instructor credential, as well as 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.

### Research Centers

#### Counselor Education

Paul Bruce, Director

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

#### Institute for Cultural Pluralism

The Institute for Cultural Pluralism (ICP) is an umbrella organization, housing projects funded by federal, state and private sources. The ICP currently includes the National Origin Desegregation/Lau Center, the Multifunctional Bilingual Service Center, and the Social Equity Technical Assistance Center. These centers focus on issues of social equity, conduct research on questions related to equity in schools, and provide technical assistance to districts throughout southern California and parts of Arizona.



## Center for Instructional Technology Research and Training

Patrick J. Harrison, 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 and Librarianship of the College of Education at San Diego State University.

## Center for Vocational Rehabilitation

Fred McFarlane, Director

The Center for Vocational Rehabilitation coordinates and supports training and research activities in the field of vocational rehabilitation. This Center operates within the College of Education and works directly with faculty interested in this area. The Center for Vocational Rehabilitation administers projects funded by local, state and federal agencies. The Center's facilities are located in the Alvarado area in close proximity to the campus.



Model Education Center, College of Education.

## College of Engineering

### Administration

Dean: George T. Craig

Associate Dean: Nihad Hussain

Assistant Dean for Student Affairs: Frank Stratton

### General Information

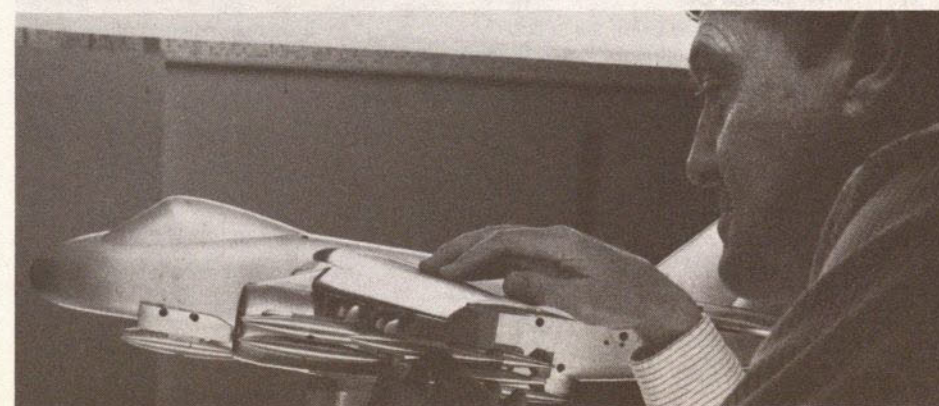
At the undergraduate level, the College of Engineering prescribes certain patterns of its courses, combined with those of other academic divisions of the University, as a program of 133 semester units leading to the Bachelor of Science degree in the four specific major fields of engineering: aerospace engineering, civil engineering, electrical engineering, and mechanical 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. Graduates of this program are able to assume personal responsibility for the development and application of engineering knowledge with wisdom and judgment for the benefit of mankind. They are qualified to take the Engineer-in-Training examination as a first step to professional registration, to enter industry at the junior engineer level, or to continue formal education at the graduate level. 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 course work emphasizing engineering fundamentals. Students then are able to utilize this knowledge of fundamentals in developing special knowledge in their areas of specific interest.

### 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.



Research Aircraft Model in SDSU Wind Tunnel.



## College of Human Services

### Administration

Dean: Peter Dual  
Associate Dean: Dolores A. Wozniak  
Assistant Dean for Student Affairs: Barry Jones

### General Information

The mission of the College of Human Services is to offer excellence, uniqueness, and opportunity in professional education in health and human service disciplines. The College of Human Services consists of the following group of professional schools, departments, and centers: the Graduate School of Public Health, the Schools of Nursing and Social Work, the Departments of Communicative Disorders and Health Science, the Clinical Training Center, and the University Center on Aging.

The College of Human Services faculty through close 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 lifestyles and the challenge of improving the quality of the human condition. Therefore, 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, and Master of Social Work 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 inservice training for professionals already in the field.

### Human Services Courses

The College of Human Services sponsors General Studies courses 220, 302 and 502. The purpose of these courses is to provide an opportunity for interdisciplinary study for students entering human service professions. Refer to the Class Schedule for specific content.

### 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 Human Services.

#### Master's Degrees

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

#### Bachelor's Degrees

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

#### Minors

Communicative Disorders, Gerontology, Health Science, Social Work.

#### Certificate Programs

Gerontology, Human Services Paraprofessional, Preventive Medicine Residency, Professional Services Bilingual/Bicultural.

## Research Center

### University Center on Aging

E. Percil Stanford, Director

The University Center on Aging is a multidisciplinary organization located in the College of Human Services. The Center is active in such areas of aging as (1) supporting interdisciplinary educational and curriculum efforts; (2) undertaking research 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 the community. The Center has a commitment to include ethnic minority content in each area described.

The University Center on Aging works with a wide variety of disciplines to provide students an opportunity to take gerontology related courses across a number of colleges, schools and departments. Courses pertaining to aging are being offered within Psychology, Social Work, Health Science, Sociology, Family Studies and Consumer Sciences, Anthropology, Recreation, Nursing, and Biology. Students wishing to organize a series of courses to meet their needs in the area of gerontology are encouraged to contact the Center Director or staff for more specific information on course offerings.

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

Other major activities of the Center are administering a National Institute on Minority Aging, a 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.



Clinical Laboratory, School of Nursing.



## College of Professional Studies and Fine Arts

### Administration

Dean: Merrill Lessley  
Associate Dean: Stephen W. King  
Assistant Dean for Academic Affairs: Barbara W. Hartung  
Assistant Dean for Student Affairs: Carole Robasciotti  
Assistant Dean for Physical Resources: Fred Hammond  
Director, Development and Public Affairs: Michael Lewis

### General Information

Comprised of 14 departments and schools, the College of Professional Studies and Fine Arts is a multifaceted college which offers students diverse educational opportunities coupled with interdisciplinary, internship, and participatory programs in several areas of study. The College's academic programs not only encourage intellectual development but help prepare 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 studies, 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.

The College reaches out to the community through its performing arts programs in art, drama, music, and dance. It is further involved with the community through sponsorship of an active intramural sports program, an adult fitness program, and in the area of public affairs through the well-known annual Institute on World Affairs—to name but a few areas of community service.

In addition, three research centers housed in the College allow students opportunities for firsthand research experience. They are the Center for Communications, the Institute of Public and Urban Affairs, and the Institute for Leisure Behavior.

A number of the instructional programs in the College have been accorded full five-year or ten-year national accreditation status.

### 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.), City Planning (M.C.P.), Drama (M.A., M.F.A.), Home Economics (M.A.), Industrial Arts (M.A.), Mass Communication (M.S.), Music (M.A., M.M.), Nutritional Sciences (M.S.), Physical Education (M.A.), Radio and Television (M.A.), Speech Communication (M.A.).

#### Bachelor's Degrees

Art (A.B.), Child Development (B.S.), Criminal Justice Administration (B.S.), Drama (A.B.), Foods and Nutrition (B.S.), Home Economics (A.B.), Industrial Arts (A.B.), Journalism (A.B.), Music (A.B., B.M.), Physical Education (A.B.), Public Administration (A.B.), Radio-Television (A.B., B.S.), Recreation Administration (A.B.), Speech Communication (A.B.).

### Minors

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

### Military Curricula

Aerospace Studies, Military Science, Naval Science

### Research Centers

#### Center for Communications

John P. Witherspoon, Director

The Center for Communications was established to develop and administer interdisciplinary research and planning projects concerned with telecommunications technology, issues, and applications. It also develops and administers the applications of the University's ITFS television system and satellite teleconferencing facilities. Center projects are funded from grants and contracts with industry, government, education, and philanthropy. The Center seeks to stimulate recommendations for research from faculty members in participating departments; to conduct studies and planning projects relating to developments in the communications field, problems in communications, and applications of communications technology; to conduct conferences and seminars related to these areas; to examine methods by which the University can extend its reach by use of communications technology; and to establish a mechanism for cooperative enterprises in the communications field with other institutions in the San Diego area.

The Center is advised by a Board representing interested units of the University and the communications industries of the San Diego area.

#### Institute for Leisure Behavior

Gene G. Lamke, Director

The Institute for Leisure Behavior is the research and community service unit within the Department of Recreation at San Diego State University. It is primarily concerned with conducting leisure related research, promoting professional development, disseminating specialized publications, and organizing conferences, seminars, lectures and workshops.

The Institute also assists with the development of Camp Able, an aquatic program for disabled people, and administers facilities and programs for the Spring Valley park and recreation district and the City of Santee.

#### Institute of Public and Urban Affairs

Robert J. Waste, 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  
Associate Dean: James W. Neel  
Associate Dean: James W. Brown  
Associate Dean for External Relations: Gordon L. Shakelford  
Assistant Dean for Student Affairs: Celia L. Marshak

### General Information

The College of Sciences, composed of eleven 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 Hubbs 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.

#### Joint Doctoral Degrees

Biology, Chemistry, Ecology, Genetics\*

\* Admission to this program is closed.

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

#### Minors

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

#### Certificate Programs

Recombinant DNA Technology

#### Other Curricula

Medical Technology, Predental, Premedical, Preveterinary

### Research Centers

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

Richard H. Miller, Director

The Allison Center supports research in paleontology, geology and related sciences. The Center maintains a research library containing journals, reprints, and some textbooks, and

houses a collection of fossil and recent vertebrates, invertebrates, and plants. Research space is available for students, faculty, and visiting scholars. Small grants and 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 Medicine

Robert M. Kaplan, Director

The Center for Behavioral Medicine was established in 1982 to promote research and academic programs relevant to applications of behavioral science principles in medicine and health care. Recent developments in behavioral technology have created methodologies that may be useful in the prevention, diagnosis, treatment, and rehabilitation of a variety of conditions. Behavioral medicine involves collaborative efforts between physicians and basic scientists from a variety of different fields. Current Center research projects involve physicians from a variety of specialties (including surgery, chest medicine, endocrinology, cardiology, family practice, and pediatrics) with epidemiologists, exercise physiologists, dieticians, and many others.

Currently the Center works with the University of California at San Diego Medical Center, Scripps Clinic and Research Foundation, and Children's Hospital and Health Center. Funding for the Center comes from federal and private foundation grants.

The Center offers opportunities for graduate students to be involved in collaborative research efforts and has a commitment to provide important research experience to advanced students. The Center also participates in the Minority Access to Research Careers (MARC) Program funded by the National Institutes for Health.

The Center is located in the Alvarado Medical Center at 6363 Alvarado Court, Suite 101, San Diego, CA 92120; telephone (619) 265-4350.

### Biological Field Stations

Walter C. Oechel, 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 4400-acre Sky Oaks Biological Research Station in Chihuahua Valley north of Warner Springs, the 2700-acre Santa Margarita Ecological Reserve near Temecula, and the 500-acre Fortuna Mountain Ecological Reserve north of Mission Gorge Road in San Diego.

The Sky Oaks Biological Research Station maintains laboratory and dormitory facilities and weather stations. It is adjacent to the Anza Borego State Park, Cleveland National Forest, BLM lands, and private land. The proximity of these lands provides many research and teaching opportunities which would otherwise be unavailable. This site offers a diversity of community types, including red shank-chamise chaparral, mixed chaparral, oak woodlands, grassland, 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. A variety of soils and rock types are present and rich groundwater resources and archaeological sites are on the property.

The Santa Margarita site provides riparian vegetation, oak woodlands, grasslands, coastal sage scrub, chamise chaparral and mixed chaparral. While pockets of older chaparral exist, much of the chaparral vegetation is young, having been burned in the 1969 fire. Abundant wildlife exists and the Santa Margarita River, a perennial stream, offers stream and riparian habitat for study. The area is undeveloped and relatively undisturbed.

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 campus Biological Field Stations office in HA-525. Reports describing the ecology and development of the Santa Margarita and Sky Oaks sites are available from the director.



### Center for Energy Studies

Phillip R. Pryde, Acting 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. Research in specific energy technologies is also carried out by various faculty who are members of the Center. 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 265-6240 or 265-5485. 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. The Center is located in the College of Sciences and administered by an executive committee consisting of faculty from the colleges of Sciences, Engineering, Arts and Letters, and Professional Studies and Fine Arts.

### Center for Marine Studies

Richard F. Ford, Director

The primary functions of the Center for Marine Studies are to coordinate and represent the multidisciplinary Marine Studies Program offered by departments within the University, to aid in the development of instructional, research, and public services aspects of the program, and to provide special supporting services to those involved. The Center is operated as a special unit of the College of Sciences. Supporting services sponsored by the Center include advising students concerning marine studies, assistance to faculty and students in research, preparation of manuscripts and publication, operation of the SDSU Marine Laboratory at Mission Bay and the University's Encina Laboratory at Carlsbad, California, a boat operations program, and the University Diving Safety Program. The Center is administered by a director, associate directors, and an executive committee consisting of faculty members elected from participating departments in the College of Arts and Letters, the College of Business Administration, the College of Engineering, the College of Professional Studies and Fine Arts, and the College of Sciences. Additional information about the Marine Studies Program and student advising is available from the Center for Marine Studies office in PS-103.

### Molecular Biology Institute

A. Stephen Dahms, 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. Funding for the research programs administered by MBI members is provided 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, and Sea Grant (NOAA).

### Paleobiology Council

Richard D. Estes, Director

The Paleobiology Council is an interdisciplinary research and teaching group concerned with exploration of the fossil record. It is composed of faculty members from the Departments of Biology and Geological Sciences and the San Diego Natural History Museum. Students interested in pursuing an interdisciplinary Special Major leading to an M.A. in Paleobiology may do so under the direction of the committee.

### Survey Research

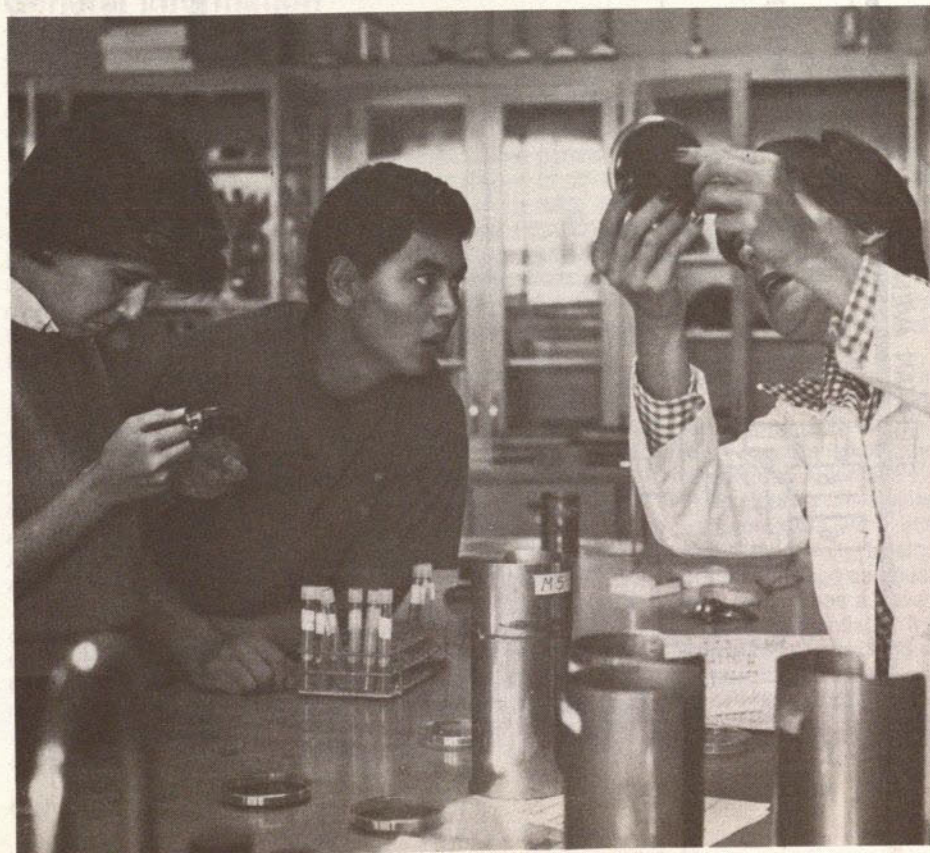
Oscar Kaplan, Director

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

### Systems Ecology Research Group

Walter C. Oechel, Director

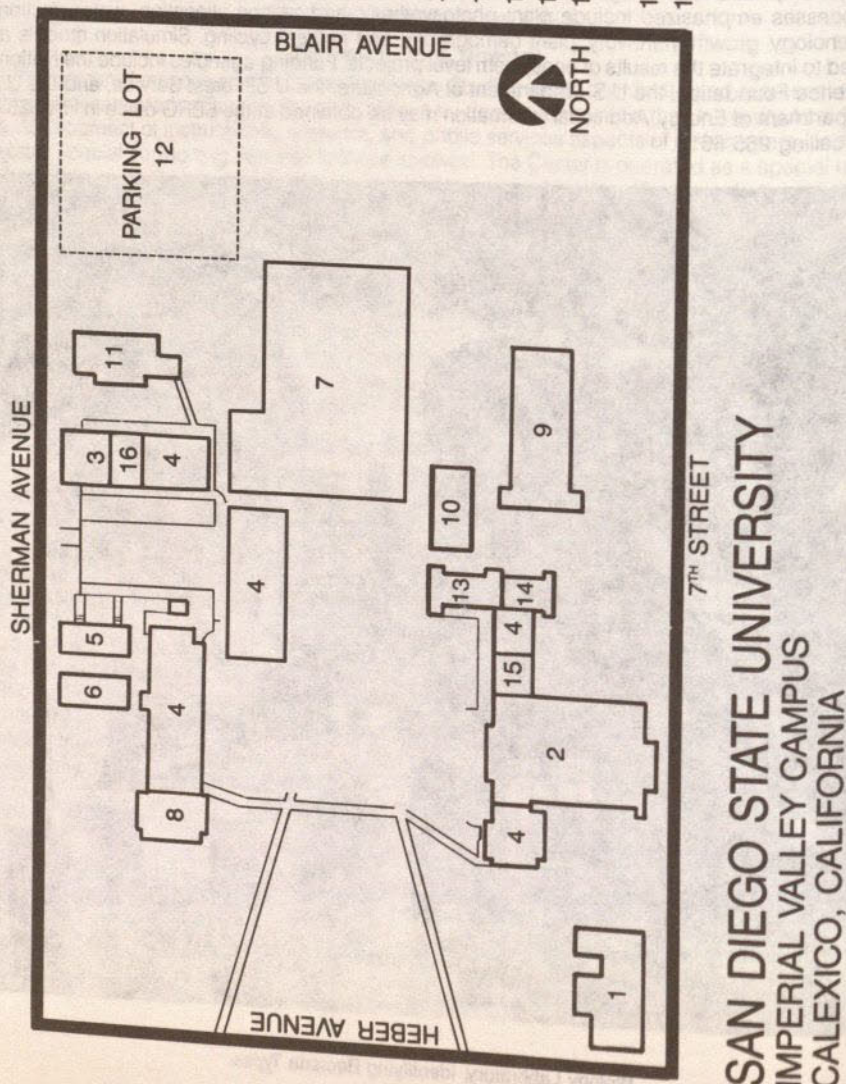
The Systems Ecology Research Group (SERG) is an interdisciplinary group established to conduct basic research and promote graduate education in systems ecology. Group expertise exists in general ecology, physiological ecology, botany, forestry, meteorology, soil science, community ecology, demography image processing, and computer modeling. At present, the major emphasis is on integrated research projects in chaparral and arctic tundra ecosystems. Processes emphasized include plant photosynthesis and carbon allocation, water relations, phenology, growth, herbivory, plant demography, and nutrient cycling. Simulation models are used to integrate the results of ecosystem level projects. Funding agencies include the National Science Foundation, the U.S. Department of Agriculture, the U.S. Forest Service, and the U.S. Department of Energy. Additional information may be obtained at the SERG office in HA-525 or by calling 265-6613.



Biology Laboratory, Identifying Bacteria Types.



- 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/  
COMPUTER CENTER
  15. TUTORING CENTER
  16. BORDER INSTITUTE



**SAN DIEGO STATE UNIVERSITY**  
**IMPERIAL VALLEY CAMPUS**  
**CALEXICO, CALIFORNIA**

## Imperial Valley Campus, Calexico

### Administration

Dean: David Ballesteros  
 Associate Dean for Academic Affairs: Armando Arias, Jr.  
 Special Assistant to the Dean: Dana W. Murphy  
 Assistant Dean for Student Affairs: Cynthia D. Flores  
 Director of Admissions and Records: Kathleen Russum  
 Director of Library Services: Louise Lovely  
 Business Manager: Emma Odegard

### Faculty

Emeritus: Harmon, King, Rodney, Spencer  
 Professors: Baldwin, Smith, Wilson  
 Associate Professors: Ayala, Erzen, Franklin, Monk (Visiting), Polich, Polkinhorn, Ryan, Varela-Ibarra  
 Assistant Professors: Dunn, Hill, Quintana  
 Lecturers: Akers, Bell, Bernardi, Blek, Blumberg, Bowen, Butler, Dady, Dolener, Doshier, Fields, Fuentes, Harmon, Johnson, Larsson, Lazer, Livingston, Lohr, Maddox, Micheli, Murphy, Murray, Paul, Perry, Puddy, Rousseau, Shaver, Shinn, Stampel, Stevenson, Velasco, Villarino

### General Information

The Imperial Valley Campus is a two-year upper-division campus of San Diego State University serving the desert area of southeastern California. It is accredited as an integral division of SDSU and operates under the same academic calendar. Established in 1959 by an act of the State legislature, the campus is located on the Mexican border in Calexico in the Imperial Valley. Offering only the last two years of undergraduate education as well as a fifth year credential program for teacher preparation 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 600,000 people. There are also many opportunities on the U.S. side of the border to be involved in a bilingual/cross-cultural setting. There is an exchange program for students between the Imperial Valley Campus and the Universidad Autonoma de Baja California which allows students to take classes at either of the participating universities and receive credit at their home institution. Among the faculty are professors with Latin American emphases in history, geography, sociology, and Spanish. The faculty is also augmented with other Latin American specialists from Mexico and from the San Diego campus.

The Imperial Valley is one of the richest agricultural centers in the country. It has a desert climate with mild winters and little rainfall. Because of this, the area has 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 A.B. degree in liberal arts and sciences.



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

Occasionally the Imperial Valley Campus cooperates with academic units and the Graduate Division of the San Diego Campus in offering selected graduate programs leading to advanced degrees. 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 Multicultural Education and in Administration and Supervision; these have been provided through cooperative arrangements with the College of Education. A similar program, provided by the School of Social Work, offers a course of graduate study leading to the Master of Social Work degree.

### Certificate Programs

Business Administration, Public Administration, Spanish Translation and Court Interpreting

### Teaching Credentials

#### Basic

Multiple subject  
 Multiple subject (bilingual emphasis)  
 Single subject

#### Specialist

Bilingual/Cross-cultural — in conjunction with the College of Education  
 Administrative Services — 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. This was originally the site of Calexico's first high school, and some of the campus buildings, including Rodney Auditorium, are part of the original school structures. In 1980 the Legislature approved funding to construct a new classroom building and a library media center which was dedicated in February 1983. A modern language laboratory and minicomputer laboratory have also been added.

The library is expanding its collection from its current 28,000 volumes to approximately 50,000 volumes by the end of the decade. It subscribes to over 300 periodicals. Quick inter-library loan services make the library resources of the entire CSU system available to Calexico faculty and students. 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 student union, bookstore, administration, student services, faculty office and shop buildings make up the facilities on the campus.

### Admission, Registration, and Commencement

To apply for admission to the Imperial Valley Campus, students must file a complete application and transcripts as outlined 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) 357-3721 for further information. Applications for admission to the campus are accepted through registration week for both the fall and spring semesters. Because of the size of the campus, the registration process is easily accomplished in a short period of time with little chance of classes closing.

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

## North County Center

### Administration

Director: Richard R. Rush  
 Assistant Dean for Student Affairs: Sandra R. Kuchler  
 Senior Assistant Librarian: Nancy C. Assaf

Graduation and academic requirements for degree programs offered at the Center are identical to main campus requirements.

Faculty teaching at the Center are regular full-time SDSU faculty and part-time faculty selected by departments on the basis of their academic preparation and teaching experience.

### General Information

The San Diego State University North County Center has been established to assist individuals living in the northern San Diego, southern Orange and Riverside counties in meeting their academic objectives.

Establishment of the Center was approved by the state legislature and Governor in the summer of 1979. The first classes at the Center were offered in September 1979. Courses offered at the Center are at the upper division and graduate level. Lower division academic work will be provided by local community colleges.

The Center is located at 800 West Los Vallecitos Boulevard, San Marcos, California.

### Curricula Offered

Major in American studies with the A.B. degree in liberal arts and sciences.  
 Major in liberal studies, option 2, with the A.B. degree in applied arts and sciences.  
 Major in social science with the A.B. degree in liberal arts and sciences.

Major with the B.S. degree in business administration in the following fields: accounting and management.

Major in public administration with the A.B. degree in applied arts and sciences.

Master of Arts degree in education with concentrations in elementary curriculum and instruction, secondary curriculum and instruction, community college curriculum and instruction, educational technology, multicultural education, and reading education.

Master of Arts degree in education with a concentration in educational administration and/or administrative services credential.

Master of Social Work degree.

Certificate in Instructional Technology.

### Admission and Registration

To attend classes at the North County Center, students must file a complete application and transcripts as outlined elsewhere in this catalog and be admitted to San Diego State University. Upon admission to the University, students may register for classes at SDSU, at the North County Center, or both.

Students may register for North County classes by using the mail registration procedures or by registering in person at the Center prior to the start of classes. See the current Class Schedule for registration dates.

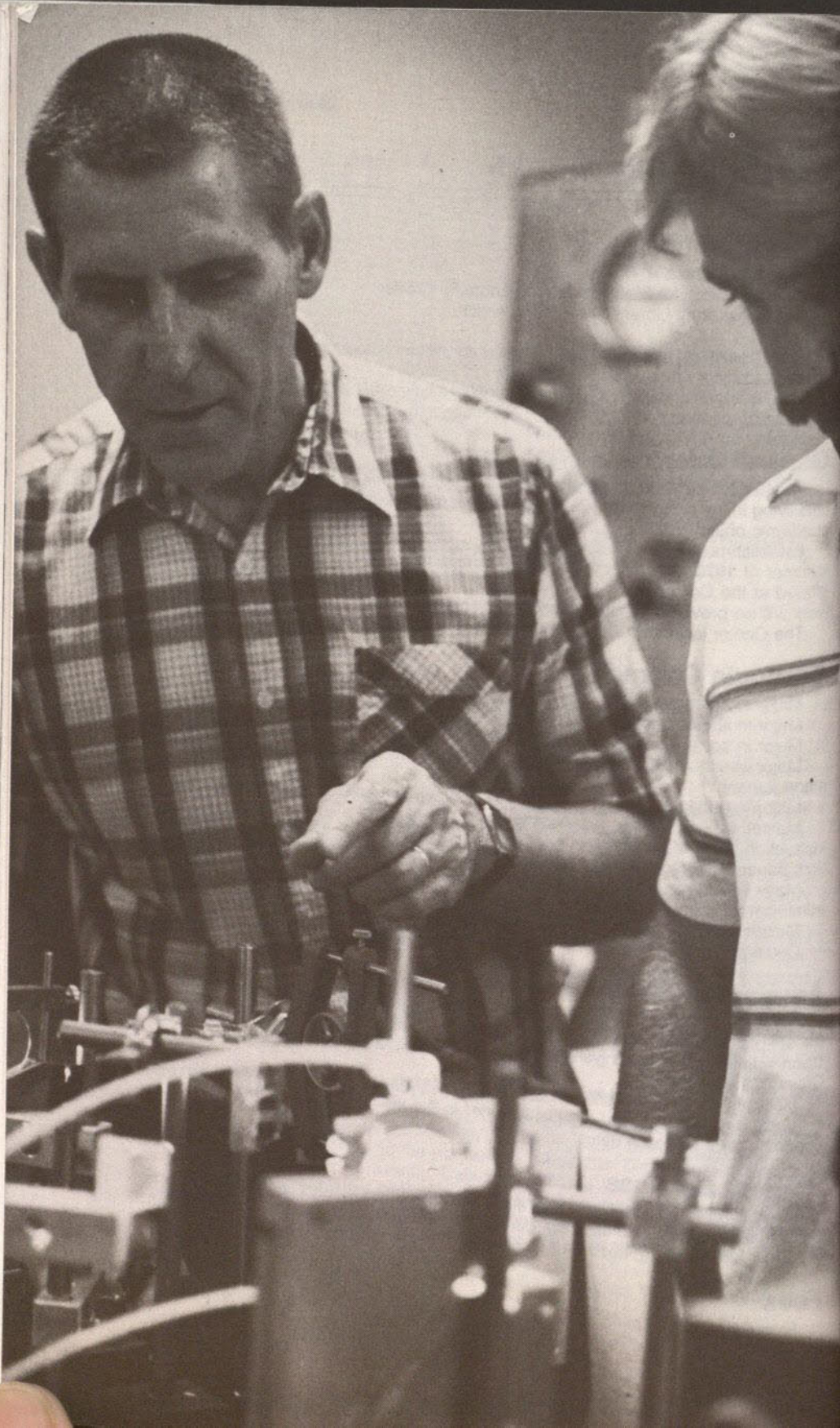
### Student Services

In addition to on-site registration and payment of fees, student services provided at the Center include academic advising, career counseling, veterans benefit information, financial aid information, testing, textbook purchase, library services, and student activities.

### Fees

Fees for courses offered at the North County Center are the same as those charged on the main campus. For specific information, see the Schedule of Fees in this catalog.





# Division of Undergraduate Studies

*Opposite page:* Electro-Optics Equipment, Dye Laser Equipment.



## Division of Undergraduate Studies

### Objectives and Functions

The Division of Undergraduate Studies serves to provide coordination, evaluation, and stimulation to 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 Servicemembers' Opportunity College, and the preprofessional program in law. In addition, it sponsors the Liberal Studies majors.

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. Honors sections of regular classes, as well as those specially designed for the program, are available; 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 before completion of three semesters. Eligibility at entrance is determined by an SAT score of approximately 1100 or above (ACT 26), or a high school GPA of 3.5, or successful completion of advanced high school courses; later eligibility is determined by a superior GPA at the 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 (most are listed under the department's 300 number), and contact the department or instructor for information.

### Cooperative Education Program

San Diego State University's Cooperative Education program is designed to provide students with practical work experience directly related to their academic fields of study and career objectives.

Cooperative Education offers students the opportunity to enhance their on-campus study with periods of supervised half-time or full-time off-campus paid employment. Students recommended by their academic departments to participate in the Cooperative Education program work directly with professionals in their fields of study. Job placements are screened to assure students an opportunity to apply their educational knowledge and skills at an appropriate level and to acquire experience directly related to their future education. Students who participate in this program gain marketable knowledge, earn extension credit, receive competitive wages, gain new insights into their proposed careers, and develop maturity and self-confidence.

While learning is the primary objective of Cooperative Education, the program is also a method through which students can finance a portion of their education. In addition, Cooperative Education students are likely to be hired at a higher rate of pay than graduates who are making their initial entry into the job market. Furthermore, professional contacts made

through a Cooperative Education placement are especially beneficial to students who wish to expand their employment opportunities upon graduation.

Students with a GPA of 2.0 or higher who have completed fifteen San Diego State units or thirty semester transfer units are eligible to begin the Cooperative Education job search process. The Cooperative Education Office provides assignment opportunities primarily with employers located in the San Diego area; however, placement is not limited to the San Diego region. The Cooperative Education Office is continually seeking new business, industry, and government contacts in order to provide appropriate employment for interested students.

During the Cooperative Education work experience, a student receives evaluations by an immediate supervisor and by a faculty member from the student's department or college. The student also completes an academic project arranged in advance with a faculty member in the student's major department.

San Diego State's goal is to enable all students who desire to do so to benefit from this unique educational program. Additional information regarding the program may be obtained from the Cooperative Education Office, the Division of Undergraduate Studies, the Center for Counseling Services and Placement, the University Advising Center, the Cooperative Education Coordinator in the College of Engineering or the College of Professional Studies and Fine Arts, and from the Assistant Dean for Student Affairs in each college.

### International Programs

The California State University (CSU) International Programs offers students the opportunity to continue their studies overseas for a full academic year while they remain enrolled at their home CSU campus. The International Programs' primary purposes are to enable selected students to gain a firsthand understanding of other areas of the world and to advance their knowledge and skills within specific academic disciplines in pursuit of established degree objectives.

A wide variety of academic majors may be accommodated by the 25 foreign universities cooperating with the International Programs in 15 countries around the globe. The affiliated institutions are: the University of São Paulo (Brazil); the Universities of the Province of Quebec (Canada); the University of Copenhagen (through Denmark's International Student Committee's Study Division); the University of Provence (France); the Universities of Hamburg, Heidelberg, and Tübingen (Germany); the Hebrew University of Jerusalem (Israel); the University of Florence (Italy); Waseda University (Japan); the Iberoamericana University (Mexico); Massey University and Lincoln University College (New Zealand); the Catholic University of Lima (Peru); National Chengchi University (Republic of China/Taiwan); the Universities of Granada and Madrid (Spain); the University of Uppsala (Sweden); and the Universities of Bradford and Bristol (United Kingdom). Information on academic course offerings available at these locations may be found in the International Programs Bulletin which may be obtained from the International Programs representative on campus.

Eligibility for application is limited to those students who will have upper division or graduate standing at a CSU campus by the time of departure, who possess a cumulative grade point average of 2.75 or 3.00 (depending on the program) for all college level work completed at the time of application, and who will have completed required language or other preparatory study where applicable. Selection is competitive and is based on home campus recommendations and the applicant's academic record. Final selection is made by the Office of International Programs in consultation with a statewide faculty selection committee.

The International Programs supports all tuition and administrative costs overseas for each of its participants to the same extent that such funds would be expended to support similar costs in California. Students assume responsibility for all personal costs, such as transportation, room and board, and living expenses, as well as for home campus fees. Because they remain enrolled at their home CSU campus while studying overseas, International Programs students earn full resident credit for all academic work completed while abroad and remain eligible to receive any form of financial aid (other than work-study) for which they can individually qualify.

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 1986-87 academic year overseas must be submitted by February 1, 1986.



## International Student Exchanges

In addition to the international programs sponsored by CSU, San Diego State University has entered into special institutional arrangement with selected foreign universities that provide both undergraduate and graduate students the opportunity for study abroad. Currently San Diego State University has exchange agreements with universities in Brazil, France, Indonesia, Israel, Japan, Mexico, the People's Republic of China, and the United Kingdom. Information about student exchange opportunities may be obtained from the Graduate Division Office.

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

## University Prelaw Adviser

Students interested in pursuing a legal career are counselled 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 Political Science Department.

# Graduate Division



## Graduate Division

### Organization and Administration

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

The Graduate Division 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 Dean of the Graduate Division is the appropriate University authority for the administration of all matters related to graduate degree curricula, minimum requirements for which are specified in Section 40504 of the *California Administrative Code*.

### 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 in Biology is offered jointly with the University of California, San Diego.

The Doctor of Philosophy degree in Chemistry is offered jointly with the University of California, San Diego.

The Doctor of Philosophy degree in Ecology is offered jointly with the University of California, Davis.

The Doctor of Philosophy degree in Education is offered jointly with the Claremont Graduate School.

The Doctor of Philosophy degree in Genetics is offered jointly with the University of California, Berkeley and the University of California, San Diego.\*

\* Admission to this program is closed.

#### Master of Arts

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

American studies	French	Physics
Anthropology	Geography	Political science
Art	German **	Psychology
Asian studies	History	Public history
Biology	Industrial arts	Radio and television
Chemistry	Latin American studies	Russian
Communicative disorders	Linguistics	Sociology
Drama	Mathematics	Spanish
Economics	Music	Special major
Education	Philosophy	Speech communication
English	Physical education	

\*\* No students will be admitted into this program during the current academic year.

### Master of Science

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

Accountancy	Home economics
Aerospace engineering	Mass communications
Applied mathematics	Mechanical engineering
Astronomy	Microbiology
Biology	Nursing
Business administration	Nutritional sciences
Chemistry	Physics
Civil engineering	Psychology
Computer science	Radiological health physics
Counseling	Rehabilitation counseling
Electrical engineering	Special major
Geological sciences	Statistics

### Master of Business Administration

#### Master of City Planning

#### Master of Fine Arts in Art

#### Master of Fine Arts in Drama

#### Master of Music

#### Master of Public Administration

#### Master of Public Health

#### Master of Social Work

## Nondegree Postbaccalaureate Study

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

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

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

Further information about nondegree postbaccalaureate study may be obtained by contacting the Graduate Division Office.

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



### Application Procedures

All applicants for 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 \$35.00 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 Office 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 Dean of the Graduate Division; (b) have attained a grade point average of at least 2.5 (when A equals 4) in the last 60 semester (90 quarter) units attempted; and (c) have been in good standing at the last institution attended. Applicants who do not qualify for admission under provisions (a) and (b) may be admitted by special action if the Dean of the Graduate Division 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.

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

### Graduate Standing (Classified)

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

- Achieve a satisfactory score on the GRE General (Aptitude) Test. (Students holding an advanced degree from an institution which is a member of the Council of Graduate Schools are exempted from this requirement; students applying to the College of Business Administration will take the Graduate Management Admission Test.)
- Have completed an undergraduate major appropriate to the field in which he/she 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 or college have been met, the student will be accorded full graduate standing (classified).

A student who is already enrolled in the University with postbaccalaureate standing may not be admitted to conditional graduate standing (classified) but may request acceptance into an advanced degree curriculum with graduate standing (classified). Applications for such continuing students are available at the Graduate Division Office. Reports of the GRE General (Aptitude) Test scores must be on file at the University before continuing students may apply for graduate standing (classified).

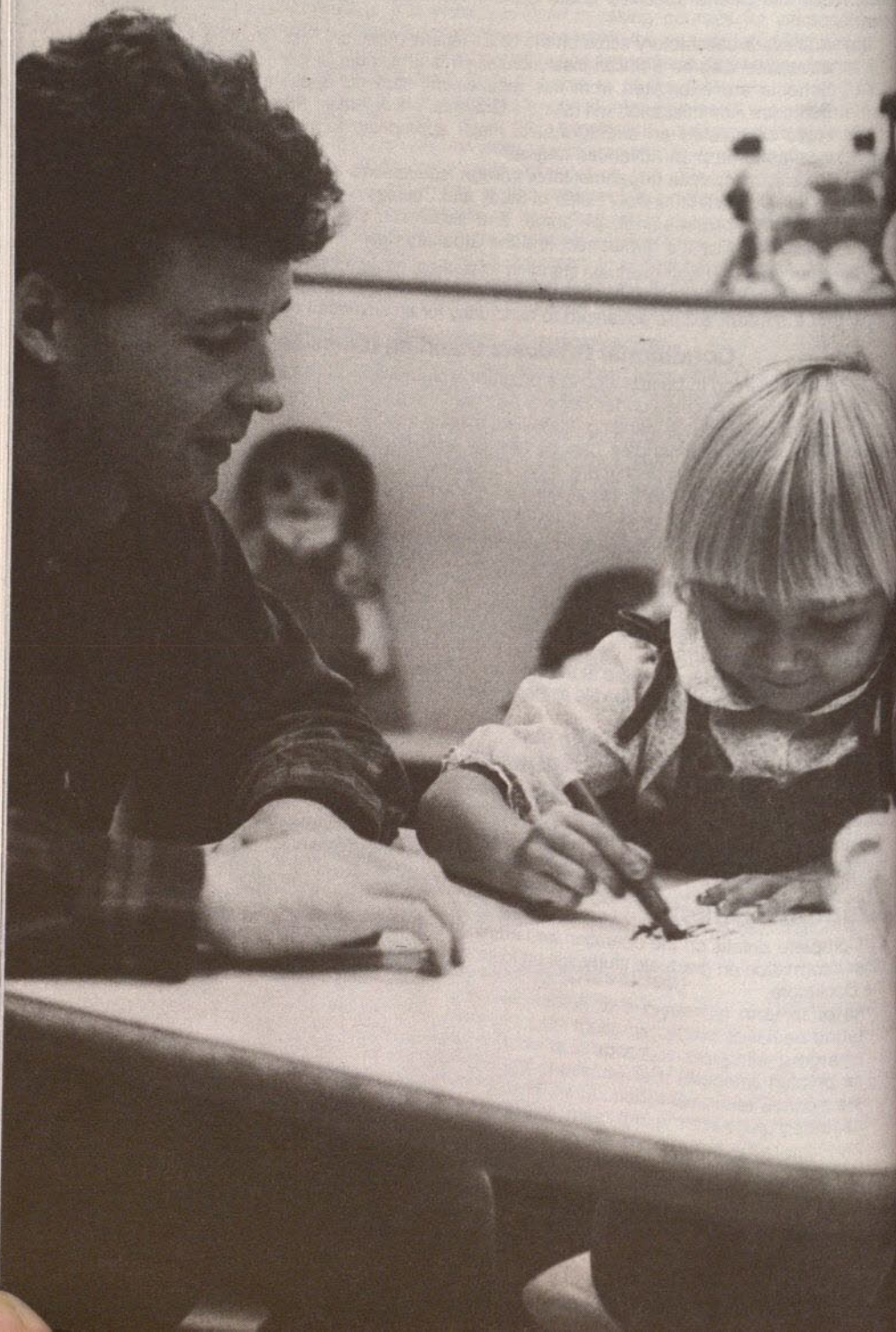
### International Faculty Exchanges

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 institutions in Latin America, East and Southeast Asia, and in Western Europe.

### 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

*Opposite page:* SDSU Clinical Training Center.



## 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 Science, Room 135.

### Pre dental Curriculum

The pre dental 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 course work in the others. Other departmental majors are permissible, however. Pre dental students must confer with a pre dental 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.

Regardless of the major, pre dental students should include the following courses in their program: Biology 200A, 200B, 215, 352 or 357, 355 or 356, 577, 590; Chemistry 200, 201, 231, 431; Mathematics 121 and 122, or 150; Physics 180A-180B and 182A-182B, or 195, 195L, 196, 196L, 197, 197L; Psychology 101 plus one additional course in psychology. Each student should consult the major for level of course required when there are alternatives. Biology 250 (Topics in Dentistry) is offered each spring semester.

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. The students are also expected to obtain information regarding the entrance requirements of specific dental schools.

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, four years of English.

The Preprofessional Health Adviser will be available to high school or transfer students by appointment throughout the summer and during the registration period. All pre dental students should establish a personnel file in Life Science, Room 135; 265-6638.

### 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 programs. 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 210A-210B or 212, 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 521A-521B, 545A-545B; Political Science 301A-301B, 346, 347A-347B. Additional: Economics 380, History 536 and 547A-547B, Political Science 345, 348 and 350.

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.

### 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 course work in the others. Other departmental majors are permissible, however. Premedical students must confer with a 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.

Regardless of the major, premedical students should include the following courses in their program: Biology 200A, 200B, 215, 352 or 357, 355 or 356, 576 or 577, 590; Chemistry 200, 201, 231, 361A, 361B, 431; Mathematics 121 and 122, or 150; Physics 180A-180B and 182A-182B, or 195, 195L, 196, 196L, 197, 197L. Each student should consult the major for level of course required when there are alternatives. Biology 250 (Topics in Medicine) is offered each fall semester.

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, 474, 522; Psychology 101. The students are also expected to obtain information regarding the entrance requirements of specific medical schools.

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, four years of English.

The Preprofessional Health Adviser will be available to high school or transfer students by appointment throughout the summer and during the registration period. All premedical students should establish a personnel file in Life Science, Room 135; 265-6638.

### Preveterinary Curriculum

The preveterinary program is pursued in conjunction with a degree program. Students ordinarily elect to concentrate in biology, with a major in one area and selected course work in the other. Other departmental majors are permissible, however. Preveterinary students must 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.

Regardless of the major, preveterinary students should include the following courses in their program: Biology 200A, 200B, 215, 352 or 357, 355 or 356, 577, 590; Chemistry 200, 201, 231 and 431 or 230, 361A; Mathematics 121 and 122; Physics 180A-180B and 182A-182B; two semesters of English.

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 353 or 354, 350, 474, 522. Biology 250 (Topics in Veterinary Medicine) is offered each fall semester.

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.

The Preprofessional Health Adviser will be available to high school or transfer students by appointment throughout the summer and during the registration period. All preveterinary students should establish a personnel file in Life Science, Room 135; 265-6638.



### **Preparation for Other Professions**

Full programs of professional study in other fields, such as agriculture, forestry, architecture, optometry, pharmacy 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 course work 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.



Bilingual Instructional Technology (BIT) Program.

# **College of Extended Studies**

**Continuing Education  
External Degree Programs**



## 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, Retired Adult Programs, 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 600 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.

Five sessions are scheduled each summer; two 3-week terms during which four units of credit may be earned; two 6-week terms in which students may earn seven units of credit; and one 5-week term during which seven units of credit may be earned. 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 for distribution in March.

### Wintersession

The College of Extended Studies administers a special academic program during the winter recess period titled "The Wintersession." This special session provides students an opportunity to earn resident academic credit through participation in concentrated and interesting course work. Credit earned during Wintersession is applicable to graduation and residence requirements. Admission to the University is not required for Wintersession attendance. Enrollment in Wintersession 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 (25 hours per week) English programs throughout the year to students and professionals interested in improving their English proficiency. By enrolling in ALI, students may take advantage of a program called conditional admission. Conditional admission is available to those students who require acceptance 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 appropriate TOEFL scores and training at the American Language Institute.

Programs offered by ALI are as follows:

**English for Academic Purposes** — A 16-week course for students planning to enter San Diego State or other colleges or universities. Classes are offered in reading, writing, grammar, English for specific purposes (e.g., English for Science and English for Business) and intercultural communication.

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 20-week course focusing upon oral skills and cultural experiences. Classes include eight hours of conversation in addition to reading, writing, structure and pronunciation. Elective courses are offered and directed community activities provide experiences for real language use. Regular field trips to places of educational and recreational interest are an integral part of the program.

**Specific Purposes Programs** — Programs for students and professionals with specific needs, including language programs in management, teacher training, personnel administration and education, 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).

**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.

## Foreign Travel/Study Programs

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

## Extension

In order to meet the needs of the adult community, as well as matriculated students, the College provides a variety of extension courses and workshops, open university, and external degree programs. For the convenience of adult students most courses are scheduled in the evenings or on weekends, on campus or at convenient learning extension centers throughout the service area.



### 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 graduate students in any category 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.

Open University classes may not be taken by the following:

1. Nonmatriculated foreign students (nonresidents from non-English-speaking countries) with a score of less than 450 on the Test of English as a Foreign Language (TOEFL) or its equivalent.
2. Foreign students with I-20 visas from another university.
3. SDSU matriculated students.

### External Degree Programs

In addition to its role of administering external degree programs for the civilian population, Extended Studies serves as the liaison with the military installations in the University service area for the purpose of developing higher educational opportunities for military personnel. The College of Extended Studies, which has been designated by the Department of Defense as a Servicemembers' Opportunity College, offers external degree and certificate programs designed specifically for mature military and civilian personnel, including a Master of Arts degree in Education with a Concentration in Educational Administration and Supervision. Classes are held at times and locations convenient for students. The College also administers a Master of Business Administration which is offered only to students sponsored by participating companies.

For additional information contact the Extension Office.

### Continuing Education in Health and Human Services

A variety of credit and noncredit short courses are offered throughout the year to meet relicensure requirements for the nursing profession and to provide training in the allied health fields.

### Professional Development

A variety of learning activities are offered throughout the year to meet the continuing education needs of working adults. These opportunities take many forms, as described below. For further information, contact the Director of Professional Development.

#### Certificate Programs

Professional certificate programs are coordinated by the Division of Professional Development. 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, Materials Management, Personnel and Industrial Relations, and Training Systems Design and Administration.

The Division also offers Noncredit Certificate Programs in special interest areas.

### Corporate Training Programs

Custom-tailored training, workshops, and consultation are offered to the San Diego business community through the Division of Professional Development. The Division provides training in a wide variety of subject areas to all levels of employees. Program leaders and consultants, drawn from academic and business worlds, are qualified experts in their fields.

### Seminars and Workshops

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

The Center offers intensive seminars and workshops for the business community aimed at increasing the expertise of these people.

### 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.

### Retired Adults Education Program

Programs for retired adults are sponsored by the College of Extended Studies at San Diego State University and operate out of two locations—downtown San Diego (Educational Growth Opportunities—EGO) and Rancho Bernardo (Continuing Education Center—CEC).

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.



## External Degree Programs

### Purpose

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

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

### Admission Requirements

Applicants must be at least 18 years of age and have attained a high school diploma or its equivalent. Students are normally expected to have completed their lower division course work prior to entry into an external degree program. However, students with less than 56 units of college credit may be admitted to upper division courses for which they meet prerequisites.

### Admission and Enrollment Procedures

Students who desire to become classified candidates for the degree must apply for admission to the degree program by completing the following steps prior to earning nine units of credit in that program:

1. Complete and submit Application for Admission.
2. Request transcripts from last high school and all colleges and universities attended; transcripts must be received directly from the school.
3. Submit a one-time admission fee of \$35.00.

Students may enroll in courses without having been admitted to the program. Priority will be given to those persons who have applied for admission and been accepted into the degree program.

### Instruction and Scheduling

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

### Curriculum

The curriculum in an approved undergraduate external degree program is comprised of upper division courses only. Students who have not completed general education and elective requirements may do so at community colleges, through open university, extension, summer sessions at San Diego State University or at other regionally accredited institutions.

### Servicemembers' Opportunity Colleges

San Diego State University has been designated as an institutional member of Servicemembers' Opportunity Colleges (SOC), a group of over 400 colleges and universities providing voluntary postsecondary education to members of the military throughout the world. As a SOC member, SDSU recognizes the unique nature of the military lifestyle and has committed itself to easing the transfer of relevant course credits, providing flexible academic residency requirements, and crediting learning from appropriate military training and experiences. SOC has been developed jointly by educational representatives of each of the

Armed Services, the Office of the Secretary of Defense, and a consortium of 13 leading national higher education associations. It is sponsored by the American Association of State Colleges and Universities (AASCU) and the American Association of Community and Junior Colleges (AACJC).

### Fees

Since Extension and External Degree programs do not receive state support, they are required to be financially self-supporting. Contact Extension for fee ranges.

### Degrees Offered

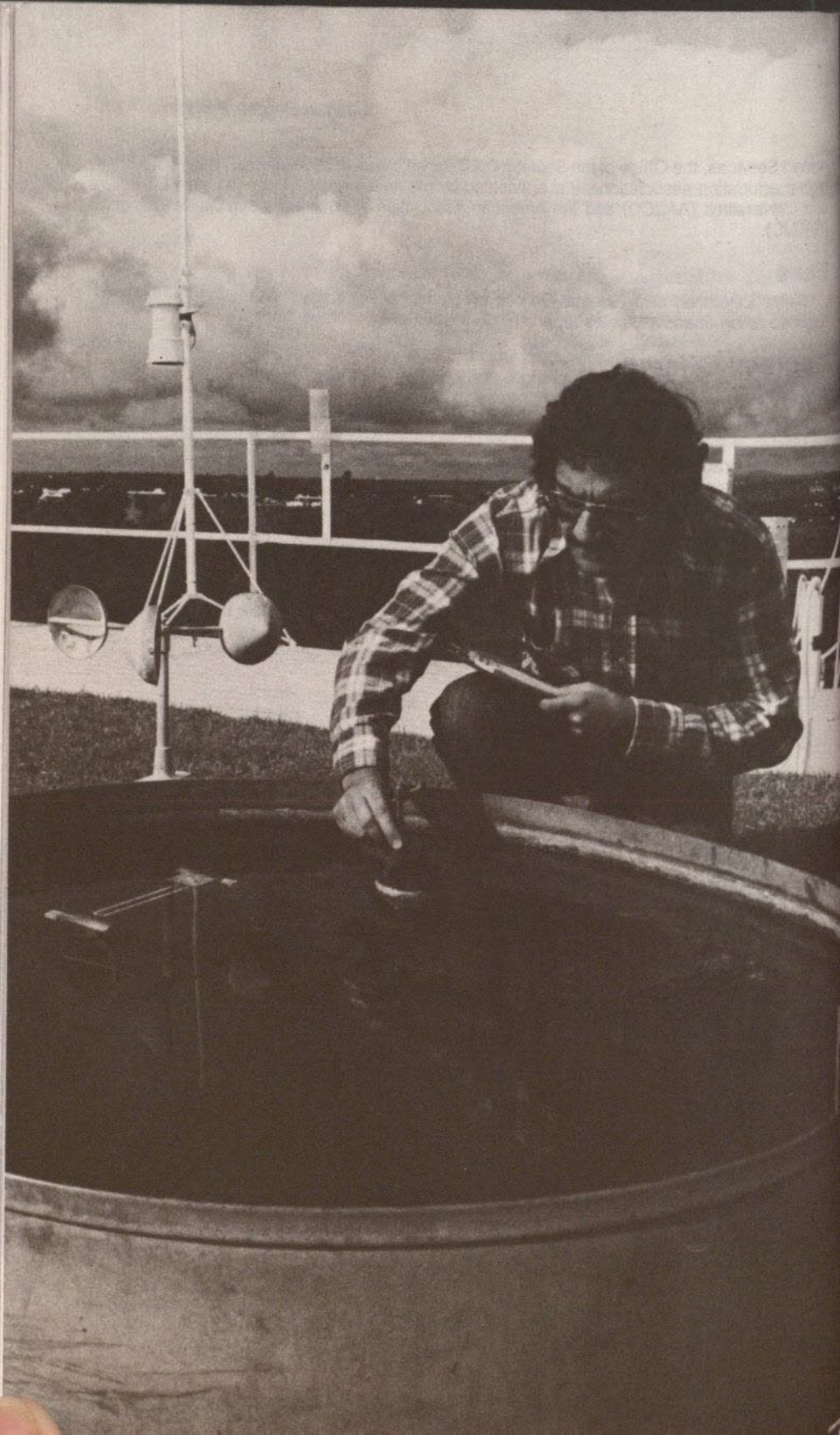
#### Graduate

Master of Arts in education.

Master of Business Administration.

(For graduate external degree program details, refer to the Graduate Bulletin of the Graduate Division.)





# Regulations

Admission and Registration  
General Regulations

*Opposite page:* SDSU Weather Station.



## 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 Administrative Code*. 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

The CSU advises prospective students that they must supply complete and accurate information on the application for admission, residence questionnaire, and financial aid forms. Further, applicants must submit authentic and official transcripts of all previous academic work attempted. Failure to file complete, accurate, and authentic application documents may result in denial of admission, cancellation of academic credit, suspension, or expulsion (Section 41301, Article 1.1, Title 5, *California Administrative Code*).

### 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 Administrative Code*, Section 41201. The social security account number will be used as a means of identifying records pertaining to the student as well as identifying the student for purposes of financial aid eligibility and disbursement and the repayment of financial aid and other debts payable to the institution.

### 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 application booklet. The \$35 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 alternative choice campus and major may be indicated on the application, but **applicants should list as alternative campus only that campus of The California State University that they can attend**. Generally, an alternate degree major will be considered at the first choice campus before an application is redirected to an alternative choice campus. Applicants will be considered automatically at the alternative choice campus if the first choice campus cannot accommodate them.

### Impacted Programs

The CSU designates programs to be impacted when more applications are received in the first month of the filing period than the spaces available. Some programs are impacted at every campus where they are offered; others are impacted at some campuses but not all. You must meet supplementary admission 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. We will also give information about the supplementary criteria 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. Nonresident applicants are rarely admitted to impacted programs.

Business Administration (upper division), Computer Science, Aerospace Engineering, Electrical Engineering, Mechanical Engineering, Nursing, and Telecommunications and Film are impacted majors at San Diego State University.

### Supplementary Admission Criteria

Each campus with impacted programs uses supplementary admission criteria in screening applicants. Supplementary criteria may include ranking on the freshman eligibility index, the overall transfer grade point average, and a combination of campus-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.

The supplementary admission criteria used by the individual campuses to screen applicants appear periodically in the *CSU School and College Review* and are sent by the campuses 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 alternative major either at the first choice campus or another campus.

### Postbaccalaureate Application Procedures

All applicants for any type of postbaccalaureate status (e.g., master's degree applicants, those seeking credentials, second baccalaureate degrees, or second majors, and those interested in taking courses for personal or professional growth) must file a complete application within the appropriate filing period. A complete application for postbaccalaureate status includes all of the materials required for undergraduate applicants (Part A) plus the supplementary graduate admission application (Part B). Postbaccalaureate applicants who completed undergraduate degree requirements and graduated the preceding term are also required to complete and submit an application and the \$35 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 Graduate Studies Office of any California State University campus in addition to the sources noted for undergraduate applicants.

### Application Filing Periods

Terms in 1985-86	Applications First Accepted	Filing Period Duration	Student Notification Begins
Fall Semester 1985	November 1, 1984	Each campus accepts applications until capacities are reached. Most campuses accept applications up to a month prior to the opening day of the term. Some campuses will close individual programs as they reach capacity.	December 1984
Spring Semester 1986	August 1, 1985		September 1985



## Space Reservation Notices

Normally you may expect to receive some form of space reservation notice from your first choice campus within two months of filing the application. A notice that space has been reserved is also a request for records necessary to make the final admission decision. It is an assurance of admission *only* if evaluation of your previous academic record indicates that admission requirements have been met. Such a notice is not transferable to another term or to another campus.

## Hardship Petitions

There are established procedures for consideration of qualified applicants who would be faced with extreme hardship if not admitted. Prospective hardship petitioners should write the Admissions Office regarding specific policies governing hardship admission.

## Filing of Records

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

1. Transcript from high school of graduation or last in attendance (not required of the graduate student who holds a bachelor's degree from an accredited institution, but is required of the student who holds a bachelor's degree from a nonaccredited institution).
2. Transcripts from EACH college attended (including extension, correspondence, summer session, or evening courses). Graduate students must file transcripts *in duplicate* if they plan to enter 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

### First-time Freshman Applicants

You will qualify for regular admission as a first-time freshman if you

1. are a high school graduate,
2. have a qualifiable eligibility index (see below), and
3. have completed with grades of C or better at least four years of college preparatory English and at least two years of college preparatory mathematics.

**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). For this purpose we compute your grade point average on your final three years of high school studies, excluding physical education and military science.

You can calculate the 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 2994 using the SAT or 722 using the ACT; the table below shows the combinations of test scores and average required. If you neither graduated from a California high school nor are a legal resident of California for tuition purposes, you need a minimum index of 3402 (SAT) or 826 (ACT).

Applicants with grade point averages above 3.10 (3.60 for nonresidents) are exempt from the test requirement.

Eligibility Index Table for California High School Graduates

GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score
(—) <sup>1</sup>			2.74	18	810	2.36	25	1110
3.10	11	520	2.73	18	810	2.35	26	1120
3.09	11	530	2.72	18	820	2.34	26	1130
3.08	11	530	2.71	18	830	2.33	26	1130
3.07	11	540	2.70	19	840	2.32	26	1140
3.06	11	550	2.69	19	850	2.31	26	1150
3.05	12	560	2.68	19	850	2.30	27	1160
3.04	12	570	2.67	19	860	2.29	27	1170
3.03	12	570	2.66	19	870	2.28	27	1170
3.02	12	580	2.65	20	880	2.27	27	1180
3.01	12	590	2.64	20	890	2.26	27	1190
3.00	13	600	2.63	20	890	2.25	28	1200
2.99	13	610	2.62	20	900	2.24	28	1210
2.98	13	610	2.61	20	910	2.23	28	1210
2.97	13	620	2.60	21	920	2.22	28	1220
2.96	13	630	2.59	21	930	2.21	28	1230
2.95	14	640	2.58	21	930	2.20	29	1240
2.94	14	650	2.57	21	940	2.19	29	1250
2.93	14	650	2.56	21	950	2.18	29	1250
2.92	14	660	2.55	22	960	2.17	29	1260
2.91	14	670	2.54	22	970	2.16	29	1270
2.90	15	680	2.53	22	970	2.15	30	1280
2.89	15	690	2.52	22	980	2.14	30	1290
2.88	15	690	2.51	22	990	2.13	30	1290
2.87	15	700	2.50	23	1000	2.12	30	1300
2.86	15	710	2.49	23	1010	2.11	30	1310
2.85	16	720	2.48	23	1010	2.10	31	1320
2.84	16	730	2.47	23	1020	2.09	31	1330
2.83	16	730	2.46	23	1030	2.08	31	1330
2.82	16	740	2.45	24	1040	2.07	31	1340
2.81	16	750	2.44	24	1050	2.06	31	1350
2.80	17	760	2.43	24	1050	2.05	32	1360
2.79	17	770	2.42	24	1060	2.04	32	1370
2.78	17	770	2.41	24	1070	2.03	32	1370
2.77	17	780	2.40	25	1080	2.02	32	1380
2.76	17	790	2.39	25	1090	2.01	32	1390
2.75	18	800	2.38	25	1090	2.00	33	1400
			2.37	25	1100	(—) <sup>2</sup>		

<sup>1</sup> Above 3.10 qualifies with any score.

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

## 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.

**Early Admission Program.** San Diego State University may recognize outstanding academic achievement (3.40 GPA or higher) of high school students by issuing an early admission commitment to such applicants conditional upon the earning of the high school diploma or its equivalent. Details about the Early Admission Program may be obtained from the Office of Admissions and Records.

## Transfer Applicants

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. **You graduated from high school before spring 1984** and either
  - a. were eligible as a freshman, or
  - b. have completed at least 56 transferable semester (84 quarter) units. (Nonresidents must have a 2.4 grade point average or better.)
2. **You graduated from high school in spring 1984 or later** and either
  - a. were eligible as a freshman, or
  - b. were eligible as a freshman except for the college preparatory subjects in English and mathematics and have satisfied the subject deficiencies, or
  - c. have completed at least 56 transferable semester (84 quarter) units and have satisfied any deficiencies in college preparatory English and mathematics. (Nonresidents must have a 2.4 grade point average or better.)

For these requirements, transferable courses are those designated for that purpose by the college or university offering the courses.

**Note:** Transfer applicants must meet standard 2 above beginning fall 1986, irrespective of when they graduate from high school.

### Subject Requirements

The California State University requires that all undergraduate applicants for admission complete with grades of C or better four years of college preparatory study in English and two years of college preparatory mathematics, or their equivalent. California secondary school courses that meet the subject requirements are listed on "Courses to Meet Requirements for Admission to the University of California," published for and available at each high school.

**English.** Regular English courses in the 9th and 10th grades that integrate reading and writing will be considered college preparatory. English courses in the 11th and 12th grades will be considered college preparatory if (1) they include writing instruction and evaluation and require substantial amounts of writing of extensive, structured papers, expressive and analytical, demanding a high level of thinking skills; and (2) they are integrated with challenging, in-depth reading of significant literature.

San Diego State University requires a writing competency test and an English Placement Test prior to matriculation or during the student's first two semesters. Students may not take baccalaureate-level composition courses until these requirements have been satisfied.

Courses in speech, drama, or journalism will be considered college preparatory if they meet the criteria for 11th and 12th grade courses. Two consecutive semesters of advanced English as a Second Language may be substituted for two semesters of college preparatory English. Remedial reading and writing courses at any level will not be accepted nor will courses in beginning or intermediate English as a Second Language.

**Mathematics.** College preparatory courses in mathematics include algebra, geometry, trigonometry, calculus, and mathematical analysis. Most students will have taken at least algebra and geometry or two years of algebra. Business or technical mathematics, arithmetic, or prealgebra are not considered college preparatory.

San Diego State University requires a mathematics competency test and an Entry-Level Mathematics examination prior to matriculation or during the student's first two semesters. Students may not take baccalaureate-level mathematics or statistics courses until these requirements have been satisfied.

### Additional College Preparatory Courses Recommended

Most academic advisers agree that preparation for university study includes preparation in subjects beyond four years of English and two years of mathematics. Bachelor's degree curricula build upon previous study in the natural sciences, social sciences, visual and performing arts, foreign languages, and the humanities. Students planning to major in mathematics, the sciences (including computer science), engineering, premedicine, other science-related fields, business, or economics should complete four years of college preparatory mathematics. Students in the social sciences and preprofessional fields of study should include at least three years of mathematics in the preparatory studies. Further, all students should include English and mathematics in the final year of high school.

### 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.

### Test Requirements

Freshman and transfer applicants who have fewer than 56 semester or 84 quarter units of transferable college work must submit scores from either the Scholastic Aptitude Test of The College Board (SAT) or the American College Test Program (ACT). 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:

The College Board (SAT)  
Registration Unit, Box 592  
Princeton, New Jersey 08541

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

### TOEFL Requirement

All undergraduate applicants, regardless of citizenship, whose preparatory education was principally in a language other than English must demonstrate competence in English. Those who have not attended for at least three years of school at the secondary level or above where English is the principal language of instruction must earn a minimum score of 550 on the Test of English as a Foreign Language (TOEFL).

### Placement Tests Required of Most New Students

The CSU requires new students to be tested in English and mathematics after they are admitted. These are not admission tests, but a way to determine if students are prepared for college work and, if not, to counsel them in how to strengthen their preparation. Students might be exempted from one or both of the tests if they have scored well on other specified tests or completed appropriate courses.

**English Placement Test (EPT).** The CSU English Placement Test must be completed by all freshmen or sophomores (those who enroll with fewer than 56\* transferable semester units) with the exception of 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 satisfactory score on the CSU English Equivalency Examination.
- A score of 510 or above on the Verbal section of The College Board Scholastic Aptitude Test (SAT-Verbal).
- A score of 23 or above on the ACT English Usage Test.
- A score of 600 or above on The College Board Achievement Test in English Composition *with essay*.
- Completion of an acceptable college course in English composition of four quarter or three semester units with a grade of C or better.

**Entry-Level Mathematics (ELM) Test.** All undergraduate students admitted for fall 1983 and thereafter and who are subject to the 1983-84 or later General Catalog must take the test and *pass it* before enrolling in a course that satisfies the college-level mathematics requirement of the General Education-Breadth program. 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 530 or above on the Mathematics section of the Scholastic Aptitude Test (SAT-Math).

\* Please note that, beginning in academic year 1986-87, all undergraduates (including those who enroll with 56 or more transferable semester units and who are subject to the 1986-87 or later General Catalog) will be required to complete the English Placement Test requirement. Even though not required this year for those with 56 or more units, all undergraduates are encouraged to take the test to heighten their awareness and command of college-level English skills.



- A score of 23 or above on the ACT Mathematics Test.
- A score of 520 or above on The College Board Math Achievement Test, Level 1.
- A score of 540 or above on The College Board Math Achievement Test, Level 2.
- Completion of a college course that satisfies the General Education-Breadth Requirement in Quantitative Reasoning at the CSU campus to which they have transferred. The course must be at the level of intermediate algebra or above with a grade of C or better.

Failure to verify satisfaction of both of these test requirements within two semesters of first date of attendance at San Diego State University will result in the withholding of registration privileges for a third semester.

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

### 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 the following basic 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, has earned a grade point average of C or better.

Consideration will be based upon a judgment as to whether the applicant is as likely to succeed as a regularly admitted freshman or transfer and will include an assessment of basic skills in the English language and mathematical computation.

### Graduation Requirement in Writing Proficiency

All students subject to degree requirements listed in the 1977-78 or later General Catalog must demonstrate writing proficiency at the upper division level as a requirement for graduation. Information on currently available ways to meet this graduation requirement is included in the Graduation Requirements section of this catalog.

### Other Applicants

Applicants not admissible under one of the above provisions should enroll in a community college or other appropriate institution. Only under the most unusual circumstances will such applicants be permitted to enroll. Permission is granted only by special action.

San Diego State University 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.

## 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, the CSU will consider an application for admission in one of four categories:

- **Postbaccalaureate Unclassified.** You have completed a bachelor's degree from a regionally accredited institution and are applying for a master's or doctoral program.

- **Postbaccalaureate Unclassified.** You will qualify for admission as an unclassified postbaccalaureate student if you (1) hold an acceptable bachelor's degree from a regionally accredited institution or have equivalent preparation as determined by the campus; (2) have a grade point average of at least 2.50 in your last 60 semester (90 quarter) units; and (3) are in good standing at the last college you attended. In unusual circumstances, a campus may make exceptions to these criteria.
- If eligible in postbaccalaureate unclassified standing, you may qualify for:
- **Postbaccalaureate Classified** standing to enroll in a credential or certificate program provided you satisfy the additional professional, personal, scholastic, and other standards, including qualifying examinations, as the campus may prescribe; or

- **Graduate Conditionally Classified** standing to enroll in a graduate degree curriculum if in the opinion of the appropriate campus authority you can remedy any deficiencies by additional preparation; or
- **Graduate Classified** standing to enroll in a graduate degree curriculum if you satisfactorily meet the professional, personal, scholastic, and other standards, including qualifying examinations, as the campus may prescribe.

### 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. Applicants who have not attended secondary or postsecondary educational institutions for at least three years of full-time enrollment where English is the principal language of instruction must receive a minimum score of 550 on the Test of English as a Foreign Language (TOEFL). Individual campuses may require a higher score.

## Second Bachelor's Degree

A student wishing to earn a second bachelor's degree in a major different from that declared for the previous degree may do so in most areas, provided the student's academic record indicates strong promise of success and the student can show clear evidence of a change in educational objective. A student seeking a second bachelor's degree in an impacted major must file application for admission to the impacted program during the first month of the application filing period in order to be considered.

A student seeking a second bachelor's degree, even if a recent graduate from SDSU, must apply for admission to the University unless already admitted in postbaccalaureate (unclassified) status. 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 in the new major may have been used to satisfy requirements for a previous major, provided the student had completed at least the same number of units in excess of the minimum requirements for the first degree. The student must fulfill all requirements for the degree (including additional General Education and foreign language requirements where necessary) and have prior approval by the new major department and by the Dean of Undergraduate Studies.

Classified graduate students are not eligible to apply for a second bachelor's degree and credit earned while pursuing a second bachelor's degree may not be applied toward an advanced degree at a later date.

For additional information, including the names of those departments participating in the Second Bachelor's Degree program, contact the Division of Undergraduate Studies or the University Advising Center.

## Second Major for SDSU Graduates

A student wishing to return to the University after graduation from San Diego State University in order to complete a second major may do so in most areas provided the student qualifies for unclassified postbaccalaureate standing (2.50 grade point average on the last 60 units), has previously completed at least nine units in the department of the second major with a minimum grade point average of 2.50, and receives prior approval of the department and the Dean of Undergraduate Studies. The student must meet all current catalog requirements associated with the major, including foreign language and upper division writing requirements where appropriate. If the original courses in the second major were taken some time ago, the student may be required to take more than the minimum number of units required in the discipline. A minimum of 12 upper division units in the new major must be completed at this University. A second major student is subject to procedural and academic requirements established by the Graduate Division, including the maintenance of a 2.50 grade point average. (See Graduate Bulletin for specific details.)

A student seeking a second major, even if a recent graduate from SDSU, must apply for admission to the University unless already admitted in postbaccalaureate status. The student should apply as a postbaccalaureate student with no degree or credential objective. A student desiring a credential as well as a second major may apply for both simultaneously. In addition, all students desiring a second major, whether or not already admitted as postbaccalaureate students, must fill out a special application for the second major.



A second major is an undergraduate objective: no course numbered in the 600 or 700 series may be used to fulfill a second major requirement and no credit earned toward a second major can be applied toward an advanced degree. The indication of the completion of a second major will be recorded on the postbaccalaureate record. No new diploma will be issued, nor will the student be eligible for honors for second major work.

For additional information, including names of departments participating in the second major option, contact the Division of Undergraduate Studies or the University Advising Center.

## International (Foreign) Student Admission Requirements

The admission of international (foreign) students is governed by separate requirements. Prospective applicants from abroad should consult the individual campus catalogs and international (foreign) student informational brochures available from the campuses. Health insurance coverage is mandatory for international (foreign) students. Present acceptable health insurance is available on campus at approximately \$170 per year. Applicants for admission as either graduates or undergraduates whose education has been in a foreign country should file an application for admission, official certificates and detailed transcripts of record from each secondary school and collegiate institution attended several months in advance of the opening of the semester in which the applicant expects to attend. International students from outside the United States will be considered for admission only for the fall semester. Canadian and Mexican citizens are exceptions. 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.

Since priority in admission is given to residents of California, nonresident applicants, including international students, are advised that there is little likelihood of being admitted to either impacted programs or to those with limited access. Programs impacted at SDSU include the following undergraduate majors: Business Administration, Computer Science, Aerospace Engineering, Electrical Engineering, Mechanical Engineering, Nursing, and Telecommunications and Film.

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 and test scores must be received by the university before admission to the university can be granted. Information as to the time and place at which this test is given may be obtained by writing to: Educational Testing Service (TOEFL), Princeton, New Jersey, 08540, U.S.A. Upon arrival at San Diego State University, 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 for use by advisers to assist students in planning an appropriate course of study. Depending upon students' performance on the placement test and their academic background, they may be required to enroll in one or more English language courses during their first 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.

If English instruction is needed, students may enroll in the American Language Institute. The American Language Institute (ALI) offers preparation in the English language reading, writing and listening skills necessary for university success. For those students who are enrolling in the American Language Institute, a program called conditional admission is available. It is for those students who require acceptance to a university in order to obtain a passport, a U.S. visa, or government sponsorship. The program is offered to students who do not have an adequate command of English or the required TOEFL (Test of English as a Foreign Language) score to qualify for admission to the University. After transcripts of their academic work have been evaluated by SDSU staff, students may receive an official letter of conditional admission which states that the student has met all University requirements *except* English language proficiency and may enter the University after appropriate TOEFL scores and training at the American Language Institute.

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

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

## Limitation of Enrollment

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

## Registration

San Diego State University students are afforded the opportunity to participate in an Advance Registration system. On-campus registration is also held just prior to the beginning of each semester. 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. Failure to pay fees may result in cancellation of registration. For policies governing registration after classes begin, consult the current Class Schedule.

## Determination of Residence for Nonresident Tuition Purposes

The campus Admissions and Records Office determines the residence status of all new and returning students for nonresident tuition purposes. Responses to items 29-45 on the Application for Admission and, if necessary, other evidence 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 and will be required to pay out-of-state fees.

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 Administrative Code*, Sections 41900-41912. A copy of the statutes and regulations is available for inspection at the campus Admissions Office.

Legal residence may be established by an adult who is physically present in the state 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 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 the 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 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 adult 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 for the 1985-86 academic year are September 20, 1985 and January 25, 1986. Questions regarding residence determination dates should be directed to the Legal Residence Office in the Admissions Office which can give you the residence determination date for the term for which you are registering.

There are exceptions for nonresident tuition, including:

1. Persons below the age of 19 whose parents were residents of California but who left the state while the student, who remained, was still a minor. When the minor reaches age 18, the exception continues for one year to enable the student to qualify as a resident student.
  2. Persons 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 have been a California resident for the most recent year.
  4. Dependent children and spouses of persons in active military service stationed in California on the residence determination date. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for a year. The exception, once attained, is not affected by retirement or transfer of the military person outside the state.
  5. Military personnel in active service stationed in California on the residence determination date for purposes other than education at state-supported institutions of higher education. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for a year.
  6. Certain credentialed, full-time employees of California school districts.
  7. Full-time State University employees and their children and spouses. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for one year.
  8. Certain exchange students.
  9. 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 Administrative Code*. Resident students who become nonresidents, and nonresident students qualifying for exceptions whose basis for so qualifying changes, must immediately notify the Admissions Office. Applications for a change in classification with respect to a previous term are not accepted.

The student is cautioned that this summation of rules regarding residency determination is by no means a complete explanation of their meaning. The student should also note that changes may have been made in the rate of nonresident tuition, in the statutes, and in the 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 (Social Sciences, Room 132)

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 (SS-132) for general education advising.

Afro-American Studies	European Studies	Mexican-American Studies
American Indian Studies	French & Italian Languages	Philosophy
American Studies	Geography	Political Science
Anthropology	German & Russian Languages	Religious Studies
Asian Studies	History	Social Science
Classical & Oriental Languages	Humanities	Sociology
Comparative Literature	Latin American Studies	Spanish & Portuguese Languages
Economics	Linguistics	Women's Studies
English		

### College of Business Administration Advising Center (Business Administration, Room 441)

Accounting	Information Systems	Marketing
Finance	Insurance	Real Estate
Financial Services	Management	

### College of Education Admissions and Advising Center (Campus Laboratory School, Room 106)

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

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

Aerospace Engineering	Electrical Engineering
Civil Engineering	Mechanical Engineering

### College of Human Services Advising Center (Hepner Hall, Room 124)

Communicative Disorders	Social Work Major	Graduate Program in Public Health
Health Science	Social Work Minor	Graduate Program in Social Work
Nursing		



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

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

**College of Sciences Advising Center  
(Life Sciences, Room 133)**

Astronomy	Geological Sciences	Physics
Biology	Mathematical Sciences	Psychology
Chemistry	Physical Science	

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

**University Advising Center  
(Campus Laboratory School, Room 107)**

Students who have not declared a major  
General education advising  
University and overall academic unit requirements  
Liberal Studies Options 2 and 3 advising

Students who have not decided on a major should bring their academic questions to the University Advising Center. Besides dealing with graduation requirements such as general education, foreign language, writing and mathematics competency, American institutions and the like, the Center offers special assistance in establishing academic goals and deciding upon a major.

**Imperial Valley Campus Advising**

Imperial Valley Campus students are required to see an adviser prior to registration for each semester. Students with a declared major or an interest in a specific major should consult with a member of the Campus Academic Advising Team: Professors Erzen, Polich, Assistant Dean Flores, or Director Russum. These academic advisers may be consulted at any time on specific questions concerning programs of study, general degree requirements, or students' evaluations. An academic adviser will be available Monday through Thursday from 2 p.m. to 6 p.m.

Students who are undecided about their major should consult with a counselor from the Student Affairs Unit. The Unit operates Monday through Thursday from 8:30 a.m. to 7:30 p.m. and on Friday from 8:30 a.m. to 5 p.m. Academic advisement from either of the above sources is available by appointment or on a drop-in basis.

**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 10:00 a.m. to 5:00 p.m. on Monday through Thursday and from 10:00 a.m. to 4:30 p.m. on Friday. A departmental graduate adviser is available in all programs offering graduate degrees.

**Teaching credential requirements.** Advising concerning requirements for the single subject (secondary school) and the multiple subjects (elementary school) credential programs is available through the Teacher Education Faculty/Student Services Center. The Center is located in room 151 of the Education building. Hours of service are Monday through Friday from 9:00 a.m. to 12:00 noon and 1:00 p.m. to 4:30 p.m. Regularly scheduled group advising is offered by both the single subject and multiple subjects programs. Students seeking the single subject credential should consult with the credential adviser in their major department for particular subject area course requirements.

**Preprofessional advising.** Advisement for students planning to attend professional schools is available through the following offices: *pre dentistry*, Life Sciences, room 135; *pre law*, Social Science, room 131; *pre medicine*, Life Sciences, room 135; *pre occupational therapy*, Life Sciences, room 133; *pre optometry*, Life Science, room 133; *pre pharmacy*, Life Sciences, room 133; *pre physical therapy*, Life Sciences, room 133; *pre veterinary medicine*, Life Sciences, room 135. Advisers in prelaw are not available during the summer months.

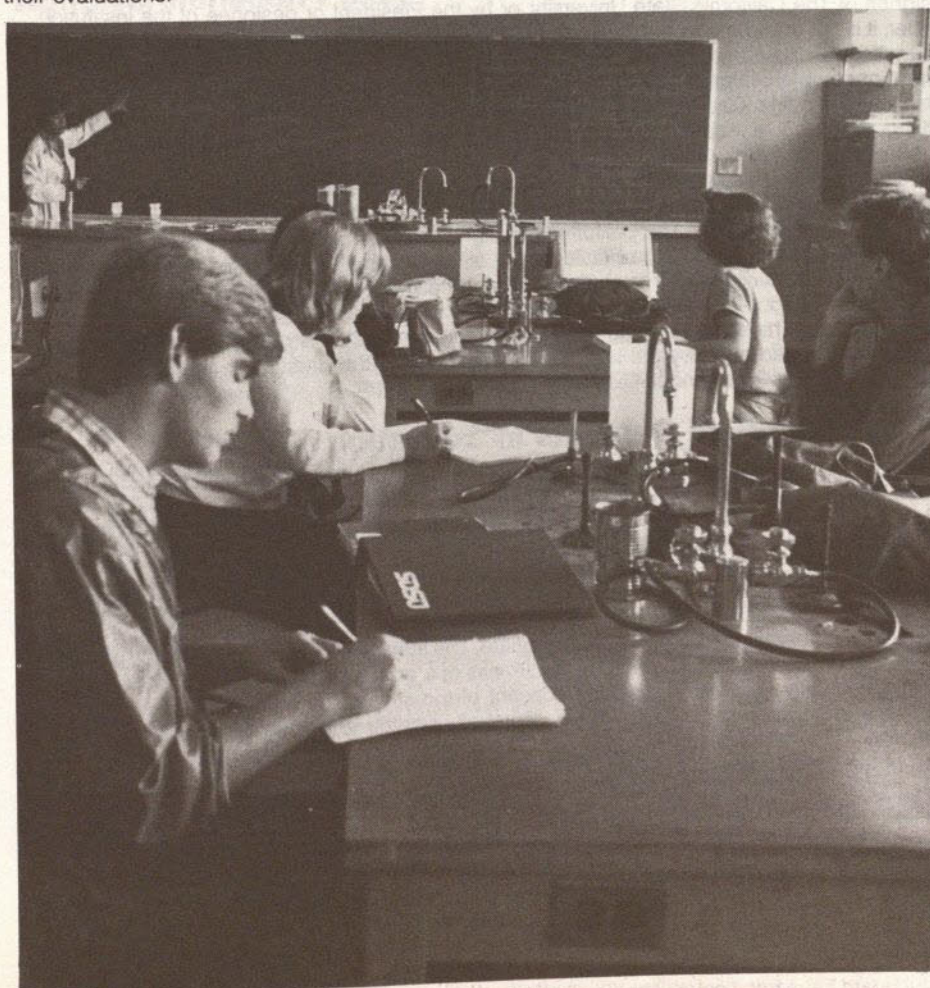
**Additional Advisory Services Provided Through Following Programs**

**New student orientation.** As a new semester approaches, all incoming students are invited to attend a one-day orientation program called Academic Information Day. Advisement is an important part of each program, including General Education requirements and small group meetings with the assistant deans from the various colleges. Questions concerning orientation can be directed to the Student Resource and Information Center, Campus Laboratory School, Room 114, (619) 265-5223.

**Transcript Evaluation**

Official evaluations may be requested at the Evaluations Office (AD-127) by currently enrolled students with declared majors who have completed 56 semester units.

Appointments may be scheduled with evaluators by students with questions concerning their evaluations.



Biology Laboratory.



## 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 the institution. Further, it is not possible in a publication of this size to include all of the rules, policies and other information which pertain to the student, the institution, and The California State University. 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 the campus. The Trustees, the Chancellor, and the President are authorized by law to adopt, amend, or repeal rules and policies which apply to students. This catalog does not constitute a contract or the terms and conditions of a contract between the student and the institution or The California State University. The relationship of the student to the institution is one governed by statute, rules, and policy adopted by the Legislature, the Trustees, the Chancellor, the President and their duly authorized designees.

### Privacy Rights of Students in Education Records

The federal Family Educational Rights and Privacy Act of 1974 (20 U.S.C. 1232g) and regulations adopted thereunder (45 C.F.R. 99) and California Education Code Section 67100 et seq, set out requirements designed to protect the privacy of students concerning their records maintained by the campus. Specifically, the statute and regulations govern 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 official records directly related to the student and an opportunity for a hearing to challenge such records on the grounds that they are inaccurate, misleading or otherwise inappropriate. The right to a hearing under the law does not include any right to challenge the appropriateness of a grade as determined by the instructor. The law generally requires that written consent of the student be received before releasing personally identifiable data about the student from records to other than a specified list of exceptions. The institution has adopted a set of policies and procedures concerning implementation of the statutes and the regulations on the campus. Copies of these policies and procedures may be obtained at the Office of the Vice President for Student Affairs. Among the types of information included in the campus statement of policies and procedures are: (1) the types of student records and the information contained therein; (2) the official responsible for the maintenance of each type of record; (3) the location of access lists which indicate persons requesting or receiving information from the record; (4) policies for reviewing and expunging records; (5) the access rights of students; (6) the procedures for challenging the content of student records; (7) the cost which will be charged for reproducing copies of records; and (8) the right of the student to file a complaint with the Department of Education. An office and review board have been established by the Department to investigate and adjudicate violations

and complaints. The office designated for this purpose is The Family Educational Rights and Privacy Act Office (FERPA), U.S. Department of Education, 330 "C" Street, Room 4511, Washington, D.C. 20202.

The campus is authorized under the Act to release "directory information" concerning students. "Directory information" includes the student's name, address, telephone listing, 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.

### Nondiscrimination 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 265-5211.

#### 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 California State University. Inquiries concerning the application of Title VI to program activities of San Diego State University may be referred to the Affirmative Action Officer, ED-156, 265-6464.

#### Sex

The California State University does not discriminate on the basis of sex in the educational programs or activities it conducts. Title IX of the Education Amendments of 1972, as amended, and the administrative regulations adopted thereunder prohibit discrimination on the basis of sex in education programs and activities operated by San Diego State University. Such programs and activities include admission of students and employment. Inquiries concerning the application of Title IX to programs and activities of San Diego State University may be referred to the Affirmative Action Officer (265-6464), the campus officer assigned the administrative responsibility of reviewing such matters, or to the Regional Director of the Office of Civil Rights, Region 9, 1275 Market Street, 14th Floor, San Francisco, California 94103.

### Registration and Computation of Grades

#### Registration of Grades

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



grade point average; **I** (authorized incomplete), no credit earned and not counted in the grade point average until one calendar year has expired at which time it will count as an "F" for grade point average computation; **U** (unauthorized incomplete), counted as "F" for grade point average computation.

### Plus/Minus Grading

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

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

Faculty members use all grades from A through F to distinguish among levels of academic accomplishment. The grade for average undergraduate achievement is C.

### Satisfactory Progress Grade — "SP"

The "SP" symbol is used in connection with courses that extend beyond one academic term. It indicates that work is in progress and has been evaluated and found to be satisfactory to date, but that assignment of a precise grade must await completion of additional work. Work is to be completed within a stipulated time period not to exceed one year except for graduate thesis (799A) or dissertation (899). Failure to complete the assigned work within one calendar year except for courses 799A and 899 will result in the course being computed into the grade point average as an "F" (or a "NC" if the course was taken for a credit/no credit grade).

### Withdrawal Grade — "W"

The symbol "W" indicates that the student was permitted to drop a course after the end of the tenth day of instruction because of a verified serious and compelling reason and has obtained the signature of the instructor and the approval of the College Dean or designee.

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 status in the class, and the approval of the college dean or designee, and approvals are made in writing on prescribed forms. Students are not permitted to drop a class during the final three weeks of instruction, except in cases such as accident or serious illness where the cause of dropping the class is due to circumstances clearly beyond the student's control and the assignment of an incomplete is not practicable. All such requests must be accompanied by appropriate verification. Ordinarily, withdrawals in this category will involve total withdrawal from the University, except that credit, or an incomplete, may be assigned for courses in which sufficient work has been completed to permit an evaluation to be made. Requests to withdraw under such circumstances must be approved by the dean (or designee) of the college of the student's major.

### Auditing — "AU"

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

### Credit/No Credit (Undergraduate Student Option) — "Cr/NC"

An undergraduate student may elect to be graded credit/no credit in particular courses, subject to the following conditions:

1. Upper division courses graded credit/no credit (Cr/NC), whether taken at this or at another institution, may not be used to satisfy requirements for the student's major except for those courses identified in the course listing as graded "Cr/NC."

2. Courses graded credit/no credit may not be used to satisfy the Communication and Analytical Reasoning section of General Education.

3. No more than 24 units graded credit/no credit may be offered in satisfaction of the total units required in a bachelor's degree program, except that all units accepted as transfer credit from another institution at the time of the student's admission may be used. If 24 or more units graded credit/no credit are transferred, the student may offer no additional courses graded credit/no credit to satisfy total units required for a bachelor's degree. Exceptions to this rule will be made only if a student is required to take a course on a Cr/NC basis.

4. If for any reason (change of major or transfer from another institution) upper division courses graded credit/no credit are offered to satisfy requirements in the major, the student may be required by the major department to pass competency examinations at an acceptable level or take prescribed alternate courses before being allowed to continue in the major.

5. Change in grading basis may be made by obtaining the instructor's signature on a Change of Program form and returning that form to the Change of Program booth (Administration Building) on or before the fifteenth day of instruction. No changes in grading basis are permitted after that date.

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

7. The only courses which may be repeated with a credit/no credit option are those in which the student previously received a grade of "No Credit." If a course previously taken for a grade is repeated for a grade of "Credit," the original grade will continue to be used in computation of the grade point average.

### Authorized Incomplete Grade — "I"

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

Contract forms for Incompletes are available at department offices.

An Incomplete must be made up within one calendar year immediately following the end of the term in which it was assigned. This limitation prevails whether or not the student maintains continuous enrollment. Failure to complete the assigned work within one calendar year will result in an Incomplete being computed into the grade point average as an "F" (or a "NC" if the course has been taken Cr/NC). After one calendar year, the only way a student may eliminate that grade from the grade point calculation is to repeat the course. In any case, because the Student Record must provide an accurate and complete record of the student's academic history, the notation of "Incomplete" will remain on the Record.

### Unauthorized Incomplete Grade — "U"

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

If a student attends a portion of a course and then, after receiving failing grades, stops attending without officially withdrawing, that student should normally receive a final grade of "F" and not "U."

### Computation of Grade Point Average

To compute the grade point average, the total number of grade points earned is divided by the number of units attempted. Units earned with a Cr (Credit) are not included in the computation. A grade of "I" (authorized incomplete) is not counted in the grade point computation until one calendar year has expired, at which time it will count as an "F." The minimum GPA for a



bachelor's degree is 2.0 (C); in other words, the student must have earned at least twice as many grade points as units attempted.

### Repeated Course

An undergraduate student who receives an unsatisfactory grade (less than 2.0 grade points per unit) may repeat the course at San Diego State University except in those cases where enrollment in the course is restricted and the student no longer qualifies for admission. While the original grade will remain on the transcript, only the second grade will be used in computation of grade point averages. The course repeat policy does not apply to courses repeated through Open University. If a course is taken for a third (or more) time(s), all grades except the original grade will be used in computing grade point averages. A student may not repeat a course in which a grade of "C" or better was received. In addition, the only courses which may be repeated with a Credit/No Credit option are those in which the student previously received a grade of No Credit. If a course previously taken for a grade is repeated for a grade of Credit or No Credit, the original grade will continue to be used in computation of the grade point average. This policy applies to courses taken initially at other institutions as well as at San Diego State University.

### 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 Courses

Courses 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; those numbered 600 through 799 are graduate courses; and those numbered 800 through 899 are doctoral courses.

Courses numbered X-01 through X-99 are those offered only through Extension to meet specific academic needs of community groups and 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-99 are designated as upper division. It is the prerogative of the academic department/college to determine if X-01 through X-99 level courses are applicable to a major, a minor, or toward specified electives. The X-01 through X-99 level courses are offered in conjunction with certificate programs only. Courses at the X-01 through X-99 level are not acceptable on advanced degree programs.

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-99 level courses offered in any certificate program toward their proposed course of study.

### 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 Course Work

### 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 Administrative Code* 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

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 office 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 bachelor's degree must be completed at the end of the semester or term in which the concurrent credit is earned. The maximum number of units which may be earned as concurrent master's degree credit is determined by the difference between the number of units remaining for the bachelor's degree and 15.

### 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 course work in excess of graduation requirements during the semester (or summer session) when graduation occurs.
3. Attempt no more than 18 units during the final undergraduate semester (or 15 units during summer session).
4. Request no more than a maximum of 12 units of 300-, 400-, or 500-numbered courses for postbaccalaureate credit.
5. Submit petition before the end of the first week of classes (or the first week of summer Term A) of the final undergraduate semester (or term) when graduation occurs.
6. Petition the Dean of the College of Education.
7. Graduate at the end of the semester (or summer session) the petition is made.

Extension courses are not acceptable for concurrent postbaccalaureate credit. Concurrent postbaccalaureate credit will not be granted retroactively.

Petition forms are available in the Evaluations Office, AD-127.



### 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 do not count 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-900 level and serves to meet the needs of specific community groups.

Courses 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; those numbered 600 through 799 are graduate courses; and those numbered 800 through 899 are doctoral courses.

Courses numbered X-01 through X-99 are those offered only through Extension to meet specific academic needs of community groups and 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-99 are designated as upper division. It is the prerogative of the academic department/college to determine if X-01 through X-99 level courses are applicable to a major, a minor, or toward specified electives. The X-01 through X-99 level courses are offered in conjunction with certificate programs only. Courses at the X-01 through X-99 level are not acceptable on advanced degree programs.

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-99 level courses offered in any certificate program toward their proposed course of study.

### Academic Credit Through Examination

The University grants credit for passing scores on the CSU English Equivalency Examination, The College Board Advanced Placement Examinations, and certain tests in the College-Level Examination Program. It also grants credit for locally administered "credit by examination" tests. The details in each case are provided below.

#### 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. Students with passing scores on the EEE are exempted from the CSU English Placement Test.

#### 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 5 to 10 semester units of 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 chart below indicates the score necessary, the units earned and the course equivalents for each of the examinations offered.

Examination	Score	Semester units credit allowed toward degree	SDSU course equivalents*	Remarks
Art History .....	3, 4, 5	6	Art 258 and 259 .....	(6)
Art, Studio .....	3, 4, 5	6	Art 100 and 101 .....	(6)
Biology .....	3, 4, 5	6	Biology 100, 100L and 300 .....	(6)
Chemistry .....	3, 4, 5	10	Chemistry 200, 201 .....	(10)
Classics:				
Vergil .....	3, 4, 5	6	Classics 202L .....	(5)
Latin Prose .....	3, 4, 5	6	Classics 202L .....	(5)
Latin Lyric .....	3, 4, 5	6	Classics 202L .....	(5)
Computer Science .....	3, 4, 5	6	Mathematics 107 and 108 .....	(6)
English:				
Lang. and Comp. ....	3, 4, 5	6	English 100 and 200 .....	(6)
Comp. and Lit. ....	3, 4, 5	6	English 100 and 220 .....	(6)
French .....	3	6	French 200A and 200D .....	(6)
	4, 5	9	French 200A, 200B and 200D .....	(9)
French Literature .....	3, 4, 5	6	French 305A and 305B .....	(6)
German .....	3	6	German 201 and 211 .....	(6)
	4, 5	6	German 202 and 212 .....	(6)
German Literature .....	3, 4, 5	6	German 310 and 499 .....	(6)
History:				
American .....	3, 4, 5	6	History 110A-110B .....	(6)
				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 .....	(6)
Mathematics:				
Calculus AB .....	3, 4, 5	6	Mathematics 150 .....	(5)
Calculus BC .....	3, 4, 5	9	Mathematics 150 and 151 .....	(9)
Music .....	3, 4, 5	6	Music 158A-158B** .....	(6)
Music Listening and Literature .....	3, 4, 5	6	Music 151 and 345 .....	(6)
Physics:				
B .....	3, 4, 5	8	Physics 180A-180B and 182A-182B .....	(8)
C .....	3, 4, 5	8	Physics 195, 195L, 196, 196L .....	(8)
Spanish .....	3	6	Spanish 201 and 211 .....	(6½)
	4, 5	6	Spanish 202 and 212 .....	(6)
Spanish Literature .....	3, 4, 5	6	Spanish 305A-305B .....	(6)

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

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

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

The University grants credit on four of the five CLEP General Examinations (Humanities, Mathematics, Natural Sciences, and Social Sciences) and on four of the CLEP Subject Examinations (Calculus and Analytic Geometry including essay, College Algebra and Trigonometry, General Chemistry, and Statistics).

For information on minimum acceptable scores, contact the Evaluations Office or the University Advising Center.

#### Credit by Examination

Students may challenge courses by taking examinations developed at San Diego State University. Semester 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 letter grades.

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. Application for credit-by-examination must be made 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 Evaluations Office.
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; cannot exceed 30 units as applicable to graduation; and does not count as residence credit.
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. In summer sessions the total units earned for courses and examinations cannot exceed the limit authorized by the Education Code.

### Credit for Instruction in Noncollegiate Settings

San Diego State University grants undergraduate degree credit for successful completion of formal instruction appropriate to the baccalaureate in noncollege settings, either military or civilian, 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 (AD-127). 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. One week should be allowed for the processing and mailing of the transcript. Transcripts from other schools or colleges become the property of this university and will not be released 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. The Student Services 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/Provisional Enrollment

Prerequisites will be enforced in all sections of courses listed in the Academic Policy pages of the current Class Schedule and Information Handbook. Students who register for those courses through Walk-Through Registration, Advance Registration, or Schedule Adjustment will be provisionally enrolled only; official enrollment will depend on the student's verification of prerequisites. In the event that the student cannot verify prerequisites, the instructor reserves the right to disenroll the student administratively.

### Change of Program

San Diego State University provides for change of program beginning the first day of classes every term. Change of program includes: withdrawal from 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 status in the class, and the approval of the College Dean or designee, and approvals are made in writing on prescribed forms. Students are not permitted to drop a class during the final three weeks of instruction, except in cases such as accident or serious illness where the cause of the dropping the class is due to circumstances clearly beyond the student's control and the dropping the class 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 must make application at the Evaluations 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 course work 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, Leave 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 term begins. In order to receive a refund, the student must officially withdraw and file a refund request at the Cashiers Office 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. 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.

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

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

**Educational Leave of Absence.** Students are permitted to take a total of two semesters of approved leave of absence during their matriculation at San Diego State University. However, students must apply for the particular semester they wish to be absent from school. If they wish to extend that leave for an additional semester, a separate application must be filed previous to the deadline for submitting leaves as outlined in the Academic Calendar.

A student must file 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. Consult the Class Schedule and Student Information Handbook for specific procedures and deadlines.

Approval for leaves of absence will not be granted to students who have been admitted but will not have completed at least one semester before the leave of absence period; nor to students who were academically disqualified at the end of their last semester of attendance. To be eligible for leave an undergraduate must be eligible to return as an undergraduate; students qualifying for change in status from undergraduate to graduate are not eligible.

Leave of absence is not to be confused with the privilege of being able to step-out one semester. This means, with certain exceptions, undergraduate students and graduate students may be absent for one semester and maintain their continuing student status. This includes election of catalog requirements for graduation and eligibility to register for the next semester. Disqualified students, students with financial or test holds, students who are applying for graduation, students absent for more than one semester, or those who attend another institution while absent must apply for readmission should they wish to return to San Diego State University.

**Readmission.** A student who withdraws from the University must file application for readmission if a full semester elapses between withdrawal and return. A \$35 application fee for readmission is required if the applicant was not regularly enrolled in either of the two semesters immediately preceding the semester for which the application is submitted, or if the student was enrolled at another institution subsequent to the last attendance at San Diego State University. SDSU students in good standing (not academically disqualified) retain their original catalog status if they are absent from the University for no more than one semester.

**Evaluation.** An evaluation is a summary of college work completed and of requirements to be completed for a bachelor's degree or credential. To be eligible for an evaluation, a student must be currently enrolled, have completed at least 56 units of acceptable college work, and must have a declared major. An evaluation will not be done until official copies of all transfer credit 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. Authorization for more than one evaluation during any one semester or one evaluation in nine weeks of summer session, due to change of major, requires special permission.

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 Administrative Code*, Chapter 5, Section 40401, Election of Regulations. (Further information is given in the section of this catalog on Graduation Requirements.)

After an interval of five years from the time an evaluation is made, courses in education to be applied toward a teaching credential are subject to reevaluation.



## 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 in each graduating class 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 mid-year graduates and at the beginning of the spring 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 mid-year 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 school or 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.

## Scholastic Probation and Disqualification

### Undergraduate Students

An undergraduate student will be placed on academic probation if at any time the student's cumulative grade point average in all college work attempted or the student's cumulative grade point average at this institution falls below 2.0.

An undergraduate student on academic probation is subject to academic disqualification:

- A. As a lower-division student (less than 60 semester hours of college work completed) if a student falls 15 or more grade points below a 2.0 (C) average on all units attempted or in all units attempted at this campus.

- B. As a junior (60-89 semester hours of college work completed) if a student falls nine or more grade points below a 2.0 (C) average on all units attempted or in all units attempted at this campus.
- C. As a senior (90 semester hours of college work completed) if a student falls six or more grade points below a 2.0 (C) average on all units attempted or in all units attempted at this campus.

An undergraduate student shall be removed from academic probation when his/her cumulative grade point average is 2.0 or higher in all college work attempted and in all work attempted at this University.

A disqualified student may be reinstated when conditions causing the poor performance have been alleviated. Enrollment in Summer Sessions, Wintersession, or special session courses will be considered for students seeking reinstatement to the University; however, successful completion in such residence courses will not guarantee immediate reinstatement. Application for reinstatement should be made at the Office of Admissions and Records.

A disqualified student who is reinstated after an absence from SDSU of one or more semesters is subject to the requirements of the General Catalog in effect when the student resumes study and remains in continuous enrollment at a California community college or a California State University campus.

## 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:

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

## Administrative Academic Disqualification

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

- A. The conditions for removal of administrative academic probation are not met within the period specified.
- B. The student becomes subject to academic probation while on administrative academic probation.
- C. The student becomes subject to administrative academic probation for 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, Sections 41301 through 41304 of Title 5, *California Administrative Code*. 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, slingshot, billy, sandclub, sandbag, metal knuckles; any dirk, dagger, switchblade knife, pistol, revolver, or any other firearm; any knife having a blade longer than five inches; any razor with an unguarded blade, and any metal pipe or bar used or intended to be used as a club.
  - (4) The term "behavior" includes conduct and expression.
  - (5) The term "hazing" means any method of initiation into a student organization or any pastime or amusement engaged in with regard to such an organization which causes, or is likely to cause, bodily danger or physical or emotional harm to any member of the campus community; but the term "hazing" does not include customary athletic events or other similar contests or competitions.
- (o) This Section is not adopted pursuant to Education Code Section 89031.
- (p) Notwithstanding any amendment or repeal pursuant to the resolution by which any provision of this Article is amended, all acts and omissions occurring prior to that effective date shall be subject to the provisions of this Article as in effect immediately prior to such effective date.

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

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

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

The President may immediately impose an interim suspension in all cases in which there is reasonable cause to believe that such an immediate suspension is required in order to protect lives or property and to 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 his 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, he/she may bring his/her 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**

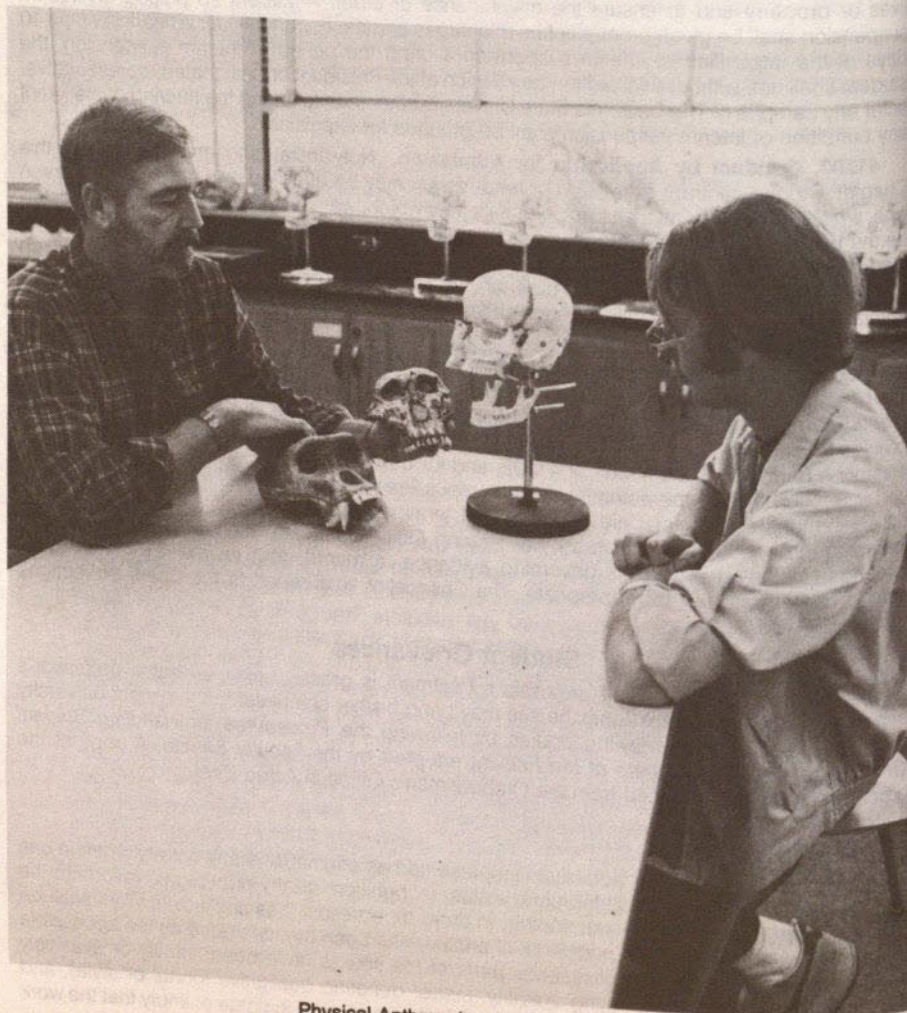
Plagiarism is formal work publicly misrepresented as original; it is any activity wherein one person knowingly, directly, and for lucre, status, recognition, or any public gain resorts to the published or unpublished work of another in order to represent it as one's own. Work shall be deemed plagiarism: (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.

Second, 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 obliged 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.



Physical Anthropology Laboratory.

# Graduation Requirements

Competency  
Upper Division Writing  
Major and Minor  
American Institutions  
Foreign Language  
Units  
Residence  
Grade Point Average  
General Education



## 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:

1. Students may remain with the graduation requirements in effect during the 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 each academic 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 are not considered to be in continuous attendance at SDSU even if they continue in attendance at another campus in the CSU system or a California community college. If disqualified students are subsequently reinstated after an absence from SDSU of one or more semesters, they are subject to the requirements of the General Catalog in effect during the semester in which they re-enroll in the CSU system or a California community college.

2. At the students' option, they may change to the catalog in effect in the year in which they graduate. Thus, students graduating in December 1985, May 1986, or in the 1986 summer sessions may adopt this catalog by so indicating on their application for graduation.

Applications for graduation are available in the Evaluations Office, Administration Bldg., Room 127, and are filed in the spring semester of the junior year for mid-year graduates or the fall semester of the senior year for spring and summer graduates. Deadlines by which applications must be received in the Evaluations Office 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 Evaluations Office, Administration Bldg., Room 127. 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:

1. the California State University English Placement Test requirement;
2. the San Diego State University Writing Competency requirement;
3. the California State University Entry-Level Mathematics Examination requirement;
4. the San Diego State University Mathematics Competency requirement.

All four requirements **must be satisfied** BEFORE enrolling in baccalaureate level writing, mathematics, statistics, and selected economics, health science, and telecommunications courses.

**Failure to attempt to satisfy all four of the requirements in writing and mathematics within two semesters of attendance at San Diego State University will result in the withholding of registration privileges for a third semester. Failure to satisfy the requirements within four semesters will result in the withholding of registration privileges for a fifth semester.** All requirements must be satisfied prior to graduation.

All courses for which writing and/or mathematics competency is an enforced prerequisite are listed in the "Changes in Academic Policies and Requirements Applicable to All Students" section of the current 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, selected economics and 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 110, or to verify satisfaction of the two requirements by other methods listed below **within two semesters** of attendance at SDSU will result in the withholding of registration privileges for a third semester. Failure to **satisfy** the requirements by passing the appropriate examination or Academic Skills courses **within four semesters** will result in the withholding of registration privileges for a fifth semester.

Test dates and times are listed in the "Special Tests" section of the current Class Schedule.

#### 1. The CSU English Placement Test requirement

Students must satisfy the CSU English Placement Test requirement by one of the following methods:

- a. Completion of the CSU English Placement Test (EPT) at SDSU or at another CSU campus.
- b. Transfer to SDSU with 56 or more transferable semester units or 84 quarter units completed before transfer.
- c. Completion **before** matriculation at SDSU of an acceptable college transfer course in English composition of three semester or four quarter units with a grade of C or better.
- d. Score of 510 or above on the Verbal section of the Scholastic Aptitude Test (SAT).
- e. Score of 23 or above on the English Usage section of the American College Test (ACT).
- f. Satisfactory score on the CSU English Equivalency Examination (EEE).
- g. Score of 3 or above on the English Composition Examination of The College Board Advanced Placement Program (AP).
- h. Score of 600 or above on The College Board Achievement Test in English Composition with Essay (ES).

#### 2. The SDSU Writing Competency requirement

Students must satisfy the SDSU Writing Competency requirement by one of the following methods:

- a. Essay score of 7 **and** total score of 150 on the CSU English Placement Test (EPT).\*
- b. Passing score on the SDSU Writing Competency Test.\*\*
- c. Score of 510 or above on the Verbal section of the Scholastic Aptitude Test (SAT).\*
- d. Score of 23 or above on the English Usage section of the American College Test (ACT).\*
- e. Qualification for English 100 or Linguistics 100 on the International Students English Placement Test (ISEPT) (for **all** international students, regardless of TOEFL score, whose native language is not English).
- f. Satisfactory score on the CSU English Equivalency Examination (EEE).
- g. Score of 3 or above on the English Composition Examination of The College Board Advanced Placement Program (AP).
- h. Score of 600 or above on The College Board Achievement Test in English Composition with Essay (ES).
- i. Passing the final competency examination in Academic Skills 110 at SDSU.
- j. Credit for Academic Skills 150 at SDSU.

\* Please note that, beginning in academic year 1986-87, all undergraduates (including those who enroll with 56 or more transferable semester units and who are subject to the 1986-87 or later General Catalog) will be required to complete the English Placement Test requirement. Even though not required this year for those with 56 or more units, all undergraduates are encouraged to take the test to heighten their awareness and command of college-level English skills.

\*\* 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.



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 110) 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 them for the examination may take Academic Skills 110 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 150, which also uses a competency examination as a final examination. A grade of Cr (Credit) in Academic Skills 150 will satisfy the SDSU Writing Competency requirement. Credit earned in Academic Skills 110 and 150 is not applicable to the baccalaureate degree.

### MATHEMATICS REQUIREMENTS

ALL students *must satisfy* both the CSU Entry-Level Mathematics Examination requirement *and* the SDSU Mathematics Competency requirement *BEFORE* enrolling in baccalaureate level mathematics, statistics, and selected economics and health science courses.

Furthermore, failure to *attempt* the CSU Entry-Level Mathematics Examination and the SDSU Mathematics Placement Test, or to register in Academic Skills 102A, 102B, or 103, or to verify satisfaction of the two requirements by other methods listed below *within two semesters* of attendance at SDSU will result in the withholding of registration privileges for a third semester. Failure to *satisfy* the requirements by passing the appropriate examinations or courses *within four semesters* will result in the withholding of registration privileges for a fifth semester.

Test dates and times are listed in the "Special Tests" section of the current Class Schedule.

#### 1. CSU Entry-Level Mathematics Examination requirement

Students must satisfy the CSU Entry-Level Mathematics Examination (ELM) requirement by one of the following methods:

- Score of 38 or above on the CSU Entry-Level Mathematics Examination (ELM) taken at SDSU or at another CSU campus.
- Completion *before* matriculation at SDSU of an approved General Education mathematics transfer course of three semester or four quarter units at the level of Intermediate Algebra or above with a grade of C or better.
- Score of 530 or above on the Mathematics section of the Scholastic Aptitude Test (SAT).
- Score of 23 or above on the Mathematics section of the American College Test (ACT).
- Score of 3 or above on The College Board Advanced Placement Test (AP) in Mathematics, level AB or BC.
- Score of 520 or above on The College Board Mathematics Achievement Test, Level 1.
- Score of 540 or above on The College Board Mathematics Achievement Test, Level 2.
- Continuous attendance at a California community college or CSU campus prior to summer 1983 until the present.

Students who fail to pass the Entry-Level Mathematics Examination or who wish to take a course to prepare them for the examination may take Academic Skills 102A; however, credit for the course does not satisfy the requirement. All students subject to the ELM must pass the examination.

#### 2. The SDSU Mathematics Competency requirement

Students must fulfill the SDSU Mathematics Competency requirement by one of the following methods:

- Score of 38 or above on the CSU Entry-Level Mathematics Examination (ELM).
- Satisfactory score on any section of the SDSU Mathematics Placement Test.
- Score of 530 or above on the Mathematics section of the Scholastic Aptitude Test (SAT).\*\*
- Score of 23 or above on the Mathematics section of the American College Test (ACT).\*\*
- Score of 3 or above on The College Board Advanced Placement Test in Mathematics, level AB or BC.
- Score of 520 or above on The College Board Mathematics Achievement Test, Level 1.
- Score of 540 or above on The College Board Mathematics Achievement Test, Level 2.

\*\* 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.

- Satisfactory score on the Mathematics General Examination or on the College Algebra-Trigonometry section, the Calculus and Analytic Geometry section, or the Statistics section of the College-Level Examination Program.
- Passing the final examination (the Mathematics Placement Test Part C or the ELM) in Academic Skills 102A or 102B at SDSU.

Satisfaction of the Entry-Level Mathematics Examination requirement and the SDSU Mathematics Competency requirement verifies a very basic level of mathematical skill insufficient for further work in mathematics, engineering, sciences, and many other academic disciplines. Therefore, students who wish to enroll in mathematics courses more advanced than Mathematics 118, 210A, and 210B must pass the appropriate section of the Mathematics Placement Test which assesses mathematical ability beyond the elementary level. Students may attempt any part of the Mathematics Placement Test three times. After three unsuccessful attempts, students must make a substantial effort to improve their mathematical skills (for example, by taking a course—for Part C, Academic Skills 102A; for Part I, Academic Skills 103) before being allowed a fourth attempt. Credit earned in Academic Skills 102A, 102B, and 103 is not applicable to the baccalaureate degree.

## II. Upper Division Writing Requirement

All students subject to degree requirements of 1981-82 and subsequent general catalogs must fulfill the Upper Division Writing Requirement as mandated by the major and included in each major description.

Before attempting to satisfy this requirement, students must:

- Have completed or be completing 60 units;
- Have fulfilled the Writing Competency requirement; and
- Have completed the General Education Communication and Analytical Reasoning requirement in Composition.

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.

Students whose majors do not specify any particular course or procedure may select from the following options:

- Demonstrating the required proficiency by passing the University Upper Division Writing Examination.
- Passing with a grade of C (2.0) or better one of the following courses:
 

Anthropology 396W	Information Systems 396W
English 304W	Information Systems 490W
English 305W	Linguistics 305W
English 306W	Linguistics 396W
English 500W	Mexican-American Studies 396W
English 508W	Recreation 396W
English 581W	Religious Studies 396W
English 582W	Sociology 396W
History 396W	Speech Communication 396W
History 430W	Teacher Education 396W

(Note: Several of these courses are limited to majors in the indicated department or have specific 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. 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 those offered during Summer Sessions and Wintersession, are not applicable to this requirement. 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 satisfaction of the major cannot be used to meet requirements in a minor. 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.

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 transcript will note the completion of each major.

- 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 course work, combining lower and upper division course work in proportions appropriate to the various disciplines. The minor shall consist of 15-24 units. 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. 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.

#### IV. American Institutions Requirement

The American Institutions requirement can be satisfied in any of three ways:

- A. **Courses:** By passing any one of the following pairs of courses:
- |                                    |                               |
|------------------------------------|-------------------------------|
| Afro-American Studies 170A-170B    | Political Science 101 and 102 |
| History 110A-110B                  | Political Science 305 and 320 |
| History 115A-115B                  | Political Science 305 and 321 |
| History 310A-310B                  | Political Science 305 and 522 |
| History 410A-410B                  | Political Science 320 and 321 |
| History 547A-547B                  | Political Science 320 and 522 |
| Mexican-American Studies 120A-120B | Women's Studies 341A-341B     |
| Mexican-American Studies 141A-141B |                               |
- B. **Examination and courses:** By passing the California State and Local Government Test (1 hour) or course work listed in B.3 AND completing course work appropriate to the remaining two areas. Courses applicable to each area are listed below.
- American History, Institutions and Ideals:** All pairs of courses listed in IV.B above and History 537A-537B, 544A-544B, 545A-545B.
  - United States Constitution:** Afro-American Studies 170A; History 110A, 115A, 310A, 410A, 531, 532, 545A, 545B, 547A; Mexican-American Studies 120A, 141A; Political Science 102, 305, 320, 347A-347B; Women's Studies 341A.
  - California State and Local Government:** Afro-American Studies 170B; History 110B, 115B, 310B, 410B, 541B, 547B; Mexican-American Studies 120B, 141B; Political Science 102, 320, 321, 522; Women's Studies 341B.
- C. **Transfer credit:** By providing evidence on a transcript or other official document from an accredited California university, liberal arts college, or community college that the requirement as outlined in Title 5, *California Administrative Code*, 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. Students whose majors lead to other degrees are not subject to this requirement.

- A. **The Bachelor of Arts degree in liberal arts and sciences** requires competency in one foreign or American Indian language as part of preparation for the major. Such competency can be demonstrated by:

1. Successfully completing the third college semester in one foreign language;
2. Successfully completing the fourth year level of high school courses in one foreign language;
3. Successfully completing a proficiency examination in one foreign language;
4. Graduating from high school (other than an American high school) in a non-English speaking country.

Any combination of the preceding is also acceptable. However, conversation courses may not be used in satisfying this requirement.

Students 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, 202, and 303	Hebrew 101, 102, and 201
Classics 101G, 202G, and 303G (Greek)	Italian 100A, 100B, and 200A or 200B
Classics 101L, 202L, and 303L (Latin)	Japanese 101, 102, and 201
French 100A, 100B, and 200A or 200B	Portuguese 101, 301, and 302
or 200C or 200D	Russian 101, 102, and 201
German 101, 102, and 201	Spanish 101, 102, and 201

**Exclusions:** (a) conversation courses may not be used to meet this requirement; (b) courses used to meet this requirement may not be applied to the General Education requirement.

Native speakers from foreign countries 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.

- B. **The Bachelor of Music degree** requires eight to twelve units in a foreign language (or 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** — twelve units of one foreign language chosen from French, German, or Italian.
3. **All others** — eight units 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 exclusive of Academic Skills 102, 103, 110, 111, 131, 132, 133, 141, 150 and English 125 is as follows:

1. For the Bachelor of Arts degree in Applied Arts and Sciences .....124
2. For the Bachelor of Arts degree in Liberal Arts and Sciences .....124
3. For the Bachelor of Science degree .....128
- \* 4. For the Bachelor of Science degree in Geological Sciences .....132

\* Applies to all options except General Geology and Paleontology which require 128 units.



5. For the Bachelor of Science degree in Engineering .....133
6. For the Bachelor of Music degree .....132
7. For the 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.

**B. Upper division unit requirement.** The total number of upper division units necessary for a bachelor's degree is as follows:

1. For the Bachelor of Arts degree in Applied Arts and Sciences .....40
2. For the Bachelor of Arts degree in Liberal Arts and Sciences .....45
3. For the Bachelor of Science degree .....45\*
4. For the Bachelor of Music degree .....47-51
5. For the Bachelor of Vocational Education degree .....40

Courses offering upper division credit are those numbered 300 through 599. All units from upper division courses 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. Special unit 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 and correspondence courses .....24
4. From credit (Cr) courses .....24
5. From topics courses numbered 296, 496, 596 .....9
6. From General Studies courses numbered 200 and 400 .....6
7. From Academic Skills 102A, 102B, 103, 110, 111, 131, 132, 133, 141, 150 and English 125 .....0
8. From Academic Skills 143, 151 and 296 .....3
9. From Aerospace Studies, Military Science and Naval Science courses .....24

**D. Units in one department.**

1. **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 journalism. Students majoring in journalism may not accumulate more than 30 units of credit in journalism courses.
2. **Bachelor of Music degree.** The maximum number of units in upper division music courses acceptable toward the Bachelor of Music degree is 70.
3. **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 seven 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).
4. **Other degrees.** The maximum number of units per department for other degrees is left to the discretion of the student, except the Bachelor of Arts degree in Applied Arts and Sciences with a major in Radio-Television in which no more than 27 upper division units in telecommunications and film may be counted toward the total units required for graduation.

## VII. Residence Requirement

To qualify for a bachelor's degree, each of the following unit requirements must be completed at this university:

- A. 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.

\* 36 units required for students subject to 1980 and earlier General Education requirements.

- C. At least nine units in General Education courses if subject to the 1981-82 and later General Education requirements.

**Note:** Courses taken in extension (except for Summer Sessions and Wintersession) and units earned through credit-by-examination may not be applied to these requirements.

## VIII. Grade Point Average Requirements

Three averages, each 2.0 or higher, are required for graduation:

- A. An average based on all courses attempted at SDSU.
- B. An average based on all courses attempted at SDSU and transferable courses at other universities, liberal arts colleges, and community colleges.
- C. An average based on all upper division courses attempted in the major.

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.

## IX. General Education Requirements\*

As an important part of education, undergraduate students spend approximately one-third of their college years studying in the General Education program. Course work in General Education is intended to give enriching perspective to students' overall academic programs, to complement their mastery of a more specialized subject area, and to equip them for life-long understanding and development of themselves as integrated physiological and psychological entities. In recognition of the importance of social as well as personal integration and of preparing students to function as citizens of a multicultural society, material on racism, sexism and nondominant groups in American society is incorporated into General Education Foundations courses. The program consists of a minimum of 49 semester units, distributed as indicated below. The major components—Communication and Analytical Reasoning, Foundations, and Explorations—should be taken sequentially so that mastery of skills may prepare students for understanding the academic disciplines of the University, and so that introduction to academic disciplines may prepare them for more specialized or interdisciplinary study.

The General Education program at San Diego State University is evolutionary. A standing committee of faculty and students reviews the program continually and encourages the development of new courses, concepts, and learning experiences. The program has four major objectives: (1) to develop in students the intellectual capabilities necessary to the enterprise of learning; (2) to introduce students to the modes of thought characteristic of diverse academic disciplines; (3) to help them understand the conditions and forces which shape them as human beings and influence their lives; and (4) to help them apply critical and informed judgments to the achievements of their own and other cultures.

### COURSE WORK EXCLUDED FROM GENERAL EDUCATION

The educational objectives of courses in General Education are not characteristic of other types of course offerings in the curriculum. Therefore, certain types of courses are not acceptable for General Education credit.

Types of courses that do **not** count for General Education credit include:

1. Course work in a major (upper division courses).\*\*
2. Mathematics 104 and 107, computer programming courses, and all Academic Skills courses.
3. Course work in excess of 12 units in one department or academic unit.

\* Engineering, Liberal Studies Options 2 and 3, and Nursing majors should refer to the Courses and Curricula section of the General Catalog for a listing of General Education requirements.

\*\* A maximum of three upper division units in excess of 24 upper division units for the B.A. degree and 36 upper division units 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.



4. Courses numbered 296, 496, or 596 (Topics).

5. Courses numbered 299, 499 (Special Study).

**NOTE:** However, course work completed in a minor or in preparation for the major may be used to satisfy General Education.

### CALIFORNIA COMMUNITY COLLEGE AND CSU CERTIFIED TRANSFER STUDENTS

Transfer students who are certified by their previous institutions to have completed 39 state-mandated General Education units as outlined in the *California Administrative Code*, Title 5, will be required to complete an additional nine units necessary to comply with the following Title 5 provision: "At least nine units shall be earned at the campus granting the degree."

It is expected that almost all students will take their remaining nine units at the upper division level in order to fulfill the required nine-unit upper division General Education requirement. Up to two upper division courses may be counted from a single area (Natural Sciences, Social and Behavioral Sciences, Humanities) of "Explorations," Part III of General Education. Only one course may be counted from American Institutions.

Those transfer students who have completed upper division General Education courses on another campus must take whatever additional units are necessary to complete the nine-unit upper division General Education requirement (within the limitations described in the above paragraph); such students may then select any course(s) approved for General Education to complete the nine units which must be taken at the campus granting the degree.

This provision also applies to students who were certified as having completed 40 units of General Education under earlier requirements and who have not maintained continuous attendance.

### SPECIFIC REQUIREMENTS

**Students will complete a minimum of 49 units in General Education, to include a minimum of nine upper division units which shall be taken no sooner than the term in which the student achieves upper division status.\*\* At least nine units of General Education must be earned at San Diego State University. No more than 12 units may be used for General Education credit from any one department or academic unit.**

#### I. COMMUNICATION AND ANALYTICAL REASONING

*Courses taken to satisfy the Communication and Analytical Reasoning Section of General Education may not be taken for credit/no credit.*

Included in Communication and Analytical Reasoning are courses in written and oral communication skills in English and in the analytical reasoning skills developed in mathematics, statistics, and logic. Communication and Analytical Reasoning courses deal with the communicative, ratiocinative, and computational skills required within the context of the University at large; they are not intended to introduce students to the peculiarities of disciplines (i.e., specialized subjects of inquiry and unique methodologies). *These capabilities should be achieved by students during their first year of college.*

**Course Work in Communication and Analytical Reasoning.** A minimum of twelve units distributed as follows.

**A. Written Communication.** Six units to include one course each from areas 1 and 2.

##### 1. Composition

Afro-American Studies 120. Composition (3)

English 100. College Composition (3)

Linguistics 100. English Composition for International Students (3)

Mexican-American Studies 111B. Written Communication (3)

\*\* A maximum of three upper division units in excess of 24 upper division units for the B.A. degree and 36 upper division units 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.

#### 2. Intermediate Composition

Afro-American 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.** Three units from the following.

Afro-American Studies 140. Oral Communication (3)

Mexican-American Studies 111A. Oral Communication (3)

Speech Communication 103. Oral Communication (3)

**C. Logic, Mathematics, Statistics.** Three units from one of the following areas.

##### 1. Logic

Philosophy 120. Logic (3)

##### 2. Mathematics

Mathematics 118, or higher-numbered course, excluding computer programming courses

##### 3. Statistics<sup>1</sup>

Economics 201. Statistical Methods (3)

Mathematics 119. Elementary Statistics for Business (3)

Mathematics 250. Basic Statistical Methods (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

Foundations courses follow and build upon Communication and Analytical Reasoning courses and are offered by individual departments and interdisciplinary areas in the Natural Sciences, Social and Behavioral Sciences, and Humanities. Foundations courses introduce students to various disciplines, i.e., subject matters and the diverse conceptual frameworks by which scholars in different fields approach these subjects. The purpose of this section of General Education is to familiarize the student sufficiently with such modes of thought so as to allow for their application to various human concerns and experiences, among them the need to function in a multicultural society.

**Course Work in Foundations.** A minimum of 22 units distributed as follows. **No more than seven units taken in any one department or program may be counted for credit in Foundations and Explorations.**

**A. Natural Sciences.** Seven units to include one course each from areas 1 and 2 and a one-unit (three-hour) laboratory.

##### 1. Life Sciences

+ Anthropology 101. Human Bio-Cultural Origins (3)

Biology 100. General Biology (3)

Biology 100L. General Biology Laboratory (1)

Biology 110. Evolution and Diversity of Animals (3)

Biology 110L. Evolution and Diversity of Animals Laboratory (1)

Biology 120. Microbiology and Man (3)

Biology 120L. Microbiology and Man Laboratory (1)

Biology 130. Plants and Man (3)

Biology 130L. Plants and Man Laboratory (1)

Biology 301. Agricultural Botany of the Imperial Valley with Laboratory (4)

(Offered at IVC only)

Natural Science 110B. Energy in Nature with Laboratory (4)

<sup>1</sup> Students completing more than one of the above statistics courses will be awarded a total of four units of credit, three of which will be applicable to General Education.

+ Only one of these three courses may be taken for General Education credit.



**2. Physical Sciences**

- Astronomy 101. Principles of Astronomy (3)
- Astronomy 109. Astronomy Laboratory (1)
- Chemistry 100. Introduction to General Chemistry with Laboratory (4)
- Chemistry 110. Chemistry and Life (3)
- + Geography 101. Introduction to Physical Geography (3)
- Geography 101L. Physical Geography Laboratory (1)
- + Geography 103. Introduction to Meteorology (3)
- Geography 103L. Introduction to Meteorology Laboratory (1)
- Geological Sciences 100. General Geology (3)
- Geological Sciences 101. General Geology Laboratory (1)
- Natural Science 100. Physical Science (3)
- Natural Science 102. Physical Science with Laboratory (4)
- Natural Science 103. Laboratory Exercises in Physical Science (2)
- Natural Science 110A. Energy in Nature with Laboratory (4)
- Physics 107. Introductory Physics with Laboratory (4)

**3. Special Provision for Majors in the Sciences and Related Fields.**

- a. Where course work in astronomy, biology, chemistry, geological sciences, or physics is required (or listed as a recommended course in the catalog) in preparation for the major, a student may substitute those courses for courses listed under either Life Sciences or Physical Sciences (as appropriate) in Sections II. A above and III. A below.
- b. If a student adopts the above provision and later changes his or her major to a field which does not require course work in these disciplines, the student may nevertheless receive General Education credit for courses taken in those disciplines.
- c. Undeclared majors who take non-General Education science courses in Section II. A and III. A, in anticipation of declaring a major which requires such course work, are included in a. and b. above.

**B. Social and Behavioral Sciences.** Six units to include courses from two departments.

- 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. Introduction to Cultural Geography (3)
- Linguistics 101. Introductory Linguistics (3)
- Political Science 103. Introduction to Comparative Government (3)
- Psychology 101. Introductory Psychology (3)
- Sociology 101. Introductory Sociology (3)

**C. Humanities.** Nine units to include courses from three of the four areas listed below.**1. Literature**

- Comparative Literature 270A. World Literature (3)
- Comparative Literature 270B. World Literature (3)
- English 220. Introduction to Literature (3)

**2. Art, Classics, Drama, Humanities, and Music**

- Art 157. Introduction to Art (3)
- Art 258. Appreciation and History of Art (3)
- Art 259. Appreciation and History of Art (3)
- Classics 140. The Heritage of Greece and Rome (3)
- Drama 105. Introduction to the Theatre (3)
- Drama 120. Dramatic Heritage (3)
- Humanities 101. Introduction to Humanities (3)
- Humanities 102A. Introduction to European Heritage (3)
- Humanities 102B. Introduction to European Heritage (3)
- Humanities 130. The Jewish Heritage I (3)
- Humanities 140. Mythology (3)
- Music 151. Introduction to Music (3)

+ Only one of these three courses may be taken for General Education credit.

**3. History**

- History 100. World History (3)
- History 101. World History (3)
- % History 105. Western Civilization (3)
- § History 106. Western Civilization (3)

**4. Philosophy, 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)

**III. EXPLORATIONS**

General Education is not only a selection of disciplinary skills, introductions, and surveys. It also includes more detailed courses, for the most part upper division, which allow more concentrated or thematic study. This section is called Explorations. There are in Explorations four areas of study—Natural Sciences, Social and Behavioral Sciences, Humanities, and American Institutions.

**Course Work in Explorations.** A minimum of 15 units, of which at least nine units must be upper division taken after achieving upper division status and at least one course must be cross-cultural (indicated by \*), distributed as follows:

- One course from area A,
- One course from area B,
- Two courses from area C,
- One course from area B or C or D.

**No more than seven units taken in any one department or program may be counted for credit in Foundations and Explorations.**

**A. Natural Sciences.** Any course, excluding laboratories, listed in II. A above and as follows.

- Astronomy 301. Cosmology and Gravitational Collapse (3)
- Biology 140. Ecosystems and Man (3)
- Biology 160. Introduction to Heredity (3)
- Biology 170. Natural History of Plants and Animals (3)
- Biology 307. Biology of Sex (3)
- Biology 319. Evolution (3)
- Biology 321. Human Heredity (3)
- Biology 324. Life in the Sea (3)
- Biology 327. Microbes: The Key to the Future (3)
- Biology 330. Natural History of the Vertebrates (3)
- Biology 336. Principles of Human Physiology (3)
- Biology 339. Sociobiology (3)
- Biology 341. The Human Body (3)
- Biology 341L. The Human Body Laboratory (1)
- Biology 365. Microorganisms in Human History (2)
- Biology 454. Conservation of Wildlife (3)
- Biology 480. Biology of Aging (3)
- Engineering 150. Control of the Human Environment (3)
- Geological Sciences 301. Geology of National Parks and Monuments (3)
- Geological Sciences 303. Environmental Geology (3)
- Mathematics 149. Introductory Matrix Algebra (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)

% Students may not substitute History 305A for 105.

§ Students may not substitute History 305B for 106.



Natural Science 431. The Origins of Life (3)

Oceanography 320. The Oceans (3)

Physics 301. Energy and Conservation (3)

**B. Social and Behavioral Sciences.** Any course listed in II. B above and as follows.

- \* Afro-American Studies 102. Afro-American Lifestyles (3)
- \* Afro-American Studies 231. Cultural Patterns and Black Identity (3)
- \* Afro-American Studies 232. Social Analysis from a Black Perspective (3)
- \* Afro-American Studies 445. Ethnicity and Social Psychology (3)
- \* American Indian Studies 110. American Indian Heritage (3)
- \* American Indian Studies 320. American Indians in Contemporary Society (3)
- \* Anthropology 350. World Ethnography (3)
- Anthropology 410. Language in Culture (3)
- Anthropology 428. Ecological Anthropology (3)
- Anthropology 432. Principles of Personality in Culture (3)
- \* Anthropology 442. Cultures of South America (3)
- \* Anthropology 445. Ethnology of North America (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. Population and Economic Growth (3)
- General Studies 310. Our Global Future: Values for Survival (3)
- \* Geography 312. Culture Worlds (3)
- Geography 321. United States (3)
- \* Geography 323. Middle America (3)
- \* Geography 324. South America (3)
- \* Geography 331. Monsoon Asia (3)
- \* Geography 335. The Middle East and North Africa (3)
- Geography 336. Europe (3)
- Geography 337. Soviet Union (3)
- Geography 350. Political Geography (3)
- Geography 354. Geography of Cities (3)
- Geography 370. Conservation of Environmental Quality (3)
- Geography 371A. Conservation of Natural Resources (3)
- \* Health Science 362. International Health (3)
- Journalism 408. Mass Communication and Society (3)
- \* Latin American Studies 101. Latin American Heritage (3)
- Linguistics 420. Modern English (3)
- † Management 456. Conceptual Foundations of Business (3)
- \* Mexican-American Studies 140. History and Sociology of Racism (3)
- \* Mexican-American Studies 301. Political Economy of the Chicano People (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 306. Democracy and Mass Society (3)
- Political Science 356. Governments of Continental Europe (3)
- Political Science 358. Comparative Communist Political Systems (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 364. Political Change in Modern Africa (3)

\* Cross-cultural course.

† Majors in the College of Business Administration may not use this course to satisfy requirements for General Education.

Political Science 370. Political Violence (3)

Psychology 330. Developmental Psychology (3)

Psychology 340. Social Psychology (3)

Psychology 347. Psychology of Contemporary Social Problems (3)

Psychology 351. Psychology of Personality (3)

Recreation 204. Challenges of Leisure (3)

\* Social Work 350. Cultural Pluralism (3)

Social Work 360. Perspectives on Human Behavior and the Social Environment (3)

Sociology 110. Contemporary Social Problems (3)

\* Sociology 325. Minority Group Relations (3)

Sociology 333. Sex Roles in Contemporary Societies (3)

Sociology 350. Population and Contemporary Issues (3)

Sociology 404. Social Change (3)

Sociology 422. Social Organization (3)

Sociology 440. Social Psychology: Sociological Approaches (3)

\* Speech Communication 475. Intercultural Communication (3)

\* Women's Studies 201. Sexism and the Social Sciences (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 485. Economics of Women and Work (3)

**C. Humanities.** Any two courses listed in II. C above and as follows.

- \* Afro-American Studies 180. Afro-American Music (3)
- \* Afro-American Studies 260. Introduction to Afro-American Literature (3)
- \* Afro-American Studies 460. Black Images in Western Literature (3)
- \* Afro-American Studies 470. Comparative History: Afro-American and African Heritage (3)
- \* American Indian Studies 200. American Indian Literature (3)
- \* American Indian Studies 255. American Indian Music (3)
- \* American Indian Studies 430. American Indian Poetry and Fiction (3)
- \* American Indian Studies 440. American Indian History (3)
- \* American Indian Studies 470. Roots of Indian Tradition (3)
- \* Anthropology 422. Music and Culture (3)
- Anthropology 424. Primitive Religion (3)
- \* Art 158. Arts of Native America, Sub-Saharan Africa and Oceania (3)
- \* Art 264. Chinese Art (3)
- \* Art 265. Japanese Art (3)
- \* Asian Studies 458A. Asian Cultures (3)
- \* Asian Studies 458B. Asian Cultures (3)
- ‡ Chinese 101. Elementary (4)
- ‡ Chinese 202. Elementary (4)
- Chinese 303. Readings in Contemporary Chinese (4)
- Chinese 304. Readings in Chinese (4)
- ‡ Classics 101G. Elementary Greek I (5)
- ‡ Classics 101L. Elementary Latin I (5)
- Classics 120. Latin and Greek Word Derivation (3)
- ‡ Classics 202G. Elementary Greek II (5)
- ‡ Classics 202L. Elementary Latin II (5)
- Classics 303G. Readings in Greek Prose (3)
- Classics 303 L. Readings in Latin Prose (3)
- Classics 304G. Readings in Greek Poetry (3)
- Classics 304L. Readings in Latin Poetry (3)

\* Cross-cultural course.

‡ Only those foreign language courses numbered 100A, 100B, 101, 101G, 101L, 102, 200, 200A, 200B, 200C, 200D, 201, 202, 202G, 202L, 301, 302, 303, 303G, or 303L **not** used to satisfy the Foreign Language graduation requirement for the major and **not** in violation of high school course repeat provisions may be used to satisfy General Education in the Explorations component.



- Classics 310. Greek and Roman Mythology (3)
- Classics 320. Classical Literature (3)
- Classics 330. Classical Drama (3)
- Classics 340. Classical Civilization (3)
- Comparative Literature 405. The Bible as Literature (3) [Same course as English 405.]
- \* Comparative Literature 430. Asian Literature (3)
- \* Comparative Literature 440. African Literature (3)
- \* Comparative Literature 445. Modern Latin American Literature (3)
- \* Comparative Literature 470. Folk Literature (3) (Maximum GE credit 3 units)
- Drama 460A. History of the Theatre (3)
- Drama 460B. History of the Theatre (3)
- English 250A. American Literature (3)
- English 250B. American Literature (3)
- English 260A. English Literature (3)
- English 260B. English Literature (3)
- 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 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 301. Advanced Grammar and Composition (3)
- French 302. Advanced Grammar and Composition (3)
- French 305A. Survey of French Literature (3)
- French 305B. Survey of French Literature (3)
- French 421. French Civilization (3)
- French 422. French Civilization (3)
- ‡ German 101. First Course in German (4½)
- ‡ German 102. Second Course in German (4½)
- ‡ German 201. Third Course in German (4)
- ‡ German 202. Fourth Course in German (4)
- German 211. Conversation (2)
- German 212. Conversation (2)
- German 301. Grammar and Composition (3)
- German 302. Grammar and Composition (3)
- ‡ Hebrew 101. Elementary (4)
- ‡ Hebrew 102. Elementary (4)
- \* History 120. Introduction to Asian Civilizations (3)
- \* History 121. Asian Civilizations in Modern Times (3)
- % History 305A. The Sources of Civilization in the West (3)
- % History 305B. The Sources of Civilization in the West (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)

\* Cross-cultural course.

% May be used for General Education credit only by students who have not taken History 106.

§ May be used for General Education credit only by students who have not taken History 106.

‡ Only those foreign language courses numbered 100A, 100B, 101, 101G, 101L, 102, 200, 200A, 200B, 200C, 200D, 201, 202, 202G, 202L, 301, 302, 303, 303G, or 303L **not** used to satisfy the Foreign Language graduation requirement for the major and **not** in violation of high school course repeat provisions may be used to satisfy General Education in the Explorations component.

- \* History 473A. Middle Eastern History from the Rise of Islam to the Present (600-1600 A.D.) (3)
- \* History 473B. Middle Eastern History from the Rise of Islam to the Present (1600-present) (3)
- \* History 475A. Africa (3)
- \* History 475B. Africa (3)
- \* Humanities 157. Arab-Islamic Culture and Civilization (3)
- \* Humanities 158. African Culture and Civilization (3)
- Humanities 401A. The Cultural Heritage of Europe I (3)
- Humanities 401B. The Cultural Heritage of Europe II (3)
- Humanities 402A. The Cultural Heritage of Europe III (3)
- Humanities 402B. The Cultural Heritage of Europe IV (3)
- ‡ Italian 100A. Elementary (5)
- ‡ Italian 100B. Elementary (5)
- ‡ Italian 200A. Intermediate Grammar and Composition (3)
- ‡ Italian 200B. Reading and Speaking Italian (3)
- Italian 301. Advanced Oral and Written Composition (3)
- Italian 305A. Italian Literature (3)
- Italian 305B. Italian Literature (3)
- ‡ Japanese 101. Elementary Japanese (4)
- ‡ Japanese 102. Elementary Japanese (4)
- ‡ Japanese 201. Intermediate Japanese I (4)
- ‡ Japanese 202. Intermediate Japanese II (4)
- ‡ Japanese 301. Third Year Japanese I (3)
- ‡ Japanese 302. Third Year Japanese II (3)
- Linguistics 410. History of English (3)
- \* Mexican-American Studies 335. Mexican-American Literature (3)
- \* Mexican-American Studies 350A. Chicano History (3)
- \* Mexican-American Studies 350B. Chicano History (3)
- \* Mexican-American Studies 376. Mexican-American Culture and Thought (3)
- \* Mexican-American Studies 380. Chicano Folklore (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 351D. Jazz History and Appreciation (3)
- Philosophy 301. History of Philosophy I (3)
- Philosophy 310. Philosophy and Human Nature (3)
- Philosophy 329. Social Ethics (3)
- Philosophy 334. Philosophy of Literature (3)
- \* Philosophy 351. Chinese Philosophy (3)
- ‡ Portuguese 101. Elementary/Intensive (5)
- Portuguese 211. Conversation and Grammar Review (3)
- Portuguese 212. Conversation and Grammar Review (3)
- Portuguese 301. Advanced Oral and Written Composition (3)
- Portuguese 302. Advanced Oral and Written Composition (3)
- Religious Studies 301. Hebrew Scriptures (3)
- Religious Studies 305. The New Testament (3)
- Religious Studies 318. Modern Religious Thought in the West (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)

\* Cross-cultural course.

% Only those foreign language courses numbered 100A, 100B, 101, 101G, 101L, 102, 200, 200A, 200B, 200C, 200D, 201, 202, 202G, 202L, 301, 302, 303, 303G, or 303L **not** used to satisfy the Foreign Language graduation requirement for the major and **not** in violation of high school course repeat provisions may be used to satisfy General Education in the Explorations component.



- Religious Studies 363. Religion and the Sciences (3)
- \* Religious Studies 401. Religions of India (3)
- \* Religious Studies 403. Religions of the Far East (3)
- ‡ Russian 101. First Course in Russian (4½)
- ‡ Russian 102. Second Course in Russian (4½)
- ‡ Russian 201. Third Course in Russian (4)
- ‡ Russian 202. Fourth Course in Russian (4)
- Russian 211. Conversation (2)
- Russian 212. Conversation (2)
- Russian 301. Advanced Grammar and Composition (3)
- Russian 302. Advanced Grammar and Composition (3)
- Russian 305A. Survey of Russian Literature (3)
- Russian 305B. Survey of Russian Literature (3)
- ‡ Spanish 101. Elementary (4½)
- ‡ Spanish 102. Elementary (4½)
- ‡ Spanish 201. Elementary (4½)
- ‡ Spanish 202. Intermediate (4)
- Spanish 211. Intermediate Conversation and Writing (2)
- Spanish 212. Intermediate Conversation and Writing (2)
- Spanish 301. Advanced Oral and Written Composition (3)
- Spanish 302. Advanced Oral and Written Composition (3)
- Spanish 303. Advanced Composition and Style (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)
- Spanish 440. Spanish Civilization (3)
- Spanish 441. Spanish-American Civilization (3)
- Spanish 442. Mexican Civilization (3)
- Telecommunications and Film 363. International Cinema (3)
- \* Women's Studies 205. Women in Western Culture (3)
- \* Women's Studies 340. Women in Modern History (3)
- \* Women's Studies 352. Women in Literature (3)
- \* Women's Studies 453. Women Writers (3)

**D. American Institutions.** No more than **three** units of American Institutions course work may be counted for General Education, and **only** if they are also being used to satisfy the American Institutions graduation requirement. The student should consult the American Institutions Requirement in the General Catalog for other ways of satisfying the American Institutions requirement.

Afro-American Studies 170A-170B  
 History 110A-110B  
 History 115A-115B  
 History 310A-310B  
 History 410A-410B  
 History 547A-547B  
 Mexican-American Studies 120A-120B  
 Mexican-American Studies 141A-141B

Political Science 101 and 102  
 Political Science 305 and 320  
 Political Science 305 and 321  
 Political Science 305 and 522  
 Political Science 320 and 321  
 Political Science 320 and 522  
 Women's Studies 341A-341B

## Application for Graduation

Graduation is not automatic on the completion of requirements. Students who intend to graduate must take the initiative. When they believe that they are eligible, they should file an application with the Evaluations Office, Administration Building. The Class Schedule each semester specifies the exact date. An application fee of \$19.00, which is nonrefundable, is required. After the degree is granted no changes can be made in 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 each academic 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.

\* Cross-cultural course.

‡ Only those foreign language courses numbered 100A, 100B, 101, 101G, 101L, 102, 200, 200A, 200B, 200C, 200D, 201, 202, 202G, 202L, 301, 302, 303, 303G, or 303L **not** used to satisfy the Foreign Language graduation requirement for the major and **not** in violation of high school course repeat provisions may be used to satisfy General Education in the Explorations component.





# Curricula Summary

*Opposite page:* Exercise Physiology Laboratory, Peterson Gymnasium.



## Summary of Curricula Offered

Majors	Arts and Sciences Curricula		Graduate Curricula			
	Applied Arts and Sciences		Graduate Division			
	AB	BS	AB	MA, MFA	MS	PhD
Accountancy .....	-	-	-	-	MS	-
## Accounting .....	-	BS	-	-	-	-
Aerospace engineering .....	-	BS	-	-	MS	-
Afro-American studies .....	-	-	AB	-	-	-
** American studies .....	-	-	AB	MA	-	-
Anthropology .....	-	-	AB	MA	-	-
Applied mathematics .....	-	-	-	-	MS	-
Art .....	AB	-	AB	MA, MFA	-	-
** Asian studies .....	-	-	AB	MA	-	-
Astronomy .....	AB	-	AB	-	MS	-
% Biology .....	-	BS	AB	MA	MS	PhD
† Business administration .....	-	-	-	MBA	MS	-
Chemical physics .....	-	BS	-	-	-	-
% Chemistry .....	AB	BS	-	MA	MS	PhD
** Child development .....	-	BS	-	-	-	-
&† City planning .....	-	BS	-	-	MCP	-
Civil engineering .....	-	BS	-	-	MS	-
Classics .....	-	-	AB	-	-	-
Communicative disorders .....	AB	-	AB	MA	-	-
** Comparative literature .....	-	-	AB	-	-	-
&& Computer science .....	-	BS	-	-	MS	-
† Counseling .....	-	-	-	-	MS	-
Criminal justice administration .....	-	BS	-	-	-	-
Drama .....	AB	-	-	MA, MFA	-	-
# Ecology .....	-	-	-	-	-	PhD
Economics .....	-	-	AB	MA	-	-
***† Education .....	-	-	-	MA	-	PhD
Electrical engineering .....	-	BS	-	-	MS	-
English .....	-	-	AB	MA	-	-
†† Environmental health .....	-	BS	-	-	-	-
European studies .....	-	-	AB	-	-	-
## Finance .....	-	BS	-	-	-	-
## Financial services .....	-	BS	-	-	-	-
Foods and nutrition .....	-	BS	-	-	-	-
French .....	-	-	AB	MA	-	-
††† Genetics .....	-	-	AB	MA	-	PhD
Geography .....	-	-	AB	MA	-	-
Geological sciences .....	-	BS	-	-	MS	-
German .....	-	-	AB	MA***	-	-
Health science .....	-	BS	-	-	-	-
History .....	-	-	AB	MA	-	-
Home economics .....	-	-	AB	-	MS	-
Humanities .....	AB	-	-	-	-	-
Industrial arts .....	AB	-	AB	MA	-	-
## Information systems .....	-	BS	-	-	-	-
Journalism .....	-	-	AB	-	-	-
** Latin American studies .....	-	-	AB	MA	-	-
** Liberal studies .....	AB	-	AB	-	-	-
** Linguistics .....	-	-	AB	MA	-	-
## Management .....	-	BS	-	-	-	-
## Marketing .....	-	BS	-	-	-	-
**† Mass communication .....	-	-	-	-	-	-
Mathematics .....	-	BS	AB	MA	MS	-
Mechanical engineering .....	-	BS	-	-	MS	-
Mexican-American studies .....	-	-	AB	-	-	-
Microbiology .....	-	BS	AB	-	MS	-
Music .....	AB	BM	-	MA	MM	-
Nursing .....	-	BS	-	-	MS	-
Nutritional sciences .....	-	-	-	-	MS	-

## Summary of Curricula Offered

Majors	Arts and Sciences Curricula		Graduate Curricula			
	Applied Arts and Sciences		Graduate Division			
	AB	BS	AB	MA, MFA	MS	PhD
Philosophy .....	-	-	AB	MA	-	-
Physical education .....	AB	-	AB	MA	-	-
* Physical science .....	AB	-	-	-	-	-
Physics .....	-	BS	AB	MA	MS	-
Political science .....	-	-	AB	MA	-	-
Psychology .....	-	-	AB	MA	MS	-
Public administration .....	AB	-	-	-	MPA	-
Public health .....	-	-	-	-	MPH	-
Public history .....	-	-	-	MA	-	-
† Radiological physics .....	-	-	-	-	MS	-
† Radio-television .....	AB	BS	-	MA	-	-
## Real estate .....	-	BS	-	-	-	-
Recreation administration .....	AB	-	-	-	-	-
† Rehabilitation counseling .....	-	-	-	-	MS	-
Religious studies .....	-	-	AB	-	-	-
Russian .....	-	-	AB	MA	-	-
** Russian and East European studies .....	-	-	AB	-	-	-
** Social science .....	-	-	AB	-	-	-
Social work .....	AB	-	AB	-	MSW	-
Sociology .....	-	-	AB	MA	-	-
Spanish .....	-	-	AB	MA	-	-
Special major .....	-	-	-	MA	MS	-
Speech communication .....	AB	-	-	MA	-	-
&& Statistics .....	-	-	-	-	MS	-
Vocational arts .....	-	BVE	-	-	-	-
Women's studies .....	-	-	AB	-	-	-

% Offered by the Department of Telecommunications and Film.

\* Limited to students in Teacher Education.

† For master's degree only (not an undergraduate major).

\*\*\* Ph.D. offered jointly with Claremont Graduate School.

% Ph.D. offered jointly with the University of California, San Diego.

††† Ph.D. offered jointly with the University of California, Berkeley. Admission to this program is closed.

# Ph.D. offered jointly with the University of California, Davis.

## A concentration with the B.S. in Business Administration.

\*\* An interdisciplinary program.

& Offered by the School of Public Administration and Urban Studies.

†† Offered by the Department of Microbiology.

&& Offered by the Department of Mathematics.

\*\*\*\* No students will be admitted into this program during the current academic year.

## Special Curricula

### Preprofessional Curricula

Predental  
Prelegal  
Premedical  
Preveterinary

### Medical Technology

### Military Curricula

Aerospace studies (A.F.R.O.T.C.)  
Military science (R.O.T.C.)  
Naval science (N.R.O.T.C.)

### Certificate (nondegree) Programs

(See following page for listing of certificate programs.)



### Certificate (nondegree) Programs

Certificate in applied linguistics and English as a second language (ESL)	Certificate in professional services bilingual/bicultural
Certificate in bilingual (Spanish) special education	Certificate in public administration (Imperial Valley Campus only)
Certificate in business administration (Imperial Valley campus only)	Certificate in public history
Certificate in cartography	Certificate in quantitative analysis in the social sciences
Certificate in children's literature	Certificate in recombinant DNA technology
Certificate in creative writing (advanced)	Certificates in Spanish translation and court interpreting
Certificate in human services paraprofessional	Certificate in teaching the emotionally disturbed
Certificate in instructional technology	Certificate in technical and scientific writing
Certificate in language development specialist	
Certificate in preventive medicine residency	

### The following programs are available through Extension only.

Certificate in applied gerontology	Certificate in materials management
Certificate in construction practices	Certificate in personnel and industrial relations
Certificate in fire protection administration	Certificate in training systems design and administration
Certificate in government contract management	

### Teaching Credentials

Multiple subjects  
Single subject  
Community college

### Credentials Offered

#### Specialist Credentials

Bilingual/cross-cultural  
Reading  
Special education:  
Communication handicapped  
Physically handicapped  
Learning handicapped  
Severely handicapped  
Gifted

#### Service Credentials

Administrative  
Clinical rehabilitative  
Pupil personnel  
School psychology  
Health (school nurse)

### Minors for the Bachelor's Degree

Accounting	Dance	Humanities	Physics
Aerospace studies	Drama	Industrial arts	Political science
African studies	Economics	Information systems	Portuguese
Afro-American studies	Educational technology	Insurance	Production and operations management
American Indian studies	Energy studies	Italian	Psychology
American studies	Engineering	Jewish studies	Public administration
Anthropology	English	Journalism	Radio-television
Art	Environment and society	Latin American studies	Real estate
Art history	European studies	Linguistics	Recreation
Asian studies	Finance	Marketing	Religious studies
Astronomy	French	Mathematics	Russian
Biology	Geography	Mexican-American studies	Small business management (Imperial Valley Campus only)
Business management	Geological sciences	Middle East studies	Social work
Chemistry	German	Military science	Sociology
Child development	Gerontology	Music	Spanish
Classical humanities	Health science	Oceanography	Speech communication
Classics	History	Personnel and industrial management	Women's studies
Communicative Disorders	History of science and technology	Philosophy	
Comparative literature	Home economics	Physical education	
Computer science			

# Courses and Curricula



## Courses and Curricula

### Course Numbering

Courses 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; those numbered 600 through 799 are strictly graduate courses; and those numbered 800 through 899 are doctoral courses.

Courses numbered X-1 through X-99 are those offered only through Extension to meet specific academic needs of community groups and 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-99 are designated as upper division. It is the prerogative of the academic department/college to determine if X-01 through X-99 level courses are applicable to a major, a minor, or toward specified electives. The X-01 through X-99 level courses are offered in conjunction with certificate programs only. Courses at the X-01 through X-99 level are not acceptable on advanced degree programs.

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-99 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.

### 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. A "W" indicates a course offered during wintersession.

Following the course title are designations of credit and the semester in which 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 (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.

### Honors Courses (300)

These courses are intended for students with superior scholastic records and aptitude. Interested students should direct their inquiries to the chair of the department concerned.

### Special Study (499)

These courses provide opportunity for individual study of a subject not offered in the regular curriculum. The student does this outside of the classroom. The student should seek out an instructor under whose supervision he/she wishes to work, discuss the topic with the instructor, and come to an understanding on the amount of time he/she is to devote to the topic, the credit to be earned, and the mode of investigation and report. As with regular courses, the expectation is that the student will devote three hours per week to the subject for each unit of credit. Maximum credit six units per department.

### 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

### Faculty

Emeritus: MacDonald  
Chair: Basile  
Professor: Basile  
Associate Professors: Denman, Johns  
Assistant Professor: Sweedler-Brown  
Lecturers: Agatucci, Albanese, Allister, Baldwin, Brown, Carella, Dolansky, Duran, Enright, Feldstein, Gregg, Haskovec, Johnson, M., Johnson, P., Kangas, Keesey, Maggio, Makoff, Markley, Miller, Morgan, Nower, Orton, Potts, Williams, Ziai

### Offered by the Academic Skills Center

Courses in mathematics, reading, writing and learning skills.  
Major or minor work in academic skills is not offered.

### LOWER DIVISION COURSES

The Academic Skills Center, located in the Professional Studies and Fine Arts building, offers courses and individual assistance to all students at any university level, including bilingual and international students, who wish to improve mathematics, reading, writing or other skills, or obtain help with study problems or writing projects. Course work leading to satisfaction of the graduation requirement in mathematics and writing competency is offered in the Center.

Academic skills courses may not be used to satisfy general education requirements and no more than three units of 143, 151 and 296 may be applied towards a bachelor's degree. Credit earned in Academic Skills 102, 103, 110, 111, 131, 132, 133, 141, and 150 may not be applied toward a bachelor's degree.

#### 102A-102B. Fundamentals of Mathematics (3-3) Cr/NC I, II

Prerequisite: Academic Skills 102A is prerequisite to 102B.

A review of arithmetic, beginning algebra, and topics from geometry. Courses open to students who have not fulfilled the Mathematics Competency requirement or who need a review of elementary algebra. The final examination for this course will be either the SDSU Mathematics Placement Test or the CSU Entry-Level Mathematics Examination (ELM). A passing score on the test will satisfy the Mathematics Competency requirement. (Formerly numbered Academic Skills 102 and Mathematics 102.)

#### 103. Intermediate Algebra (3) Cr/NC

Prerequisites: One year of elementary algebra and completion of Mathematics Competency requirement.

Review of elementary algebra, exponents, radicals, logarithms, quadratic equations, arithmetic and geometric progressions. This course is specifically designed to prepare students for Mathematics 119, 120, 121, 140 or 250 and is not open to students with credit in Mathematics 119 or higher-numbered courses. May not be used to satisfy General Education requirements and will not count towards the bachelor's degree. (Formerly numbered Mathematics 103.)

#### 110. Writing Development (3) I, II, S Cr/NC

Sentence, paragraph, and essay writing skills. Final is writing competency examination. Students not passing exam must take Academic Skills 150. Open to students who have not satisfied the Writing Competency requirement. Credit earned in this course not applicable to a bachelor's degree or General Education. (Formerly numbered Academic Skills 100.)

#### 111. Reading Development (3) I, II Cr/NC

Two lectures and two hours of laboratory.  
Improvement of individual reading effectiveness: speed and comprehension, reading for the main idea, skimming, scanning, and word power. Credit earned in this course not applicable to a bachelor's degree.

#### 131. Fundamentals of English for International or Bilingual Students (3) I, II Cr/NC

A first course in English intended to develop speaking and listening abilities and elementary reading and writing skills. Satisfactory completion of this course qualifies a student to take Academic Skills 132, or, at the discretion of the instructor, Academic Skills 133. Credit earned in this course not applicable to a bachelor's degree.

#### 132. English for International or Bilingual Students (3) I, II Cr/NC

One lecture and four hours of laboratory.

Intermediate course in English with emphasis on the listening, reading, and writing skills necessary for academic study. Satisfactory completion of this course qualifies a student to take Academic Skills 133. Credit earned in this course not applicable to a bachelor's degree.

#### 133. English for International or Bilingual Students (3) I, II Cr/NC

One lecture and four hours of laboratory.

Advanced listening, reading, writing and research skills. Use of study materials from several academic disciplines; writing of a short research paper in the student's area of interest.

Credit earned in this course not applicable to a bachelor's degree.

#### 141. 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. Courses from this series are not applicable toward bachelor's degree credit.

- |                    |                         |
|--------------------|-------------------------|
| A. Speed Reading   | E. Grammar              |
| B. Vocabulary      | F. Research Paper       |
| C. Spelling        | G. Communication Skills |
| D. Learning Skills | H. Research Tools       |

#### 143. Adjunct Writing: Selected Topics (1) Cr/NC

Instruction in basic writing skills required of a particular discipline. Writing assignments in this course will be coordinated with those from designated lower division courses in selected disciplines; students will learn to refine papers for mechanics, rhetoric, and style within the context of the specified discipline. See Class Schedule for specific content.

#### 150. Writing Development (3) I, II, S Cr/NC

Open only to students failing Academic Skills 110 final. Review of basic writing skills at the sentence, paragraph, and essay levels. Credit in this course satisfies the University Writing Competency requirement. Credit earned in this course not applicable to a bachelor's degree or General Education.

#### 151. Technical Writing (3) Cr/NC

A comprehensive course in preparing and writing technical papers and reports. Emphasis on style, organization and techniques used in composing scientific and technical communications. Analysis of technical publications and the variety of methods used in compiling data and presenting graphic material.

#### 296. Experimental Topics (1-3) Cr/NC

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.



## Aerospace Studies

In the College of Professional Studies and Fine Arts

### Faculty

Chair: Merino

Professor: Merino

Assistant Professors: Borja, Messina, Weber

### 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. Cadets participate in dialogues, problem solving, and other planning activities designed to develop leaders and managers. All course work is done on campus with the exception of the Field Training Unit conducted at an active Air Force base and the Flying Instruction Program conducted at a local civilian flying school.

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 an average of 2.0 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 are trained in the use of weapons, drill and ceremonies, and observe selected Air Force units perform everyday operations. Upon completion of the 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 immediately upon 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. The last two years of ROTC (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, 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 commissioned by age 35 are also eligible for the program.

### Flight Instruction and Pay

The Flight Instruction Program (FIP) is offered to qualified junior cadets who have been selected to enter pilot training when reporting for active duty. The cost of the flight training is paid by the Air Force. Instruction is divided between class work taught on the campus and flying training conducted by a civilian contractor in the area.

Cadet retainer pay of \$100 per month is given for 20 months of the program. Cadets receive approximately \$400 during the Field Training Unit and are reimbursed for the cost of travel to and from the unit. Students may apply for ROTC-sponsored scholarships.

### 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.

### LOWER DIVISION COURSES

#### 100A-100B. The Air Force Today (2-2)

Semester I: Functions of the U.S. 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 (2-2)

Semester I: Development of air power from balloons and dirigibles through the peaceful employment of U.S. 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)

Required for advanced cadets, military orientation and flight familiarization. Credit granted for six-week field training camp through the Extension Division on basis of individual student application with approval of the Aerospace Studies department chair. (Formerly numbered Aerospace Studies 333-S.)

### UPPER DIVISION COURSES

(Intended for successful ROTC 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.

#### 350A-350B. Leadership Laboratory (1-1)

Two hours of laboratory per unit.

Prerequisite: Concurrent registration in Aerospace Studies 300A-300B.

Demonstration laboratory designed to develop leadership and management skills, problem-solving skills, and exercise group planning, organizing and coordinating activities.

#### 400A-400B. National Security Forces in 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.

#### 450A-450B. Leadership Laboratory (1-1)

Two hours of laboratory per unit.

Prerequisite: Concurrent registration in Aerospace Studies 400A-400B.

Demonstration laboratory designed to develop leadership and management skills, problem-solving skills, and exercise group planning, organizing and coordinating activities.

#### 499. Special Study (1-3) I, II

Prerequisite: Consent of Aerospace Studies Department chair.

Individual study. Maximum credit six units.



## Afro-American Studies

In the College of Arts and Letters

### Faculty

Chair: Weber

Professors: Chambers, Kornweibel, Meadows

Associate Professors: Karenga, Scarborough, Thomas, Weber

### Offered by the Department

Major in Afro-American studies with the A.B. degree in liberal arts and sciences.

Minor in Afro-American studies.

### 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 A.B. Degree in Liberal Arts and Sciences

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."

A minor is not required with this major.

**Preparation for the Major.** Afro-American Studies 101, 286; three units selected from 102, 140, 230, 231, 232, 250; and three units selected from 170A, 170B, 180 or 260. (12 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 six units of Afro-American Studies 496 and 12 units selected from one of the following areas and six units from the remaining two areas.

Area I. Afro-American Studies 330, 331, 360, 445 and 451.

Area II. Afro-American Studies 363, 460, 461, 470 and 480.

Area III. Afro-American Studies 362, 470, 471A and 471B.

## 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.

### LOWER DIVISION COURSES

#### 101. Introduction to Afro-American Studies (3) I

Interdisciplinary introduction that examines development and scope of subject matter orientation of Afro-American studies through analysis of major dimensions of Black experience.

#### 102. Afro-American Lifestyles (3) 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: Completion of English Placement Test and Writing Competency requirements. (See Graduation Requirements, I: Competency Requirements, section of this catalog.) PROOF OF COMPLETION OF COMPETENCY PREREQUISITE REQUIRED. Student to bring to first class meeting evidence of **one** of the following: Test score of 44+ on SAT/TSWE or 18+ on ACT or 7 essay and 150+ total on EPT or proof of having passed the final examination in Academic Skills 110 or credit for Academic Skills 150.

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 requirements.)

#### 180. Afro-American Music (3) I, II

Afro-American Music from its African roots to present. Consideration of musical styles, events, significant contributors as well as role of socio-cultural variables in development of music.

#### 200. Intermediate Expository Writing and Research Fundamentals (3) I, II

Prerequisites: Completion of English Placement Test and Writing Competency requirements and satisfactory completion of Afro-American Studies 120 or English 100 or Linguistics 100 or Mexican-American Studies 111B. PROOF OF COMPLETION OF COURSE AND COMPETENCY PREREQUISITES REQUIRED.

Development of intermediate expository writing skills and application of practical research principles.

#### 220. Politics and Economics of Urban Development (3)

Prerequisite: Afro-American Studies 101.

Political, economic, and other social implications of urban development, decay and renewal and context within which they occur or are undertaken. Analysis of specific programs and projects.

#### 230. Ethnicity and Black Social Competence (3) I, II

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.

#### 231. Cultural Patterns and Black Identity (3) I, II

An analysis of institutions in society and their socializing effect upon Afro-Americans, and the cultural parameters that guide behavior.

#### 232. Social Analysis From a Black Perspective (3)

Prerequisite: Afro-American Studies 101 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) I, II

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.

#### 260. Introduction to Afro-American Literature (3) I, II

Modern and contemporary writing of Black-American authors. The sociopolitical impact the literature has had upon the Afro-American culture.

#### 286. Statistics and Research (3) I

Prerequisite: Academic Skills 103 or qualification on the Mathematics Placement Examination.

Fundamentals of research and statistics as used for writing reports, papers, books.



**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. Organizational Management of Urban Low-Income Neighborhoods (3)**

Prerequisite: Afro-American Studies 101.

Examination of relevant approaches to administration and management in relation to the acquisition of skills for the analysis, development, and management of urban programs in low-income neighborhoods.

**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) I**

Prerequisites: Afro-American Studies 101 and 102.

Images of Black women in America and how those images have been distorted.

**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) I, II**

Prerequisite: Afro-American 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 Afro-American Studies.

Social and cultural function 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.

**380. Blacks in the American Justice System (3)**

Interpretation and application of constitutional principles and judicial decisions to political and social problems faced by Afro-Americans.

**445. Ethnicity and Social Psychology (3)**

Prerequisite: Afro-American Studies 101 or 250.

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) I, II**

Prerequisite: Afro-American Studies 250.

Attitude values and decision making of Black people as consumers. Laws and techniques of manipulating consumers.

**452. Race Relations Strategies (3)**

Prerequisite: Afro-American Studies 101 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: Afro-American 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) I, II**

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. Afro-American Literature (3) I, II**

Prerequisite: Afro-American Studies 101 or 260.

Contemporary writings of Afro-Americans. Analysis of themes, techniques, etc., of Afro-American fiction, poetry and drama.

**470. Comparative History: Afro-American and African Heritage (3) I, II**

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; antislavery 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.

**480. History of Afro-American Jazz (3) I, II**

Prerequisite: Afro-American Studies 101 or 180.

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.

**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

### Faculty

Chair: Trafzer  
Professor: Trafzer  
Associate Professor: Fixico, D.  
Lecturer: Fixico, M.

### Offered by American Indian Studies

Minor in American Indian studies.  
Courses in American Indian studies.  
Major work in American Indian studies is not offered.

### 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.

#### LOWER DIVISION COURSES

##### 110. American Indian Heritage (3) I, II

American Indian experience and their interpretations of the natural forces of nature from European contact to modern times.

##### 200. American Indian Literature (3) I, II

Introduction to American Indian literature: creation and origin stories, legends, and poetry from the oral tradition to contemporary American Indian authors.

##### 215. American Indian Psychological Perceptions (3) II

Topics relating to the dynamics of intercultural relations as reflected in the various levels of culture clash.

##### 255. American Indian Music (3) I, II

Survey of American Indian music and the culturally diverse elements that differentiate musics of North American tribes and culture groups. Traditional forms of study and investigation contrasted and compared with cultural elements as they relate to traditions.

##### 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)

##### 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.

##### 320. American Indians in Contemporary Society (3) I, II

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

American Indian literatures, focusing on selected tribal traditions. Relationship between oral traditions and contemporary American Indian poetry and fiction explored in works of Welch, Ortiz, Momaday, Silko 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

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

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. Topics will be announced in the class schedule. 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

### 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: Lewin (Political Science)

Advisers: Kushner (History), Lewin (Political Science), Redding, R. (English and Comparative Literature)

Committee: Berge (History), Colston (Center for Regional History), Ford (Geography), Keller (English and Comparative Literature), McLeod, D. (English and Comparative Literature), Shaw (Teacher Education), Vartanian (History), Wall (English and Comparative Literature)

### Offered by American Studies

Master of Arts degree in American studies.

Major in American studies with the A.B. degree in liberal arts and sciences.

Minor in American studies.

### 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 A.B. 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."

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.

**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 360 or 580; 499, 501; and nine courses from one of the following clusters or a specially designed cluster.

In each of the clusters, the student will normally take two courses in each of three areas of focus and three courses in one area. 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.

### Cultural Pluralism

#### People: Ethnic Community

Sociology 325 and one of the following: Afro-American Studies 471B, American Indian Studies 440, Anthropology 446, Mexican-American Studies 320 or 350B.

#### Process: Development of Identity

Afro-American Studies 362 or 461, Geography 356, Mexican-American Studies 335, Music 344, Political Science 531, Sociology 422 or 547, Women's Studies 352 or 453 (when American in content).

#### Place: The City

Economics 458, Geography 354 or 555, History 543B, Mexican-American Studies 303, Political Science 522 or 523, Public Administration 512, Sociology 557.

#### Period: 1840 to the Present

No more than one course in each discipline.

English 521, 523, 524, 525, 527, 528 (when appropriate); History 534, 535A, 541B, 548B; Women's Studies 341B or 430.

**Special Study:** American Studies 499.

### Cultural Institutions and Artifacts

#### People: The Family

Afro-American Studies 331, Family Studies and Consumer Sciences 436, Mexican-American Studies 320, Sociology 536.

#### Process: Material Culture

Anthropology 302; Art 347, 550; Family Studies and Consumer Sciences 345; Geography 354B, 356; Natural Science 333.

+ Museum Internship when available.

#### Place: The Southwest

No more than one course in each discipline.

History 537B, 538A, 538B, 541A, 541B, Mexican-American Studies 320, 335, 350A, 350B, 376.

#### Period: Colonial

No more than one course in each discipline.

Anthropology 441, 446; English 521; History 530, 531, 543A, 548A.

**Special Study:** American Studies 499.

### American Communication

#### People: Decision Makers

Economics 370; History 496; Management 356; Political Science 335, 522, 531, 536; Public Administration 520; Sociology 521; Women's Studies 430.

#### Process: Communications

No more than one course in each discipline.

Afro-American 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 545, 546; 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 430.

**Special Study:** American Studies 499.



**Majority American Goals and Values****People: The Middle Class**

Art 560, History 548B, Political Science 531, Sociology 521, Women's Studies 430.

**Process: Tradition and Change in the Evolution of American Goals and Values**

No more than one course in each discipline.

Economics 474; Education 383; English 525; Geography 356; History 435, 545A, 545B, 548A, 548B; Management 356, 456; Philosophy 564; Political Science 335, 345, 346, 348; Sociology 424, 537, 546, 547.

**Place: United States**

English 521, 523, 524, 525, 527; Geography 371; 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 360, 580; Art 560; English 522, 523.

**Social Sciences:** Anthropology 444; Economics 338; Geography 354; Political Science 305; Sociology 424.

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. In designing their American studies minor program, students may not include courses drawn from their major department.

**LOWER DIVISION COURSES****201. Introduction to American Culture (3) I, II**

Emphasizes the concept of culture as matrix 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)****360. Science, Technology and American Culture (3)**

Effects of scientific theories and practical technologies on the growth and character of American culture. From Jefferson and Franklin to smashing of atoms and space explorations, how science and technology have influenced American values, environment, arts, politics, and national identity.

**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.

**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 critical methods of the field, the variety of materials for interdisciplinary study.

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

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



## Anthropology

In the College of Arts and Letters

### Faculty

Emeritus: Anderson, Ezell, Rogers  
Chair: Leach  
Professors: Ball, Bartel, Goldkind, Henry, Leach, Lippold, Pendleton, Rohrl, Watson, Whitney  
Associate Professors: Greenfeld, Himes, Moore, Rollefson  
Assistant Professor: Sonek

### Offered by the Department

Master of Arts degree in anthropology.  
Major in anthropology with the A.B. degree in liberal arts and sciences.  
Minor in anthropology.

### 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.

## Anthropology Major

### With the A.B. 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.

### Basic Requirements for All Students

**Preparation for the Major.** Anthropology 101, 102. (Six 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 with a grade of C (2.0) or better.

**Major.** A minimum of 33 upper division units in Anthropology to include Anthropology 301, 302, 304, 305, 396W and 18 upper division units of electives selected from one of the following areas:

#### (a) General Anthropology

**Major (continued).** Six units selected from each of the following categories: (a) Anthropology 406, 500-509; (b) Anthropology 470-483, 560, 561A, 561B; (c) Anthropology 350, 410, 420-452, 520, 531, 532.

Anthropology 496, 499, 582 and 583 may be used in any category when subject is appropriate.

#### (b) Biocultural

**Major (continued).** Eighteen units selected from Anthropology 406, 483, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509.

Anthropology 496, 499, 582 and 583 may be used when subject is appropriate.

#### (c) Archaeology

**Major (continued).** Eighteen units selected from Anthropology 351, 470, 471, 472, 474, 476, 478, 481, 483, 560, 561A, 561B, 562.

Anthropology 496, 499, 582 and 583 may be used when subject is appropriate.

#### (d) Sociocultural

**Major (continued).** Nine units selected from Anthropology 350, 410, 420, 422, 424, 426, 428, 429, 432, 433, 439, 520, 531, 532. Nine units selected from Anthropology 440, 441, 442, 443, 444, 445, 446, 448, 449, 450, 452.

Anthropology 496, 499, 582 and 583 may be used when subject is appropriate.

## 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:

**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, and 509.

**Prehistory:** Anthropology 101 and 302 and nine units selected from Anthropology 470, 471, 472, 474, 476, 478, 481, 483, 496 (if appropriate), 499, 561A, 561B.

**Sociocultural:** Anthropology 102 and 350 and nine units selected from Anthropology 305, 424, 426, 428, 429, 439, 496 (if appropriate), 520, 532.

**Linguistics:** Anthropology 102, 304 and 410 and six units selected from Anthropology 305, 350, 496 (if appropriate), 499, 582, 583.

**General:** Anthropology 101, 102 and nine units selected from 301, 302, 304, 305.

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.

### LOWER DIVISION COURSES

#### 101. Human Biocultural Origins (3) I, II

Man's place in nature; fossil evidence for hominid evolution; evolutionary theory; racial, clinical and genetic variability; relationship of physical and cultural adaptations; the rise of civilization.

#### 102. Introduction to Cultural Anthropology (3) I, II

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.

#### 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.

#### 305. History of Anthropological Theory (3) I, II

Prerequisite: Anthropology 102.

Development of theories which lie behind the science of anthropology. Applications of the theory of culture to field methods and interpretation of findings.



**350. World Ethnography (3)**

Prerequisite: Anthropology 102.

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 non-industrial peoples.

**396W. Writing of Anthropology (3)**

Prerequisites: Anthropology 101 and 102.

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. 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.

**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)**

Prerequisite: Anthropology 102.

Survey of anthropological interests in the study of language and of linguistic interests in the sociocultural context of language.

**420. Cross-Cultural Mythology (3)**

Prerequisite: Anthropology 102.

Mythological motifs and traditions. How mythological accounts of gods, heroes, origins, explanations and other mythological themes relate to economic, social and political aspects of culture in societies around the world.

**422. Music and Culture (3)**

Prerequisite: Anthropology 102.

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)**

Prerequisite: Anthropology 102.

Beliefs and ritual of primitive man. Magic and religion. Forms of animism and polytheism. Primitive mentality and the supernatural.

**426. Cultural Change and Processes (3)**

Prerequisite: Anthropology 102.

The individual and the culture pattern: the acquisition of culture, innovation and invention, direction of cultural development, diffusion and interpenetration of cultures. Illustrations from contemporary and historic peoples: Indians of the Southwest, Eskimos, aboriginal groups of Australia, Africa and Oceania.

**428. Ecological Anthropology (3)**

Prerequisite: Anthropology 102.

Biological and cultural interactions with the environment in relation to adaptations of human populations. Examples from a worldwide sample of societies.

**429. Urban Anthropology (3)**

Prerequisite: Anthropology 102.

Cultural roles of urban centers and processes of urbanization in non-Western, nonindustrial societies of past and present. Urban influence of traditional peasant and primitive peoples of Africa, Asia, and Latin America.

**432. Principles of Personality in Culture (3)**

Prerequisite: Anthropology 102.

Principles related to the determinants of human behavior contained in culture. Studies of behavior cross-culturally.

**433. Cross-Cultural Cosmology (3)**

Prerequisite: Anthropology 102.

Cultural perception and expression of the nature and origin of the universe, humanity and peoples' operative capabilities. American Indian, African, Asian and other societies' cosmologies compared and applied to contemporary American issues and progress.

**434. Anthropology Through Science Fiction (3)**

Prerequisite: Anthropology 101 or 102.

Anthropological concepts of biological and social evolution, relativism, and ethnocentrism and adaptation through Asimov, Clarke, Heinlein, Herbert, LeGuin and other popular science fiction writers.

**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)**

Prerequisite: Anthropology 102.

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)**

Prerequisite: Anthropology 102.

Native cultures and the role of environmental and historical factors in North America.

**446. Southwestern Ethnology (3)**

Prerequisite: Anthropology 102.

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)**

Prerequisite: Anthropology 102.

The aboriginal cultures and peoples of Australia, Melanesia, Micronesia, and Polynesia in prehistoric, historic, and modern times.



**449. Cultures of Sub-Saharan Africa (3)**

Prerequisite: Anthropology 102.

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)**

Prerequisite: Anthropology 102.

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)**

Prerequisite: Anthropology 102.

Culture and social organization of Japanese people. Traditional Japanese economic, social, political and religious institutions. Korea, Okinawa and overseas Japanese. Recent industrial and urban changes in modern Japan.

**470. Prehistory of South America (3)**

Prerequisite: Anthropology 101 or 102.

Development of native South American cultures from initial occupation to the 16th century. Emphasis on major historical trends, particularly of the Andean area.

**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.

**476. Ancient Civilizations of Mexico and Central America (3)**

Prerequisite: Anthropology 101 or 102.

General overview and selected topics in prehistory of Mexico and Central America from rise of Olmec civilization to Aztec times. Emphasis on Olmec, Maya, Teotihuacan, Zapotec, Mixtec, and Toltec peoples' cultures.

**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. 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. Paleanthropology (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. Ethnological 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.

**531. Applied Anthropology (3)**

Prerequisite: Anthropology 102. Recommended: Anthropology 426.

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

**532. Culture and Personality (3)**

Prerequisite: Anthropology 102.

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 101 or 102.

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

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

Two lectures and three hours of laboratory.

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

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

**562. Ethnoarchaeology (3)**

Prerequisite: Anthropology 302.

Theoretical perspective and method for analyzing contemporary societies in order to acquire archaeological insight of behavioral patterning. Survey of experiments duplicating technology of the past. Worldwide ethnographic examples. (Formerly numbered Anthropology 482.)

**582. Regional Anthropology (3)**

Prerequisite: Anthropology 102.

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

**583. Topical Anthropology (3)**

Prerequisite: Anthropology 102.

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

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**Art****In the College of Professional Studies and Fine Arts**

The Department of Art is a Member of the  
National Association of Schools of Art and Design.

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, Bowne, Dirks, Higgins, Hodge, Jackson, Longenecker, Sorenson, Swiggett

Chair: Orth

Professors: Austin, Berg, Covington, Esser, Fisch, Groover, Hopkins, Hunter, Lingren, Miller, Orth, Ray, Rigby, Rogers, Shirk, Tanzer, Wallace

Associate Professors: Baker, R., Cotten, Dominguez, Dumlaio, Frick, Mansfield, Papworth, Perczel, Roberts, Sherman

Assistant Professors: Flaxman, Hayakawa, Moaney, Yasuda

Lecturers: Komac, Nakamura, Schamu, Smith, Tibbs

**Offered by the Department**

Master of Arts degree in art.

Master of Fine Arts degree in art.

Major in art with the A.B. degree in liberal arts and sciences.

Emphasis in art history.

Emphasis in studio arts.

Major in art with the A.B. 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 and printmaking.

Emphasis in sculpture.

Teaching major in art for the single subject teaching credential.

Minor in art.

Minor in art history.

**Art Major****With the A.B. 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."

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**

**Preparation for the Major.** Art 158, 258, 259, 264 and 265. (15 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 101, 102, 201, and 202; French 100A, 100B, 200A, and 200B; or by passing the French Modern Language Association examination which is administered by the Test Office during the second week of each semester (contact French Department for permission to take this examination); or by receiving a passing score on the Graduate School Foreign Language Examination in either French or German.

**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 history, selected from Art 365, 366, 371, 557 through 577, and 590, to include at least one three-unit course from each of the five groups listed below:

*Ancient and Medieval Art:* Art 371, 567, 568

*Renaissance and Baroque Art:* Art 562, 573, 574, 575

*Modern Art and American Art:* Art 557, 558, 560

*Native American, African and Oceanic Art:* Art 561, 569, 570, 576

*Byzantine, Islamic and Indian Art:* Art 365, 366, 572

#### Emphasis in Studio Arts

**Preparation for the Major.** Art 100, 101, 102, 103, 157, 203, 204, 216, 258 and 259; Philosophy 101. (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, 500, 557; Philosophy 541; and nine units selected with the approval of the adviser from Art 371, 405, 406, 416, 499, 502, 505, 506, 509, 516, 572, 573 and 574.

## Art Major

### With the A.B. 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."

The major in art may be planned with an emphasis in applied design, graphic design, interior design, environmental design, painting and printmaking, or sculpture. 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 and printmaking 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, enameling, furniture design, jewelry, metal smithing, textile design and weaving.

A minor is not required with this major.

#### Emphasis in Applied Design

**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 24 upper division units in art to include nine units selected from three of the areas listed below, and three units of extended work in one of the selected areas; six units of art electives; and six units of art history. Twelve units of advanced work in one area are strongly recommended.

*Fiber:* Art 334, 435, 436, 534, 535, 536

*Metal:* Art 331, 431, 531, 532

*Clay:* Art 325, 425, 525, 526

*Enamel:* Art 429, 529 (9 units)

*Wood:* Art 323, 423, 523

#### Emphasis in Environmental Design

**Preparation for the Major.** Art 100, 101, 102, 103, 247, 248, 249, 250, 251, 258, 259; and three units selected from Art 216, 220, 225. (36 units.) Recommended: Art 205, 234, 241; Family Studies and Consumer Sciences 245; Industrial Arts 121.

**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 450, 454, 547, 550, 577; six units selected from Art 323, 348, 381, 416, 451, 453, 481, 552, 581; and three additional units of art history.

#### Emphasis in Graphic Design

**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

**Preparation for the Major.** Art 100, 101, 102, 103, 247, 248, 249, 250, 251, 258, 259; and three units selected from Art 216, 220, 225, 234, 241, Drama 240, Engineering 210, and Family Studies and Consumer Sciences 245. (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 29 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, 348, 450, 547, 577; and three additional units of art history.

#### Emphasis in Painting and Printmaking

**Preparation for the Major.** Art 100, 101, 102, 103, 203, 258, 259, and six units selected from Art 204, 205 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, 410, 411, 500, 502, 503, 504, 505, 506, 509, 510, 511, 512.

#### Emphasis in Sculpture

**Preparation for the Major.** Art 100, 101, 102, 103, 216, 258, 259; and three units selected from Art 203, 204, 217, 220, 225, 231, 234. (24 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 or 517, 498A, 516; six units of art history; and nine units selected from Art 323, 331, 403, 404, 500.

## Art Major

### For the Single Subject Teaching Credential

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

This major may be used by students in teacher education as an undergraduate major for the A.B. 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, 429, 435, 586; six units of art history from among courses numbered Art 365-371, 557-577, and 590; and six units selected from Art 425, 431, 504, 505, 529, and 535. (33 units.)



## Art Minor

The minor in art consists of a minimum of 21 units in art, 12 units of which must be in upper division courses in one emphasis area, as listed in the art majors. The courses must be selected in consultation with an emphasis area 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.

## Art History Minor

The minor in art history includes a minimum of 18 units in art, 12 units of which must be in upper division, selected from one of the following areas:

**Western Tradition:** Art 258, 259, and 12 units selected from Art 371, 557, 558, 562, 568, 573, 575.

**Non-Western Tradition:** Art 158, 264, 265, and 12 units selected from Art 365, 366, 569, 570, 572.

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.

### LOWER DIVISION COURSES

#### 100. Drawing and Composition (3) I, II

Six hours.

The ordering of two-dimensional space through drawing.

#### 101. Design and Aesthetics (3) I, II

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)

Six hours.

Prerequisite: Art 101.

Introduction and investigation of design and theory, and practice in three dimensions.

#### 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)

Introduction to tribal arts of Native America, Sub-Saharan Africa and Oceania in cultural context, from ancient to contemporary period. Arts of diverse peoples living in small-scale societies are included. Field trips.

#### 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

Six hours.

Prerequisites: Art 101, 102.

Pictorial composition and techniques of painting. Maximum credit six units.

#### 205. Waterbase Media (3) I, II

Six hours.

Prerequisites: Art 101, 102.

Composition of still-life and landscape in aqueous media. 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

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. Ceramics (3) I, II

Six hours.

Prerequisite: Art 103.

Design and construction of hand-built 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, 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.

Creative projects exploring the interrelation of fundamental art principles and design using phonetic symbols and typography.

#### 242. Graphic Design Visual Techniques (3) I, II

Six hours.

Prerequisite: Art 241.

Rendering techniques of figures and objects as applied to graphic design.

#### 243. Intermediate Graphic Design (3) I, II

Six hours.

Prerequisite: Art 241.

Typographic and design concepts applied to layout for contemporary media.

#### 247. The House and Its Environment (3) I, II

Architecture, interior design, landscape and city planning for forming man's physical and aesthetic environment.

#### 248. Visual Presentation (3) I, II

Six hours.

Prerequisites: Art 102 and 103.

Methods, materials, and tools of the professional environmental designer stressing art principles.



**249. Visual Presentation (3) I, II**

Six hours.

Prerequisite: Art 248.

Methods, materials, and tools of the professional environmental designer stressing art principles.

**250. The Contemporary House (3) I, II**

Six hours.

Prerequisite: Art 248.

Elementary problems in neighborhood planning, house design, and landscaping.

**251. Interior Design I (3) I, II**

Six hours.

Prerequisites: Art 102, 103.

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**

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**

The period from the Renaissance through the modern school treated in the same manner as in Art 258.

**264. Chinese Art (3) I**

A study of the arts of China.

**265. Japanese Art (3) II**

A study of the arts of Japan.

**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) II**

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. Ceramics (3) I, II**

Six hours.

Prerequisite: Art 220. Art 225 recommended.

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. Advanced Graphic Imagery (3) I, II**

Six hours.

Prerequisite: Art 240.

Investigation of experimental photographic and technical reproductive media.

**341. Graphic Design (3) I, II**

Six hours.

Prerequisite: Art 243.

Investigation of design concepts relating to advertising.

**347. The House and Its Environment (3) I, II**

Architecture, interior design, landscape and city planning for forming man's physical and aesthetic environment, its simplicities and complexities. Not open to students with credit in Art 247.

**348. Environmental Media (3)**

Six hours.

Prerequisite: Art 249.

The communication of Environmental Design using photography, miniatures, mockups, and transfers with terminal emphasis in transparency projection.

**352. Professional Lectures in Interior Design (2) I, II**

Prerequisites: Art 250, 251.

Interior designers lecture on varied topics in successful professional practice to include codes, legal liabilities, contractual agreements, project management. Design requirements for specific project types include restaurants, medical and health facilities, financial institutions. Occasional field trips required. Maximum credit four units.

**365. The Art of Persia and the Islamic World (3) I**

Prerequisite: Upper division standing.

Painting, architecture and sculpture and minor arts of Persia and the Islamic world which manifest cultural history and heritage. Field/museum trips. (Formerly numbered Art 566.)

**366. The Art of India and Southeast Asia (3) II**

Prerequisite: Upper division standing.

Painting, architecture and sculpture of India and Southeast Asia viewed through their cultural history and aesthetic values. Field/museum trips. (Formerly numbered Art 565.)

**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. (Formerly numbered Art 571.)

**381. History and Theory of Environmental Design (3) Irregular**

Prerequisites: Art 258, 259.

Environmental arts. From earliest times to the 15th century.

**387. Design for Teachers (3)**

Six hours.

Prerequisite: Art 101.

A design-crafts course that explores in depth materials and processes that could be used with young people. Not open to students with credit in Art 220.

**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.

Pictorial composition and painterly process. Maximum credit six units.

**405. Intermediate Waterbase Media (3) I, II**

Six hours.

Prerequisites: Art 101 and 102. Art 204 or 205 recommended.

Composition in watercolor and related media.



**406. Design and Composition (3) I, II**

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.

Prerequisites: Minimum of 12 units of art and consent of instructor.

Basic to intermediate photo and darkroom techniques combined with independent research in contemporary art and photography. Criticism in context of contemporary. Maximum credit six units.

**410. Intaglio Printmaking (3) I, II**

Six hours.

Prerequisites: Art 203, 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

B. Plastic sculpture

C. Foundry/metal sculpture

D. Cellulose sculpture (handmade paper/wood/fiber)

**423. Advanced Furniture Design (3) I, II**

Six hours.

Prerequisite: Art 323.

Advanced individual design: Exploration of materials, process and function. Maximum credit nine units.

**425. 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.

**429. Design in Enamels (3) I, II**

Six hours.

Prerequisite: Art 220.

Design and production of vitreous enamels. Maximum credit six units.

**431. Jewelry and Metalwork (3) I, II**

Six hours.

Prerequisites: 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, silkscreen, 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)**

Six hours.

Prerequisite: Art 341.

Application of visual design concepts to graphic design, advertising media and technical reproductive processes.

**443. Drawing and Illustration for Graphic Design (3)**

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) I, II**

Six hours.

Prerequisite: Art 341.

Experimental, creative and practical exploration of contemporary communication as related to magazine and editorial layout. Production of a student designed limited edition.

**445. Internship in Graphic Design (3) I, II Cr/NC**

Prerequisite: Art 441.

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)**

Six hours.

Prerequisites: Art 249, 454.

Synthesis of materials, space, sound and light using exploratory methods in full scale projects.

**451. Interior Design II (3) Irregular**

Six hours.

Prerequisites: Art 249, 250, 251.

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) Cr/NC**

Nine hours of laboratory.

Prerequisite: Art 453.

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)**

One lecture, two hours of activity, and three hours of laboratory.

Prerequisites: Art 249, 250, 251.

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.

Prerequisite: Art 247.

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) II**

Prerequisites: Art 258 and 259.

Environmental arts. From the 15th to the 19th century.



**483. Museum Internship (1-6) I, II 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. 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. 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) I, II**

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.

Pictorial composition and painterly process. Maximum credit six units.

**505. Advanced Waterbase Media (3) I, II**

Six hours.

Prerequisite: Art 405.

Composition in watercolor and related media.

**506. Design and Composition (3) I, II**

Six hours.

Prerequisite: Art 406.

Structure in picture making.

**509. Relief Printmaking (3) I, II**

Six hours.

Prerequisites: Art 203, 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)**

Six hours.

Prerequisite: Art 410.

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

**511. Lithography Printmaking in Color (3)**

Six hours.

Prerequisite: Art 411.

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

**512. Serigraphy (3)**

Six hours.

Prerequisites: Art 203, 210.

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

**516. Advanced Sculpture (3) I, II**

Six hours.

Prerequisite: Art 416.

Individual investigations into sculpture ideas, methods and materials. Individual development in sculpture. Maximum credit six units for Art 516.

A. Ceramic sculpture

B. Plastic sculpture

C. Foundry/metal sculpture

D. Cellulose sculpture (handmade paper/wood/fiber)

**517. Advanced Figurative Sculpture (3) I, II**

Six hours.

Prerequisites: Art 216 and 217.

Figurative study with emphasis on individual exploration. Maximum credit six units.

**522. Design Crafts (3) Irregular**

Six hours.

Prerequisite: Art 220.

Exploration of a variety of materials and techniques. Development of the aesthetic and technical abilities of the artist craftsman. Maximum credit six units.

**523. Advanced Furniture Design (3) I, II**

Six hours.

Total credit in Art 323, 423 and 523 limited to twelve units.

Prerequisite: Art 423.

Advanced individual design; exploration of materials, process and function. Maximum credit six units.

**525. Ceramics (3) I, II**

Six hours.

Prerequisite: Art 425.

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

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

Six hours.

Prerequisite: Art 425.

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



**529. Design in Enamels (3) I, II**

Six hours.

Prerequisite: Art 429.

Design and production of vitreous enamels. Maximum credit nine units; six units applicable on a master's degree.

**531. 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) II**

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.

Total credit in Art 234, 334 and 534 limited to nine units.

Prerequisite: Art 334.

Advanced individual problems in weaving. Maximum credit six units.

**535. Advanced Nonwoven Textile Construction (3)**

Six hours.

Prerequisite: Art 435.

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

**536. Advanced Textile Design (3) I, II**

Six hours.

Prerequisite: Art 436.

Application of design for the textile surface, appropriate for both the individual designer and commercial reproduction. Maximum credit six units.

**540. Advanced Graphic Imagery (3) I, II**

Six hours.

Prerequisite: Art 340.

Investigation of experimental photographic and technical reproductive media.

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

Six hours.

Prerequisite: Art 341.

Symbolic processes, materials and structures, visual communications systems relating to corporate and visual identification programs. Maximum credit six units.

**542. Advanced Professional Problems in Graphic Design (3)**

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. Visual Communication Media (3) I, II**

Six hours.

Prerequisite: Art 444.

Experimental, creative and practical exploration of contemporary communication as related to magazine and editorial layout. Production of a student designed limited edition.

**547. Environmental Theory (3)**

Prerequisites: Art 247 or 347.

Survey of alternative solutions to the problem of design of the physical environment.

**550. Environmental Prototypes (3)**

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 and 453.

Projects in architectural interiors involving the use and perception of enclosed spaces. Space planning systems analysis. Maximum credit six units. (Formerly numbered Art 554.)

**553. Interior Design V (3) I**

Six hours.

Prerequisite: Art 552.

Projects in interiors involving space planning analysis, specification writing, materials selection and furnishing design appropriate to commercial needs. Maximum credit six units.

**557. Art of the Nineteenth Century (3) I, II**

Prerequisites: Art 258 and 259.

Development of painting, sculpture, and architecture from the French Revolution to 1900.

**558. Twentieth Century European Art to 1945 (3) I, II**

Prerequisite: Art 259.

Major developments in the visual arts and art criticism from 1880 to 1945 (Post-Impressionism through Surrealism).

**559. Twentieth Century European and American Art Since 1945 (3) I, II**

Prerequisite: Art 558.

Major developments in the visual arts and art criticism since 1945.

**560. History of American Art (3) Irregular**

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) I**

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) II**

Prerequisite: Upper division standing.

Art and architecture of Latin America from the colonial period to the present. Field trips included.

**567. Art of the Ancient Near East (3) I**

Prerequisite: Art 258.

Development of painting, sculpture, architecture and crafts from prehistoric times to the fourth century B.C.

**568. Art of Crete, Mycenae, Greece, and Rome (3) II**

Prerequisite: Art 258.

Development of painting, sculpture, architecture, and crafts from prehistoric times to the fifth century A.D.

**569. Art of Sub-Saharan Africa (3) I**

Prerequisite: Upper division standing.

Form and content of the art of Sub-Saharan Africa viewed within its cultural context.



**570. Art of Oceania (3) II**

Prerequisite: Upper division standing.

Form and content of the art of Australia, Melanesia, Polynesia, and Micronesia viewed within its cultural context.

**572. Coptic and Byzantine Art (3) Irregular**

Prerequisites: Art 258 and 259.

The art of the Eastern Church from the reign of Justinian to the Russian Revolution.

**573. Renaissance Art in Italy (3) I**

Prerequisites: Art 258 and 259.

Architecture, painting and sculpture of the Renaissance period in Italy.

**574. Northern Renaissance Art (3) II**

Prerequisites: Art 258 and 259.

Architecture, sculpture, and painting north of the Alps during the Renaissance period.

**575. Baroque and Rococo Art (3) II**

Prerequisites: Art 258 and 259.

Architecture, sculpture, and painting of the Baroque and Rococo periods.

**576. Arts of Native North America (3) Irregular**

Prerequisite: 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) Irregular**

Prerequisites: Art 157, 258, 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 19th and 20th centuries.

**582. The Decorative Arts (3)**

Investigations into the arts of ceramics, enamelling, furniture, glass, jewelry, metalwork and textiles. Analyzing the aesthetic basis which determines their forms in various times and places. Field trips to museums and ateliers.

**586. Art Practicum Seminar (3) Irregular**

Prerequisites: Twenty upper division units in art and concurrent assignment to student teaching.

Discussion, readings, and research study related to art presentation strategies.

**590. Principles and Elements of Visual Aesthetic Organization (3) Irregular**

Three hours.

Prerequisites: Art 157; or Art 258 and 259.

Visual aesthetic materials and the psychological principles involved in aesthetic organization.

**591. Gallery Exhibition Design (3) I, II**

Six hours.

Prerequisite: Fifteen units of art.

Fundamental art elements and principles applied to the theories and techniques of gallery exhibition design.

**592. Gallery Exhibition Design (3) I, II**

Six hours.

Prerequisite: Art 591.

Advanced problems in the theories and techniques of gallery exhibition design.

**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 six units. Maximum credit three units applicable to a master's degree.

**GRADUATE COURSES** Refer to the Graduate Bulletin.

## Asian Studies

In the College of Arts and Letters

### Faculty

Asian studies is administered through the Center for Asian Studies, composed of faculty members from the departments of Anthropology, Art, Classical and Oriental Languages and Literatures, Economics, English and Comparative Literature, Geography, History, Linguistics, Philosophy, Political Science, Religious Studies, and Sociology; the colleges of Business Administration, Education, Engineering, and Sciences; and the Library. Professor Thomas R. Cox is director, Professor Alvin D. Coox is graduate adviser, and Professor David V. DuFault is undergraduate adviser.

### Offered by Asian Studies

Master of Arts degree in Asian studies.

Major in Asian studies with the A.B. degree in liberal arts and sciences.

Minor in Asian studies.

### 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 A.B. 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."

**Preparation for the Major.** Six units in History 105, 106 or Philosophy 101, 102; six units in Anthropology 101, 102, Economics 101, 102, Geography 101, 102, or Political Science 101, 103; and six units in Asian Studies 105A-105B or History 120, 121. (18 units.) Art 258 and 259 (unless waived by the instructor) are needed if Art 366 is selected in the major. Art 264 and 265 are recommended.

**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. Asian language recommended. Refer to section in 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 30 upper division units to include six units selected from Asian Studies 458A-458B (not open to students with credit in Asian Studies 105A-105B), 499 or 596; from the humanities not less than 12 units from at least two departments selected from Art 366; Comparative Literature 430, 470\*, 490\*, 495\*, 571\*, 577\*, 580, 581\*; History 496\*, 561A-561B, 562, 563, 564A-564B, 565, 566, 567, 568, 569, 570, 596\*; Linguistics 496\*; Philosophy 301, 581\* and 499\*; and from the social sciences no less than 12 units from at least two departments selected from Anthropology 448, 450, 452, 481\*, 496\*; Economics 330, 336\*, 360, 365\*, 465, 489, 496\* and 499\*; Geography 331, 350, 540\*; Political Science 361, 362, 499.

\* When relevant.



## Asian Studies Minor

The minor in Asian studies consists of a minimum of 21 units to include History 120 and 121, or Asian Studies 105A-105B. Other lower division courses acceptable for the minor are Art 264 and 265, and four units of an appropriate Asian language. Twelve units must be in upper division. Upper division courses acceptable for the minor include:

**Humanities:** Not less than six units selected from History 561A-561B, 562, 563, 564A-564B, 566, 567, 568, 569, 570; Philosophy 301 (unless waived by the 575 instructor) and 575 (when relevant), 596; Religious Studies 401\*, 403\*, 506\*, 508\*.

**Social Sciences:** No less than six units selected from Anthropology 450\*; Economics 330, 465; Geography 331, 540 (when relevant); Marketing 376; Political Science 362, 499.

No more than six units may be selected from History 566, 567, 568. No more than six units may be selected from History 569, 570, and Anthropology 452. Three units from Asian Studies 499 or 596 may be substituted for three units in either Humanities or Social Sciences.

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.

\* Additional prerequisites are required for these courses.

### LOWER DIVISION COURSE

#### 105A-105B. The Asian Heritage (3-3)

An interdisciplinary course on the cultures of Southern, Southeastern, and Eastern Asia, with emphasis on the interaction of ideas, peoples and their environment.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 458A-458B. Asian Cultures (3-3)

An interdisciplinary study of the people of Southern, Southeastern, and Eastern Asia emphasizing social, cultural, economic and political aspects of Asian societies. Not open to students with credit in Asian Studies 105A-105B.

#### 499. Special Study (1-3)

Prerequisites: At least six units of upper division work completed toward the major or minor in Asian studies and the consent of the instructor.  
Individual study. Maximum credit six units.

### UPPER DIVISION COURSE (Also Acceptable for Advanced Degrees)

#### 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 six units.

### GRADUATE COURSES Refer to the Graduate Bulletin.

## Astronomy

### In the College of Sciences

#### Faculty

Emeritus: Smith

Chair: Daub

Professors: Angione, Daub, Nelson (Director of Mt. Laguna Observatory), Schopp, Young

Associate Professor: Talbert

Lecturer: Dawson

#### Offered by the Department

Master of Science degree in astronomy.

Major in astronomy with the A.B. degree in liberal arts and sciences.

Major in astronomy with the A.B. degree in applied arts and sciences.

Minor in astronomy.

## Astronomy Major

### With the A.B. 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."

**Preparation for the Major.** Astronomy 101, 109; Physics 195, 195L, 196, 196L, 197, 197L. (16 units.)

**Foreign Language Requirement.** Competency (equivalent to that which is normally attained through three consecutive semesters of college study) is required for 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 to include Astronomy 304A-304B, 312A-312B; and Physics 350A, 354A, 400A, 460. Recommended: Astronomy 520, Physics 306, 311, 350B, 510.

**Minor in Mathematics.** Students majoring in astronomy must complete a minor in mathematics to include Mathematics 150, 151, 252 and either 340A-340B, or 530. Recommended: Mathematics 531, 541A, 550.

## Astronomy Major

### With the A.B. 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."

**Preparation for the Major.** Astronomy 101, 109; Physics 195, 195L, 196, 196L, 197, 197L. (16 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 Astronomy 304A-304B, 312A-312B, 498A, 498B; and Physics 350A, 354A, 400A. Recommended: Astronomy 520; Physics 306, 311, 350B, 460, 510.

**Minor in Mathematics.** Students majoring in astronomy must complete a minor in mathematics to include Mathematics 150, 151, 252, and either 340A-340B, or 530. Recommended: Mathematics 107, 541A, 541B, 550.



## 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, 304A\*, 304B\*, 305, 312A\*, 312B\*, 520\*, Natural Science 430.

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.

\* Prerequisites for this minor include Physics 195, 195L, 196, 196L, 197, 197L, and Mathematics 150, 151, 252, unless waived by the Department.

### LOWER DIVISION COURSES

#### 101. Principles of Astronomy (3) I, II

Pursuit of insights into the fundamental nature of the naked-eye night sky, the Solar System, stars and the Galaxy, and the mysteries of the 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.

#### 112. Elementary Navigation (3) I

Compass corrections, time, line of position, use of celestial coordinates, tables such as H.O. 229 for the solution of the navigational triangle.

#### 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) I, II

Prerequisites: Three units of lower division physical science.

Einstein theory of general relativity applied to problems of gravitational collapse (stellar evolution, neutron stars, pulsars, and black holes) and cosmology (origin and evolution of the Universe).

#### 304A-304B. Advanced Astronomy (3-3)

Prerequisites: Astronomy 101 and 109 and credit or concurrent registration in both Mathematics 151 and Physics 197, 197L.

Problems in practical astronomy, such as atmospheric refraction, proper motion, photographic and photoelectric photometry, solar system astrophysics.

#### 305. Historic Development of Astronomy (3) I

A study of the more important problems and astronomical concepts in the light of their historical development. Particular attention is given to the biography and contributions of the more important astronomers, such as Galileo, Kepler, Newton, Herschel, Bessel.

#### 312A-312B. Astrophysics (3-3)

Prerequisites: Astronomy 101 and Physics 197, 197L. Astronomy 312A is prerequisite to 312B.

An application of modern physics to a study of the sun and the stellar system.

#### 498A. Senior Project (1) I

Prerequisite: An acceptable master plan for graduation within one year.

Consists of the selection and design of individual projects; oral and written progress reports.

#### 498B. Senior Project (2) II

Six hours of laboratory.

Prerequisite: Astronomy 498A.

Laboratory work, progress reports, oral and written reports.

#### 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. Solar System Astronomy (3)

Prerequisites: Astronomy 101 and Physics 197, 197L.

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

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

Prerequisite: Consent of instructor.

Selected topics in theoretical astronomy or astrophysics. May be repeated with new content upon approval of instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

### GRADUATE COURSES

Refer to the Graduate Bulletin.



## Biology

### In the College of Sciences

#### Faculty

Emeritus: Alexander, Bohnsack, Crouch, Harvey, Huffman, Kaston, Kelly, McBlair, Norland, Olson, Preston, Ratty, Taylor, Walch, Wedberg

Chair: Paolini

Professors: Atkins, Awbrey, Barnett, Baxter, Brandt, Carpenter, Chen, Clark, Cohn, Collier, B., Collier, G., Cooper, Cox, Dexter, Ebert, Estes, Etheridge, Farris, Ford, Hazen, Hunsaker, Hurlbert, Johnson, A., Johnson, G., Johnson, K., Krekorian, Krisans, Kummerow, McLean, Monroe, Moore, Neel, Paolini, Parsons, Rayle, Rinehart, Sabbadini, Schapiro, Shepard, Sloan, Steenbergen, Wilson, Zedler, J., Zedler, P.

Associate Professors: Archibald, Avila, Daugherty, Diehl, Futch, Hanscom, Hemmingsen, McClenaghan, Perrault, Phelps, Plymale, Thwaites, Weiss, Zyskind

Assistant Professors: Bernstein, Carmichael, Davis, Donoghue

Lecturers: Berta, Mathewson, Metten

#### Offered by the Department

Doctor of Philosophy degree in biology, ecology, and genetics\*.

Master of Arts degree in biology.

Master of Science degree in biology.

Master of Science degree in microbiology.

Major in biology with the A.B. 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 A.B. degree in liberal arts and sciences.

Major in microbiology with the B.S. degree in applied arts and sciences.

Curriculum in medical technology.

Single subject teaching credential in life sciences in the area of biology.

Minor in biology.

Certificate in Recombinant DNA Technology.

Curricula which prepare for the fields of dentistry, conservation, fisheries, marine biology, medicine, veterinary medicine, and wildlife management.

\* Admission to this program is closed.

## Biology Major

### With the A.B. 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 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.

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

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 200A-200B, 215; Chemistry 200, 201, and 230 or 231; Mathematics 121 and 122, or 150; Physics 180A-180B and 182A-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 A.B. degree or 36 upper division units for the B.S. degree to include Biology 352, 354, and 356; Chemistry 361A or 560A; and two additional biology laboratory courses. Additional elective courses must be selected from Biology 350-365, 452-499, and all 500-level courses; at least one of the laboratory or elective courses must be an organism-level course which include Biology 350, 462, 469, 470, 515, 524, 525, 533, and 565; Chemistry 361B and 400- or 500-level chemistry courses. All courses not included above must have prior approval by the Biology Department Chair, and the approved substitution must be filed with the Evaluations Office.

### Emphasis in Entomology

**Preparation for the Major.** Biology 200A-200B, 215; Chemistry 200, 201, and 230 or 231; Geography 103; Mathematics 121 and 122, or 150; Physics 180A-180B and 182A-182B. (41-42 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 38 upper division units to include Biology 352, 460, 462, 462L, 504, 505; 501 or 503; 502 or 586; 529 or 530; and eight or nine additional units selected in consultation with entomology adviser from above courses not already taken or from Biology 354, 500, 506, 507, 597, Chemistry 361A, or Geography 505.

## Environmental Health Major

### With the B.S. 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.

This program is approved by the California State Department of Health. Upon completion of degree requirements and one year of experience as an Assistant Sanitarian with a local public health department, the graduate will be admitted to the State of California examination for Registered Sanitarian.

**Preparation for the Major.** Biology 200A-200B; Biology 215 or Mathematics 250; Chemistry 200, 201, 230 or 231, and 250 or 251; Mathematics 121 and 122, or 150; Physics 180A-180B and 182A-182B; Psychology 101 or Sociology 101. (45-47 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 36 upper division units to include Biology 350, 464A-464B, 466, 468A-468B, 561, 586, and 589; Civil Engineering 555; Sociology 440 or Psychology 340. Remaining courses to be selected from among electives approved by the department. Prerequisites for Civil Engineering 555 are waived for students in this major.

## Microbiology Major

### With the A.B. 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.

**Preparation for the Major.** Biology 200A-200B; Biology 215 or Mathematics 250; Chemistry 200, 201, 230 or 231, 250 or 251; Mathematics 121 and 122, or 150; Physics 180A-180B and 182A-182B. (42-44 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 24 upper division units in biology courses in the area of microbiology and approved related fields to include Biology 350, 554, 554L, 585, 585L, and 352 or 556; and Chemistry 361A-361B. Remaining units to be selected from approved courses in biology, chemistry, and physics.

## Microbiology Major

### With the B.S. 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.

**Preparation for the Major.** Biology 200A-200B; Biology 215 or Mathematics 250; Chemistry 200, 201, 230 or 231, 250 or 251; Mathematics 121 and 122, or 150; Physics 180A-180B and 182A-182B. (42-44 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 36 upper division units in biology courses in the area of microbiology and approved related fields to include Biology 350, 554, 554L, 585, 585L, and 521, 521L or 589; Chemistry 361A-361B; and three of the following courses: Biology 513, 552, 556, 587. Recommended: Chemistry 310A, 310B, and 567. Remaining units to be selected from approved courses in biology, chemistry, and physics.

## Medical Technology Curriculum

### In Applied Arts and Sciences

The curriculum in medical technology, which prepares for the licensed profession of Public Health Microbiologist or Clinical Laboratory Technologist or Bioanalyst, may be obtained by taking the microbiology major with the B.S. degree, but following a modified arrangement of courses. A description of the curriculum follows:

**Public Health Microbiologist.** To fulfill academic requirements for the certification examination given by the California State Department of Public Health for Public Health Microbiologist, students should follow the major in microbiology for the B.S. degree, but should include Biology 552, 582, 587, 588, and 589. Recommended: Biology 468A-468B, 474, 552L, 556, and 586.

**Clinical Technologist.** To fulfill academic requirements to qualify for the licensing examination given by the State for Clinical Technologist and the certification examination for medical technologists given by the American Society of Clinical Pathologists, students should follow the major in microbiology for the B.S. degree, but should include Biology 552, 582, 587, 588, and 589. Recommended: Biology 468A-468B, 474, 552L, 556, 561, 586, and 594; Chemistry 567. Upon completion of degree requirements a one-year training internship at an approved laboratory is required to be eligible for licensing or certification examinations.

## Biology Major

### For the Single Subject Teaching Credential in Life Sciences

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

This major may be used as an undergraduate major for the B.S. degree in applied arts and sciences.

Candidates for the Single Subject Teaching Credential must be recommended for the program of the College of Education by the Biological Sciences Credential Screening Committee.

**Preparation for the Major.** Biology 200A-200B, 215; Chemistry 200, 201, and 230 or 231; Mathematics 121 and 122 or 150; Physics 180A-180B and 182A-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 the biological sciences and chemistry to include Biology 350, 352, 354, 356, 452, 515, 527 or 577, 530 or 563 and 563L, 590; Chemistry 361A.

## Biology Minor

The minor in biology consists of a minimum of 20 units in biology to include a General Education Foundations course in biology, Biology 150 or Biology 200A, and 12 upper division units in biology. Students must select from one of the following areas of biology:

### Animal Behavior

Prerequisite: Biology 339 or 527.

Two courses selected from Biology 307, 324, 330, 454, 462, 524, 527. Anthropology 500 or Psychology 417 may be included in the 20-unit biology requirement.

### Cell Biology and Genetics

Prerequisite: Chemistry 361A or 560A.

Two courses selected from Biology 350, 352, 356, 357, 532, 550, 556, 563, 576, 590.

### Ecology

Prerequisite: Biology 353 or 354 or 454.

Two courses selected from Biology 140, 304, 316, 324, 330, 353, 358, 359, 462, 513, 544.

### Evolutionary Biology

Prerequisite: Biology 319 or 354 or 532.

Two courses selected from Biology 304, 321, 352, 357, 358, 359, 471, 522, 526, 531. Natural Science 431 may be included in the 20-unit biology requirement.

### Human Biology

Prerequisite: Biology 261 or 336 or 410.

Two courses selected from Biology 307, 321, 327, 341, 350, 365, 474, 480, 577, 580, 590.

### Marine Biology

Prerequisite: Biology 324 or 515.

Two courses selected from Biology 339, 454, 513, 514, 515, 516, 517, 518, 519, 520, 524.

### Plant Biology

Prerequisite: Biology 358 or 533.

Two courses selected from Biology 324, 330, 359, 460, 514, 528, 529, 530, 533, 563.

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.

## Recombinant DNA Technology Certificate

The purpose of the program is to prepare current undergraduates and recent graduate students in biological sciences and chemistry for employment in public and private organizations utilizing recombinant DNA technology.

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 16 prerequisite units—Biology 350, 352, 356, Chemistry 250 or 251; and 29 certificate units—Biology 498, 550, 551, 551L; Biology 594 or Chemistry 577, Chemistry 560A-560B or 361A-361B and 567, and Biology 556 and 556L. At least 12 certificate units must be taken at SDSU and must include Biology 550, 551, 551L. 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 30, 21, and 20 units, respectively.



## LOWER DIVISION COURSES

**100. General Biology (3) I, II, S**

Prerequisite recommended: Concurrent registration in Biology 100L.

A beginning course in biology stressing processes common to living organisms.

**100L. General Biology Laboratory (1) I, II, S**

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 100.

A laboratory course in biology stressing processes common to living organisms.

**110. Evolution and Diversity of Animals (3)**

Animal adaptation and diversity and their relationship to the development of evolutionary theory. (Formerly numbered Zoology 100.)

**110L. Evolution and Diversity of Animals Laboratory (1)**

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 110.

Laboratory course on evolution and diversity of animals involving field trips and laboratory investigations. (Formerly numbered Zoology 100L.)

**120. Microbiology and Man (3) I, II**

The biology of microorganisms and their significance in disease, agriculture, sanitation and industry. Not open to biological sciences, nursing and dietetics majors. Fulfills the general education requirement in the natural science area. (Biology 120 not applicable to the major.) (Formerly numbered Microbiology 110.)

**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. Fulfills the general education laboratory requirement in the natural science area. (Formerly numbered Microbiology 110L.)

**130. Plants and Man (3) I, II, S**

Basic structure and function of plants with emphasis on the interrelationships of plants and man. (Formerly numbered Botany 100.)

**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. (Formerly numbered Botany 100L.)

**140. Ecosystems and Man (3) I, II**

Prerequisite: A high school or college general biology course.

Man's ecosystem interrelationships: past, present and future. Examination of how human activities disturb stable ecosystem relationships and how they may be modified to reestablish steady-state patterns of ecosystem function. (Formerly numbered Biology 130.)

**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. (Formerly numbered Zoology 108.)

**160. Introduction to Heredity (3) I, II**

Hereditary mechanisms and consideration of the social implications of recent and expected developments in the field of heredity. Not open to biology majors. (Formerly numbered Biology 145.)

**170. Natural History of Plants and Animals (3)**

Two lectures and three hours of laboratory.

An introduction to plants and animals in relation to their environments and to one another, with emphasis on local forms and their habitats. (Formerly numbered Biology 200.)

**200A-200B. Principles of Biology (4-4) I, II**

Three lectures and three hours of laboratory.

Prerequisite: Biology 200A is prerequisite to 200B.

Principles of biology governing all living organisms; includes diversity and evolution of plants and animals, concepts of genetics, ecology, physiology, reproduction and development. Not open to students with credit in Biology 201 and 202.

**201. Introduction to Botany (4) I, II**

Three lectures and three hours of laboratory.

Prerequisite: Chemistry 200.

Basic botany for Life Sciences majors. Origin of life; evolution of basic metabolism; the plant cell, organelles and their function; plant structure and function; plant diversity and classification; basic concepts of genetics and plant ecology. This course will be offered for the last time during the 1985-86 academic year. (Formerly numbered Botany 200.)

**202. Introduction to Zoology (4)**

Three lectures and three hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 201.

Zoology for life sciences major. Animal diversity and evolution; development, morphology and functioning of animal organ systems; activities and behavior patterns of animals; role of animals in human affairs. This course will be offered for the last time during the 1985-86 academic year. (Formerly numbered Zoology 200.)

**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 dietetics majors. Study of the microorganisms of the environment, including the disease-producing organisms, their actions and reactions. (Formerly numbered Microbiology 210.)

**215. Introduction to Quantitative Biology (3) I, II**

Two lectures and three hours of laboratory.

Prerequisites: Mathematics 121 or 140; credit or concurrent registration in Biology 200B.

Methods and experience in defining and solving quantitative problems in biology, including the design of experiments, and parametric and nonparametric statistical techniques.

**248. Careers in Biological Sciences (1) I, II 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. (Formerly numbered Zoology 250.)

**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 acceptable for credit in Biological Sciences programs (see Biology 590).

**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. Honors Course (1-3) I, II**

Refer to Honors Program.

**301. Agricultural Botany of the Imperial Valley with Laboratory (4)**  
(Offered at IVC only)

Three lectures and three hours of laboratory.

Basic botany of economically important plants using farming techniques and crops from the Imperial Valley as examples. Emphasis on relationships between human society and development of systematic agriculture. Plants examined in laboratory and on local field trips. (Formerly numbered Botany 320.)

**304. Biology of Populations (3)**

Prerequisite: A college course in the biological sciences.

The relation of modern concepts of genetics, ecology and physiology to natural populations with emphasis on the problems of human populations. Not open to majors in the biological sciences. (Formerly numbered Biology 351.)

**307. Biology of Sex (3)**

Prerequisite: Completion of Foundations section of General Education.

Traces the genetics and physiology of human reproduction from fertilization and development of the fetus to menopause and aging. Explores the biological aspects of puberty, sex hormones, menstruation, pregnancy, parturition, lactation, sterility, birth control, sexual responses, birth defects, and fetal research. (Formerly numbered Biology 310.)

**313-S. Contemporary Problems in Biology (1) S Cr/NC**

A series of six weekly lectures on varied aspects of biology by scientists engaged in research. Reading and reports required of students enrolled for credit. These lectures are open to the public. Maximum credit three units. (Formerly numbered Biology 303-S.)

**316. Energy and Environment (2-3)**

Ecological implications of energy extraction, use, and development. Emphasis on policy issues. (Formerly numbered Biology 330.)

**319. Evolution (3)**

Prerequisite: A college course in biological 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. (Formerly numbered Biology 380.)

**321. Human Heredity (3) I, II**

Prerequisite: A college course in biological 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, 351, 357, or 583 or to biology majors. (Formerly numbered Biology 350.)

**324. Life in the Sea (3)**

Prerequisite: A college course in biological 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. Course cannot be used by majors in biological sciences to satisfy upper division major requirements. (Formerly numbered Zoology 330.)

**327. Microbes: The Key to the Future (3)**

Prerequisite: Completion of natural science requirements under the Foundations of Learning component of General Education.

Use of microbes in developing alternate energy sources, treatments for infectious diseases and cancers, methods for recycling of wastes, and application of recombinant DNA. (Biology 327 not applicable to the major.) (Formerly numbered Microbiology 305.)

**330. Natural History of the Vertebrates (3)**

Two lectures and three hours of laboratory.

Prerequisite: A college course in biological sciences.

Natural history, distribution and classification of vertebrate animals; emphasis on local forms. Not open to zoology majors. (Formerly numbered Zoology 314.)

**333. Plants and History (3)**

Prerequisite: A college course in biological sciences.

Introduction to plant structure. History of economically and culturally important plants; techniques of obtaining various plant products; impact of these plants or plant products on the course of human events. (Formerly numbered Botany 315.)

**336. Principles of Human Physiology (3) I, II**

Prerequisite: A college course in biological sciences.

Systems of the human body, their interrelationships and control systems which regulate them. Required for all degrees in physical education and health science, and for specific degrees in home economics and recreation. Satisfies part of General Education requirements. Not open to students with credit in Biology 261, 410 or 590. (Formerly numbered Biology 362.)

**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. (Formerly numbered Biology 462L.)

**339. Sociobiology (3)**

Prerequisite: Biology 100 or 110 or Anthropology 102 or Psychology 101.

Biological bases of social behavior with emphasis on evolution, cooperation, and adaptive significance of social behavior. Not open to biological sciences majors. (Formerly numbered Zoology 340.)

**341. The Human Body (3)**

Survey of the human body with emphasis on intricacy of the design and integration of the various organ systems. Not open to students majoring in nursing or physical education or with credit in Biology 150. (Formerly numbered Zoology 308.)

**341L. The Human Body Laboratory (1)**

Three hours of laboratory.

Prerequisite: Concurrent registration in Biology 341.

Examination of the organ systems of the human body. (Formerly numbered Zoology 308L.)

**350. General Microbiology (4) I, II, S**

Two lectures and six hours of laboratory.

Prerequisites: Chemistry 230 or 231, Biology 200B.

The 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 the pathogens. (Formerly numbered Microbiology 310.)

**351. Molecular Biology (4)**

Three lectures and three hours of laboratory.

Prerequisites: Biology 215; Chemistry 230 or 231.

Cell chemistry and metabolism, diploid and haploid inheritance, mutations, the genetic material. Not open to students with credit in Biology 355 or 357. This course will be offered for the last time during the 1985-86 academic year. (Formerly numbered Biology 430.)

**352. General Genetics (3) I, II**

Prerequisites: Biology 200A-200B, 215; Chemistry 230 or 231; credit or concurrent registration in Chemistry 361A. Recommended: Concurrent registration in Biology 354.

Principles of transmission genetics, population genetics and evolution, and molecular genetics. Not open to students with credit in Biology 351, 357 or 546.

**353. Ecology (4) I, II**

Three lectures and three hours of laboratory.

Prerequisites: Biology 215; Physics 180B and 182B; Chemistry 201.

Ecological concepts covering all levels of organization from the individual to the ecosystem. This course will be offered for the last time during the 1985-86 academic year. (Formerly numbered Biology 411.)

**354. Ecology and Evolution (3) I, II**

Prerequisites: Biology 200A-200B, 215; credit or concurrent registration in Biology 352.

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. Not open to students with credit in Biology 353.

**355. Cellular Physiology (4) I, II**

Two lectures and six hours of laboratory.

Prerequisites: Biology 215; Chemistry 230 or 231; Physics 180B and 182B.

Cellular structure, macromolecules, energetics, growth, division, transport, excitability and motility. This course will be offered for the last time during the 1985-86 academic year. (Formerly numbered Biology 502.)

**356. Cell Biology (4) I, II**

Two lectures and six hours of laboratory.

Prerequisites: Biology 200A-200B, 215; Chemistry 361A; Physics 180A-180B, 182A-182B.

Structure and function of prokaryotic and eukaryotic cells and cell organelles. Not open to students with credit in Biology 351 or 355.

**357. Genetics (4) I, II**

Two lectures and six hours of laboratory.

Prerequisites: Biology 215; Chemistry 230 or 231.

Principles of transmission and molecular genetics, mutation, population genetics and evolution. This course will be offered for the last time during the 1985-86 academic year. (Formerly numbered Biology 503.)

**358. California Flora (3) II**

Two lectures and three hours of laboratory (Field).

Prerequisite: A college course in biological sciences.

Local native and naturalized plants in San Diego County and selected areas of California. Identification of plants and plant communities. (Formerly numbered Botany 350.)

**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. (Formerly numbered Zoology 480.)

**360. Community Epidemiology (3) I, II**

Prerequisite: Biology 210.

A course for other than biological sciences majors. Epidemiological concepts and methods as they apply to current community problems. (Formerly numbered Microbiology 370.)

**365. Microorganisms in Human History (2) I, II**

Influence of microorganisms at decisive points in human history and development of microbiology as a science. (Formerly numbered Microbiology 360.)

**410. Integrated Human Physiology (4) I, II**

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, 336, or 590.

**452. Bioscience Methodology (3) I**

One lecture and six hours of laboratory.

Prerequisite: Consent of instructor.

Methods and techniques in the biological sciences, based on materials developed by the biological sciences curriculum committee. (Formerly numbered Biology 400.)

**454. Conservation of Wildlife (3) I, II**

Prerequisite: A college course in biological sciences.

Plant and animal resources with emphasis on their conservation and intelligent use. (Formerly numbered Biology 420.)

**458. Industrial and Food Microbiology (2) II**

Prerequisite: Biology 210 or 350.

Microorganisms in food, beverage, drug, and chemical industries. Production of alcohol and other solvents, organic acids, vitamins, steroids, paper and hydrocarbon degradation, food microbiology, and sewage disposal. (Formerly numbered Microbiology 480.)

**460. Agricultural Botany (2)**

Field trips to be arranged.

Prerequisite: Biology 200B.

California crop plants, their general identification, cultural methods, and regional distribution. (Formerly numbered Botany 562.)

**462. Introductory Entomology (3)**

Prerequisite: Biology 200B.

Morphological and behavior adaptations, natural history, and overall importance of insects. (Formerly numbered Zoology 421.)

**462L. Introductory Entomology Laboratory (2)**

Six hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 462.

External and internal structure of insects; insect classification. (Formerly numbered Zoology 421L.)

**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. (Formerly numbered Microbiology 410A-410B.)

**466. Environmental Health Administration (3) II**

Prerequisite: Biology 464A.

Concepts of organization and administration applied to environmental health; factors affecting these at the local, national and international levels. (Formerly numbered Microbiology 420.)

**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. (Formerly numbered Microbiology 430A-430B.)

**469. Biology of Invertebrates (3) I, II**

Two lectures and three hours of laboratory.

Prerequisite: Biology 200B.

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) I, II**

Three lectures and three hours of laboratory.

Prerequisite: Biology 170 or 200B.

An introductory course in the biology of the vertebrates with emphasis on the vertebrate organism as a whole; anatomy, physiology, development, and evolution. (Formerly numbered Zoology 460.)

**471. Analysis of Evolutionary Criticism (3) I**

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. (Formerly numbered Biology 408.)

**472. Analytical Procedures in Cell Biology (3)**

One lecture and six hours of laboratory.

Prerequisite: Biology 356 or Chemistry 361A-361B or Chemistry 560A-560B.

Analytical course designed to provide undergraduates with practical laboratory experience. Includes procedures such as cell fractionation, analysis of marker enzymes and nucleic acids, biophysical measurements, microelectrode recording and computerized data acquisition. (Formerly numbered Biology 480.)



**474. Histology (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 200B. Recommended: Biology 150.

Descriptive microscopic anatomy of cells, tissues and organs of mammals with special emphasis on humans. (Formerly numbered Zoology 508.)

**480. Biology of Aging (3)**

Prerequisite: Biology 100 or Biology 200B.

Concepts and theories of aging in biological systems from the population to the molecular level. (Formerly numbered Biology 473 and 573.)

**490B. Senior Investigation and Report in Botany (2) II**

Prerequisites: Biology 514 or 528 or 529; Biology 530 or 563; senior standing.

Investigation and report on current botanical literature. (Formerly numbered Botany 490A-490B.)

**490E. Senior Investigation and Report in Ecology (2) I, II**

Prerequisites: Biology 354 and 354L, senior standing and consent of instructor.

Investigation and report on current ecological literature. (Formerly numbered Biology 497E.)

**490G. Senior Investigation and Report in Genetics (2) I, II**

Prerequisites: Biology 352, senior standing and consent of instructor.

Investigation and report on current genetic literature. (Formerly numbered Biology 497G.)

**490M. Investigation and Report in Microbiology (2) I, II**

Prerequisites: Biology 350 and at least one additional upper division course in biology.

Investigation and report on current microbiological literature. (Formerly numbered Microbiology 490.)

**490P. Senior Investigation and Report in Physiology (2) I, II**

Prerequisites: Biology 356, senior standing and consent of instructor.

Investigation and report on current physiological literature. (Formerly numbered Biology 497P.)

**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. Maximum credit four units. (Formerly numbered Microbiology 495 and Zoology 498.)

**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. Laboratory Experience in Modern Industrial Technology (1-5) I, II, S Cr/NC**

Up to 20 hours per week in academic year, 40 hours per week in summer or winter sessions.

Prerequisite: Fifteen upper division units in biological sciences with grades of A or B and consent of instructor.

Practical laboratory experience in local industrial laboratories or in SDSU campus laboratories emphasizing current technology.

**499. Special Study (1-3) I, II**

Prerequisites: Fifteen units in biological sciences with grades of A or B 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)

**500. Agricultural Ecology (3)**

Two lectures and three hours of laboratory.

Prerequisite: Biology 354.

Mechanisms controlling fertility, productivity, and regulation in agricultural ecosystems. The ecological design and management of agroecosystems. (Formerly numbered Biology 525.)

**501. Biological Control (4)**

Three lectures and three hours of laboratory.

Prerequisites: Biology 462, 462L.

Theory and implementation of biological control of arthropods and weeds. Emphasis on role of natural enemies, including insect pathogens, in the regulation of pest populations. Recommended for students specializing in entomology, botany or applied ecology. (Formerly numbered Zoology 527.)

**502. Economic Entomology (4)**

Two lectures and six hours of laboratory.

Prerequisites: Biology 462, 462L.

Course designed for students of entomology or agriculture and horticulture. Emphasis is placed on determination and control of insects affecting plants. Quarantine measures are also studied. (Formerly numbered Zoology 525.)

**503. Immature Insects (3)**

Two lectures and three hours of laboratory.

Prerequisites: Biology 462, 462L.

Collection, preservation, identification and biological study of the immature stages of the different insect orders. Course designed to meet the needs of students specializing in invertebrate zoology, agricultural and medical entomology, parasitology, and systematics. (Formerly numbered Zoology 523.)

**504. Insect Ecology (3)**

Prerequisites: Biology 354 or 462.

Ecological principles as applied to insects, including consideration of crop ecosystems in relation to insect and mite outbreaks. (Formerly numbered Zoology 524.)

**505. Insect Physiology (4)**

Two lectures and six hours of laboratory.

Prerequisites: Biology 356 or 462 or an upper division course in physiology; and Chemistry 230 or 231.

Description, theory, and experimental analysis of all major physiological processes in insects. (Formerly numbered Zoology 528.)

**506. Special Topics in Entomology (3-4)**

Two lectures and three hours of laboratory.

Prerequisites: Biology 356 or 462.

Treatment of some aspect of entomology, such as biological control, microbial control or forest entomology, not covered in regularly scheduled courses. See Class Schedule for specific content. Maximum credit nine units. Maximum credit six units applicable on a master's degree. (Formerly numbered Zoology 522.)

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

A. Lecture course.

B. Lecture and laboratory course. See Class Schedule for lecture/lab format.

**507. Plant Pathology (4)**

Three lectures and three hours of laboratory.

Prerequisite: Biology 200B. Recommended: Biology 528.

A practical course dealing with the principles of disease in plants, control measures, and quarantine procedures. Emphasis is placed on the determination and control measures of those pathogenic organisms which affect crops, trees and shrubs and nursery stock. (Formerly numbered Botany 526.)

**513. Marine Microbiology (2) I**

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. (Formerly numbered Microbiology 560.)

**513L. Marine Microbiology Laboratory (2) I**

Six hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 513. (Formerly numbered Microbiology 560L.)



**514. Phycology (4)**

Three lectures and three hours of laboratory.

Prerequisite: Biology 200B.

Morphology and phylogenetic relationships of the algae. (Formerly numbered Botany 501.)

**515. Marine Invertebrate Zoology (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 200B.

Structure and function, ecology, behavior, physiology and phyletic relationships of marine invertebrate animals. (Formerly numbered Zoology 510.)

**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 on a master's degree. (Formerly numbered Zoology 512.)

**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. (Formerly numbered Biology 531.)

**518. Fisheries Biology (3)**

Two lectures and three hours of laboratory.

Prerequisite: Biology 354.

Fisheries of commercial importance. The dynamics of exploited populations. (Formerly numbered Biology 532.)

**519. Aquaculture (3)**

Prerequisite: Biology 200B.

Principles and practices of the farming of aquatic organisms. (Formerly numbered Zoology 580.)

**520. Ichthyology (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 200B.

Identification, systematics, evolution, structure, physiology, behavior and ecology of fishes. (Formerly numbered Zoology 515.)

**521. Advanced General Microbiology (2) II**

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

Taxonomy, comparative physiology and ecology of representative microorganisms found in various natural environments. (Formerly numbered Microbiology 510.)

**521L. Advanced General Microbiology Laboratory (2) II**

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. (Formerly numbered Microbiology 510L.)

**522. Comparative Anatomy of the Vertebrates (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 200B.

Dissection, study and comparison of organ systems of representative vertebrates. (Formerly numbered Zoology 506.)

**523. Herpetology (4)**

Three lectures and three hours of laboratory.

Prerequisites: Biology 200B and consent of instructor.

The origin, evolution, distribution and systematics of amphibians and reptiles of the world. (Formerly numbered Zoology 516.)

**524. Ornithology (4)**

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

Prerequisites: Biology 200B and consent of instructor.

The study and identification of birds, especially those of the Pacific Coast and the San Diego region. (Formerly numbered Zoology 517.)

**525. Mammalogy (4)**

Two lectures and six hours of laboratory.

Prerequisites: Biology 200B and consent of instructor.

The evolution, systematics, distribution and ecology of mammals of the world. (Formerly numbered Zoology 518.)

**526. Vertebrate Paleontology (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 522.

Advanced studies in the evolution of vertebrates, including relations to earth history and topics in paleoecology and functional morphology. Field and laboratory techniques and exercises in identification are included. (Formerly numbered Zoology 560.)

**527. Animal Behavior (4)**

Two lectures and six hours of laboratory.

Prerequisites: Biology 215; Biology 200B or Psychology 210 and 260 for psychology majors.

Biological bases of animal behavior with emphasis on the ethological approach, including the evolution and adaptive significance of behavior. (Formerly numbered Zoology 570.)

**528. Mycology (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 200B.

The structure, food relations, and classification of fungi. (Formerly numbered Botany 502.)

**529. Vascular Plants (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 200B.

Structure, development and phylogenetic relationships of the bryophytes and vascular plants. (Formerly numbered Botany 503.)

**530. Plant Taxonomy (4) I**

Two lectures and six hours of laboratory, field trips.

Prerequisite: Biology 200B.

The study of variation, primarily in flowering plants; classification, identification, nomenclature, distribution. (Formerly numbered Botany 514.)

**531. Principles of Taxonomy, Systematics and Phylogeny (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 200B.

Basis for the classification of organisms. Modern concepts and their application in zoology. Specific problems in laboratory and field. (Formerly numbered Zoology 555.)

**532. Evolution and Population Genetics (3)**

Prerequisites: Biology 352 and 354.

Theory of evolution and modeling of genetic systems. (Formerly numbered Biology 549.)

**533. Plant Structure and Function (3) I**

Two lectures and three hours of laboratory.

Prerequisites: Biology 200B.

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. (Formerly numbered Botany 540.)

**544. Ecology of Renewable Resources (3)**

Two lectures and three hours of laboratory.

Prerequisite: Biology 354 or 454.

Ecological principles in exploitation and management of forest, range, watershed, and recreation lands for sustained human benefit. (Formerly numbered Biology 528.)



**545. Limnology (4)**

Three lectures and three hours of laboratory.

Prerequisites: Biology 354 and 354L.

Biological, chemical, and physical considerations of inland waters. (Formerly numbered Biology 530.)

**546. Population Biology (4)**

Two lectures and six hours of laboratory.

Prerequisites: Biology 351 and 353, or 354.

Principles of population genetics and evolution, advanced topics in population and community ecology. (Formerly numbered Biology 501.)

**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 200B, and consent of instructor.

Extended field studies of the flora, fauna, and biotic communities of major natural regions of western North America. May be repeated with new content. Maximum credit six units. (Formerly numbered Biology 580.)

**548. Systems Ecology (4)**

Three lectures and three hours of laboratory.

Prerequisites: Biology 354 and 354L, Mathematics 122 or 150, and consent of instructor.

Theory and techniques of systems analysis and mathematical modeling as applied to ecological problems. (Formerly numbered Biology 535.)

**549. Advanced Systems Ecology (4)**

Three lectures and three hours of laboratory.

Prerequisites: Biology 548 and consent of instructor.

Advanced topics in the application of mathematical modeling and simulation techniques to analyses of ecological problems. (Formerly numbered Biology 537.)

**550. Prokaryotic and Eukaryotic Molecular Biology (3) I, II**

Prerequisites: Chemistry 361A; Biology 352, 356.

Gene structure, organization and regulation in prokaryotes and eukaryotes. Mechanisms of RNA and protein synthesis. Dynamic aspects of the genome. (Formerly numbered Biology 591.)

**551. Recombinant DNA (3) I, II**

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

Theory and practice of recombinant DNA techniques. (Formerly numbered Biology 590.)

**551L. Recombinant DNA Laboratory (2) I, II**

Six hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 551.

A laboratory course in recombinant DNA techniques. (Formerly numbered Biology 590L.)

**552. General Virology (2) I, II**

Prerequisite: Biology 350. Recommended: Biology 585 and 589.

Viruses, their structure, function, culture, and methods of study. (Formerly numbered Microbiology 535.)

**552L. General Virology Laboratory (2) I, II**

Six hours of laboratory.

Prerequisite: Credit or concurrent registration in Microbiology 552.

The culture, isolation, and characterization of viruses. (Formerly numbered Microbiology 535L.)

**554. Microbial Physiology (2) I, II**

Prerequisites: Biology 350; Chemistry 250 or 251, 361A; Physics 180A-180B. Recommended: Physics 182A-182B.

Physiology of selected bacteria, fungi and other microorganisms. Not open to students with credit in Microbiology 320. (Formerly numbered Microbiology 505.)

**554L. Microbial Physiology Laboratory (2) I, II**

Six hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 554.

Techniques and instrumentation used in microbial physiology; computer applications in physiology. Not open to students with credit in Microbiology 320. (Formerly numbered Microbiology 505L.)

**556. Bacterial and Viral Genetics (2) I, II**

Prerequisites: Chemistry 361A; Biology 350.

The genetics of bacteriophages and bacteria. (Formerly numbered Microbiology 515.)

**556L. Bacterial and Viral Genetics Laboratory (2) I, II**

Six hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 556.

Experimental techniques in prokaryote and bacteriophage genetics. (Formerly numbered Microbiology 515L.)

**557. Microbial Genetics (3)**

Prerequisite: Biology 352.

Theory underlying microbial genetics. (Formerly numbered Biology 547.)

**558. Advanced Genetics (3)**

Prerequisite: Biology 352.

Current topics in molecular, organismal or population genetics. Maximum credit six units. (Formerly numbered Biology 559.)

**559. Mutagenesis (3)**

Prerequisite: Biology 352.

Basic principles and applications of mutation induction, expression, and detection at all levels of biological organization. Emphasis on mutation induction by chemicals and ionizing radiations. (Formerly numbered Biology 546.)

**560. Photobiology (3)**

Prerequisite: Biology 356.

Principles underlying visible and ultraviolet radiation effects on plants and animals, including man. Topics include photosensitization, ultraviolet effects, environmental photobiology, photomedicine, chronobiology, extraretinal photoreception, vision, photomorphogenesis, photomovement, photosynthesis and bioluminescence. (Formerly numbered Biology 566.)

**561. Radiation Biology (3)**

Prerequisites: Physics 180B and 182B; Biology 100 or 200B. Recommended: Biology 356.

Principles underlying radiological reactions of ionizing radiations. Effects of ionizing radiations at the biochemical, cell, organ, and organism levels. (Formerly numbered Biology 570.)

**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. (Formerly numbered Biology 570L.)

**562. Physiological Zoology (3)**

Prerequisite: Biology 200B. Recommended: At least one course in each of college algebra, chemistry and physics.

A comparative and evolutionary study of the functions of organ systems and their environmental significance. (Formerly numbered Zoology 540.)

**563. Plant Physiology (3)**

Prerequisites: Biology 200B; Chemistry 230 or 231.

Activities of plants, including photosynthesis, ion transport, translocation, water relations, growth and development. (Formerly numbered Botany 530.)

**563L. Plant Physiology Laboratory (1)**

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 563.

Laboratory experiments designed to demonstrate principles of water movement, ion transport, energy metabolism, growth and development in plants. (Formerly numbered Botany 531.)



**564. Topics in Cellular Biology (3)**

Prerequisite: Biology 356 or Chemistry 361A-361B or Chemistry 560A-560B.

Topics selected from chromatin structure function and regulation; cell cycle analysis and regulation; cellular membrane formation, structure and function. Other topics irregularly scheduled. May be repeated once with new content. (Formerly numbered Biology 561.)

**565. Topics in Comparative Physiology (3)**

Prerequisite: Biology 356 or 562.

Topics vary each semester and are chosen from three areas: digestion, nutrition, respiration, metabolism, blood, circulation, osmoregulation, excretion; sensory reception, neural integration and muscle function; endocrine mechanisms. May be repeated once with new content. See Class Schedule for specific content. (Formerly numbered Biology 562.)

**576. Developmental Biology (3)**

Prerequisite: Biology 352.

Analysis of development with emphasis on embryonic differentiation. (Formerly numbered Biology 541.)

**577. Embryology (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 200B.

Studies in comparative gametogenesis, morphogenesis, and reproductive physiology. (Formerly numbered Zoology 503.)

**578. Immunohematology (2) I, II**

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.

**579. Advanced Cellular Immunology (2) II**

Prerequisite: Biology 584 or 585.

Biology of the immune response and experimental basis for modern cellular immunology.

**580. Advanced Human Anatomy (4) I, II**

Two lectures and six hours of laboratory.

Prerequisite: Biology 150 or 522.

Comprehensive whole body dissection with primary emphasis on laboratory participation. The dissection will be from a regional aspect. (Formerly numbered Zoology 507.)

**581. Animal Viruses (4) I**

Two lectures and six hours of laboratory.

Prerequisite: Biology 552. Recommended: Biology 552L, 585, 589.

Animal virus identification and investigation, emphasizing cell culture, cytopathic effects and serology. (Formerly numbered Microbiology 580.)

**582. Hematology (4) I, II**

Two lectures and six hours of laboratory.

Prerequisite: Biology 350.

The study of normal and pathological blood with chemical, physical and microscopic methods. (Formerly numbered Microbiology 530.)

**583. Human Genetics (3) I, II**

Prerequisite: Biology 352.

Genetics as related to human biology. Molecular and cytogenetic causes of genetic disease and the genetics of human populations. (Formerly numbered Biology 544.)

**584. Immunochemistry (3)**

Prerequisite: Biology 356 or 585.

Structure and function of the immunoglobulins and the chemical and physical nature of the antigen-antibody reaction. (Formerly numbered Biology 568.)

**585. Immunology and Serology (2) I, II**

Prerequisites: Chemistry 361A and one upper division biological science course.

Immunochemistry of antigens and antibodies; their interactions *in vitro* and *in vivo*. Cellular immune mechanisms. Immunopathologies. Not open to students with credit in Microbiology 330. (Formerly numbered Microbiology 540.)

**585L. Immunology and Serology Laboratory (2) I, II**

Six hours of laboratory.

Prerequisites: Biology 350 and credit or concurrent registration in Biology 585.

Serological and cellular immunological techniques. Not open to students with credit in Microbiology 330L. (Formerly numbered Microbiology 540L.)

**586. Medical Entomology (4)**

Three lectures and three hours of laboratory. See Class Schedule for lecture/lab format.

Prerequisite: Biology 200B.

The role of insects and other arthropods in the transmission and causation of human diseases and the important diseases of domesticated animals. (Formerly numbered Zoology 526.)

**587. Medical Mycology (4) I, II**

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. (Formerly numbered Microbiology 525.)

**588. Parasitology (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 200B.

Study of animal parasites with special reference to those of humans. Laboratory including identification of important human parasites, and collection and preservation of local forms. (Formerly numbered Zoology 535.)

**589. Pathogenic Bacteriology (4) I, II**

Two lectures and six hours of laboratory.

Prerequisites: Biology 350 with a minimum grade of C; Chemistry 250 or 251. Recommended: Chemistry 361A.

Bacterial and rickettsial agents of disease in man and other animals. Consideration of host-parasite relationships, the biology of the inciting agents and mechanisms of host resistance. Laboratory experience in isolation and identification of bacterial pathogens. (Formerly numbered Microbiology 520.)

**590. Physiology of Human Systems (4)**

Three lectures and one hour of discussion.

Prerequisites: Physics 180B and 182B; Biology 200B. Recommended: Chemistry 361A and 361B or Biology 356.

Human physiology presented at cellular and organ system levels: membrane transport, nerve excitation, muscle contraction, cardiovascular physiology, kidney function, hormone function, reproduction and digestion. For students majoring in a natural science or engineering. (Formerly numbered Biology 572.)

**592. Electron Microscopy (4) II**

Two lectures and six hours of laboratory.

Prerequisites: Physics 180A-180B and 182A-182B; Biology 350. Recommended: Biology 474 and 552.

Principles and techniques in the biological application of the electron microscope. (Formerly numbered Microbiology 590.)

**593. Introduction to Scanning Electron Microscopy (2) I, II**

One lecture and three hours of laboratory.

Prerequisite: Biology 200B.

Theory and use of a scanning electron microscope for biological research. Laboratory is project oriented. (Formerly numbered Botany 510.)

**594. Radioisotope Techniques in Biology (4)**

Two lectures and six hours of laboratory.

Prerequisites: Physics 180B and 182B; Biology 100 or 200B. Recommended: Biology 356 and Chemistry 250 or 251.

The principles and application of radioisotopes in biology. Radionuclide measurement, safe handling, tracer and radioautography techniques. (Formerly numbered Biology 571.)



**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 on a bachelor's degree. Maximum credit six units with three units applicable on a master's degree.

**597. Statistical Methods in Biology (3)**

Two lectures and three hours of laboratory.

Prerequisite: Biology 352 or 354 or 356.

Application of statistical techniques to biological data. Not open to students with credit for another upper division course in statistics except with written approval of the chairman of the department offering the student's major filed with the Evaluations Office. (Formerly numbered Biology 519.)

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**College of Business Administration**

A member of the American Assembly of Collegiate  
Schools of Business

**Faculty**

Dean: Bailey

Associate Dean, Academic Affairs: Warschauer

Associate Dean, Graduate Studies: Barber

Associate Dean, External Relations: Brown

Assistant Dean, Undergraduate Studies and Student Affairs: Newton

**Offered by the College of Business Administration**

Master of Science degree in accountancy.

Master of Science degree in business administration.

Master of Business Administration.

Majors with the B.S. degree in business administration in the following fields: accounting, finance, financial services, information systems, insurance, management, marketing, real estate.

Teaching major in business for the single subject teaching credential.

Minors in the following fields: accounting, business management, personnel and industrial relations, finance, information systems, marketing, production and operations management, real estate, small business management (available at Imperial Valley Campus only).

Certificate in business administration (available at Imperial Valley Campus only).

**The Business Administration Program —  
Admission to Majors**

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 eight lower division preparation for the business major courses — Accountancy 212, Accounting Fundamentals (Accountancy 201, Accounting Fundamentals I; 202, Accounting Fundamentals II, for accountancy and information systems majors); Finance 140, Business Law; Economics 101, Principles of Economics (Macro); Economics 102, Principles of Economics (Micro); Information Systems 180, Principles of Information Systems; Information Systems 290, Written Communications in Business (not required for accounting majors); Mathematics 119, Elementary Statistics; and Mathematics 120, Mathematics for Business Analysis (Mathematics 141 for accounting majors). These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C-.

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 Planning and Advising Center in the College of Business Administration.

Students will be required to take a proficiency test in accounting fundamentals before they will be admitted to an accounting 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.



## Graduation Requirements

The student must complete the requirements listed below for the bachelor's degree. (Refer to the section of this catalog on Graduation Requirements for specific information.)

1. A minimum of 128 semester units for the B.S. degree. No less than 40 percent of these units must be in business and economics. A minimum of 52 units of course work applicable to the bachelor's degree must be completed outside the areas of business administration and economics.
2. A minimum of 30 units in residence. Twenty-four of these shall be earned in upper division courses and shall include at least one-half of the major.
3. A scholastic grade point average of 2.0 (grade of C on a five-point scale) or better in (a) all units attempted, (b) all units in the major, and (c) all units attempted at this college.
4. At least 45 upper division units for the B.S. degree.
5. One major.
6. Satisfactory completion of competency tests in mathematics and writing, or completion of appropriate courses designated in lieu thereof.
7. All regulations established by the university.
8. American Institutions, to include competence in American history, institutions and ideals; U.S. Constitution; and California state and local government.
9. A minimum of 49 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. A maximum of three upper division units in excess of 36 units for the B.S. degree required for the major but taught outside the major department may satisfy the requirements both for general education and the major if such courses have been approved for general education.
10. Application for graduation.
11. Effective the 1982-83 academic year, upper division concentrations must be declared to be eligible for a B.S. degree in Business Administration. "Generic" B.S. degrees in business will no longer be available. Students who had been advised about the existence of a generic degree will be awarded this degree only upon specific request.

## The Major

Each major in business administration consists of a pattern of prescribed upper division courses. The minimum number of units required is stated in the description of each major. No student will be permitted to register for an upper division course who has not completed the prerequisites for that course.

Also required as preparation for the major are the lower division prerequisite courses. These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C-.

Business administration majors may not complete a minor in the College of Business Administration.

For information on general education and other degree requirements, refer to the section of this catalog on Graduation Requirements.

A minimum of 52 units of course work applicable to the bachelor's degree must be completed outside the areas of business administration and economics.

## Small Business Management Minor (Imperial Valley Campus)

The minor in small business management consists of a minimum of 22 units to include Economics 101, 102; Accountancy 212; Management 350, 450; Marketing 370; and three units selected from Accountancy 315, Finance 323, Management 351, 352, 360.

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.

## 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 212; Finance 140; Information 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; Management 301 or 302, 350; Marketing 370; and three units selected from Accountancy 315; Finance 321, 341, 389; or Management 356. (15-16 units.)

## UPPER DIVISION COURSES IN BUSINESS ADMINISTRATION (Intended for Undergraduates)

### 300. Honors Course (1-3) I, II

Refer to Honors Program.

### 401. Business Internship (1-3) I, II

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.

### 402. Business Professions (3)

Prerequisites: Finance 323; Management 301 or 302, 350; Marketing 370.

For seniors in College of Business Administration.

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.

### 404. Small Business Administration (3)

Prerequisites: Finance 323; Management 301 or 302, 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.

### 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor.

Individual study. Maximum credit six units.

## GRADUATE COURSES IN BUSINESS ADMINISTRATION Refer to the Graduate Bulletin.



## Accountancy

### Faculty

Emeritus: Brown, Dodds, Ferrel, Harned, Odmark, Wright  
 Director: Whittenburg  
 The Vern Odmark Professor: Chow  
 Professors: Bailey (Dean), Ballew, Barnett, Brodshatzer, Butler, Capettini, Lamden,  
 Lightner, K., Meier, Meigs, Samuelson, Snudden, Toole, Whittenburg, Whittington, Williamson  
 Associate Professor: Lightner, S.  
 Assistant Professor: Wong-Boren  
 Visiting Lecturers: Ferrara, Griffin

### Offered by the Department

Master of Science degree in accountancy.  
 Major in accounting with the B.S. degree in business administration.  
 Teaching major in accounting for the single subject teaching credential.  
 Minor in accounting.

## Accounting Major

### With the B.S. Degree in Business Administration

The basic objective of the bachelor of science program in accounting is to provide basic conceptual accounting and business knowledge to students seeking professional careers in the field of accounting. The knowledge acquired in the B.S. program should be sufficient for entry-level positions in government, industry, and public accounting. The program provides the opportunity to gain the necessary knowledge to pass professional examinations in accounting such as the C.P.A. and C.M.A. examinations. The accounting curriculum in the B.S. program also provides the foundation for future career development and for expansion of the student's knowledge of accounting in the future.

Students will be required to take a proficiency test in accounting fundamentals before they will be admitted to an accounting major.

**Preparation for the Major.** Accountancy 201 and 202; Economics 101 and 102; Economics 201 or Mathematics 119; Finance 140; Information Systems 180; and Mathematics 141. (25 units.) These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C-.

**Upper Division Writing Requirement.** Information Systems 490W with a grade of C (2.0) or better.

**Major.** A minimum of 50 upper division units to include Accountancy 310, 311, 312, 410, 414; Economics 320 or 321; Finance 323; Information Systems 380, 490W; Management 301 or 302, 350, 405; Marketing 370; and six units selected from Accountancy 314, 511, 512, 515, Finance 340. A minimum of 52 units of course work applicable to the bachelor's degree must be completed outside the areas of business administration and economics.

## Business Major

### For the Single Subject Teaching Credential

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 the College of 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.

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, 310, 311, 312 and 410. (Management 301 or 302 recommended prerequisites for Accountancy 312.)

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. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Permission to take business minors must be obtained from the business minor adviser in the college of the student's major.

### LOWER DIVISION COURSES IN ACCOUNTANCY

#### 100. Survey of Accounting (3) I, II, S

Basic principles underlying accounting measurement in business; accounting model in retailing and manufacturing; tax accounting; audit function; and managerial use of accounting information. Not open to students with credit in Accountancy 201, 210A, 210B, or 212. Open to nonbusiness majors only.

#### 201. Accounting Fundamentals I (3) I, II, S

Theory and practice of accounting; transactions analysis; ledgers; journals; business documents; assets; liabilities; adjusting; closing; and procedures leading to preparation and understanding of financial statements with emphasis on sole proprietorships and partnerships. Not open to students with credit in Accountancy 100, 210A, 210B, or 212. Preparation requirement for business majors.

#### 202. Accounting Fundamentals II (3) I, II, S

Prerequisite: Accountancy 201.

Accounting for corporations; statements of changes in financial position; price level accounting; managerial accounting concepts and procedures including manufacturing accounting, cost accounting, CVP analysis, budgeting, and tax aspects in decision making. Preparation requirement for business majors.

#### 212. Accounting Fundamentals I, II (4) I, II, S

Principles of financial accounting including study of accounting cycle and accounting for cash, receivables, payables, inventories, payroll, partnerships, plant and equipment, bonds, equities, investments, income taxes, funds flow. (Not open to students with credit in Accountancy 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 IN ACCOUNTANCY (Intended for Undergraduates)

#### 310. Intermediate Accounting I (4) I, II, S

Prerequisite: Minimum grade of C in Accountancy 201 or 212.

Theories and principles underlying accounting for cash, short-term investments, receivables, inventories, current liabilities, plant and equipment, intangible assets, contributed capital, retained earnings.

#### 311. Intermediate Accounting II (4) I, II, S

Prerequisite: Accountancy 310 with minimum grade of C.

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.



**312. Managerial Cost Accounting Systems (4) I, II**

Prerequisites: Minimum grade of C in Accountancy 201 or 212; Management 301 or 302.

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.

**314. Advanced Accounting Problems (4) I, II**

Prerequisite: Credit or concurrent registration in Accountancy 311.

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

**315. Accounting for Managers (4) I, II**

Prerequisites: Accountancy 212 and credit or concurrent registration in Management 350.

Managerial accounting and financial accounting for nonaccountants. Not open to students with credit in Accountancy 310 or 312.

**316. 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.

**410. Federal Income Tax I (4) I, II**

Prerequisite: Minimum grade of C in Accountancy 310 or 315.

Taxation of individuals, including income, deductions, credits, social security taxes, and property transactions.

**414. Auditing (4) I, II**

Prerequisites: Accountancy 311 and 312; 314 recommended.

Consideration of 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.

**420. Field Study in Taxation (1) II Cr/NC**

Prerequisite: Accountancy 410.

Income tax preparation in the field. Follows procedures of IRS VITA Program. IRS instruction followed by faculty supervised field work. (Student must be available for special IRS tax school.)

**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.

May be repeated with new content. Maximum credit six units.

A comprehensive and original study of a problem connected with accounting under the direction of one or more members of the accounting staff.

### UPPER DIVISION COURSES IN ACCOUNTANCY (Also Acceptable for Advanced Degrees)

**511. Federal Income Tax II (3) I, II**

Prerequisite: Accountancy 410.

Taxation of corporations, partnerships, estates, and trusts. Gift and estate tax. (Formerly numbered Business Administration 411.)

**512. Advanced Managerial Accounting (3) I, II**

Prerequisites: Accountancy 312 and Management 302.

Use of accounting information systems for managerial decision making. Introduction to decision making situations which use accounting information for full or partial resolution. Consideration of uncertainty, decision theory and specific decision contexts. (Formerly numbered Business Administration 412.)

**515. Accounting for Not-For-Profit Organizations (3) I, II**

Prerequisite: Accountancy 310.

Principles of fund accounting useful in state and local governmental units, hospitals, colleges, and universities. Comparisons with commercial accounting emphasized. Includes study of budgetary accounting, appropriations, encumbrances, internal checks and auditing procedures. (Formerly numbered Business Administration 415.)

**596. Contemporary Topics in Accounting (1-3) I, II**

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 six units applicable on a master's degree.

**GRADUATE COURSES IN ACCOUNTANCY**

Refer to the Graduate Bulletin.



## Finance

### Faculty

Emeritus: Fisher, H., Schmier, Wijnholds  
 Chair: Vandenberg  
 Professors: Hippaka, Hungate, Hutchins, Neuberger, Nye, Reints, Short, Vandenberg, Warschauer (Associate Dean, Academic Affairs)  
 Associate Professors: Block, Bost, Cherin, Fisher, R., Haddad, Sachdeva, Salehizadeh, Sterk, Wilbur

### 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 insurance.  
 Minor in real estate.

## Finance Major

### With the B.S. Degree in Business Administration

**Preparation for the Major.** Accountancy 212; Finance 140; Information Systems 180, 290; Economics 101 and 102; Mathematics 120 or 150; and Economics 201 or Mathematics 119. (25-27 units.) These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C-.

**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 Accountancy 310; Finance 321, 323, 325, 327, 423; Management 301 or 302, 350, 405; Marketing 370; Economics 490; at least three units selected from Finance 329 and 425; and three units of electives selected from Finance. A minimum of 52 units of course work applicable to the bachelor's degree must be completed outside the areas of business administration and economics.

## Financial Services Major

### With the B.S. Degree in Business Administration

**Preparation for the Major.** Accountancy 212; Economics 101 and 102; Economics 201 or Mathematics 119; Finance 140; Information Systems 180 and 290; Mathematics 120 or 150. (25-27 units.) These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C-.

**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 50 upper division units to include Finance 323, 326, 327, 331, 389, 425, 542; Accountancy 310, 410; Management 301 or 302, 350, 405; Marketing 370; and nine units selected from Finance 421, 431, 433, 435, 445, 521, 525; Accountancy 511; Economics 490. A minimum of 52 units of course work applicable to the bachelor's degree must be completed outside the areas of business administration and economics.

## Real Estate Major

### With the B.S. Degree in Business Administration

**Preparation for the Major.** Accountancy 212; Finance 140; Information Systems 180, 290; Economics 101 and 102; Economics 201 or Mathematics 119; and Mathematics 120 or 150. (25-27 units.) These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C-.

**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 39-40 upper division units to include Finance 323, 331, 335, 433, 435; Management 301 or 302, 350, 405; Marketing 370; Public Administration 320; and 9-10 units selected from Accountancy 315, 410; Finance 333, 340, 342, 431, 437; Marketing 373; Economics 422, 490; Geography 354, 559. A minimum of 52 units of course work applicable to the bachelor's degree must be completed outside the areas of business administration and economics.

## Business Major

### For the Single Subject Teaching Credential

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 the College of 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.

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 19 units to include Accountancy 212; Finance 321, 323, 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. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Permission to take business minors must be obtained from the business minor adviser in the college of the student's major.

## Insurance Minor\*

The minor in insurance consists of a minimum of 15 units to include Finance 140, 521, 525, 542, and six additional upper division units in business administration with consent of insurance 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. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Permission to take business minors must be obtained from the business minor adviser in the college of the student's major.

\* No new students will be admitted to the minor in 1985-86 academic year.

## 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. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Permission to take business minors must be obtained from the business minor adviser in the college of the student's major.

## LOWER DIVISION COURSE IN FINANCE

### 140. Business Law (3) I, II

Introduction to legal institutions; nature and sources of law; the judicial system; legal concepts and cases involving contracts, agency, and sales.



## UPPER DIVISION COURSES IN FINANCE

(Intended for Undergraduates)

**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: Completion of lower division course requirements in major or minor. Proof of completion of prerequisite required.

Objectives of financial management. Financing the business enterprise. Internal financial management. Introduction to the cost of capital, valuation, dividend policy, leverage and the techniques of present value and its applications. Sources of capital.

**325. Planning of Capital Expenditures (3) I, II**

Prerequisites: Finance 323 and Management 301 or 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. Emphasis on quantitative and computer methods in the decision-making process.

**326. Financial Institutions Management (3)**

Prerequisite: Finance 323.  
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.  
Investment principles and practices with emphasis on problems of the small investor, such as tests of a good investment, sources of information, types of stocks and bonds, mechanics of purchase and sale, investment trusts, real estate mortgages, and the like.

**329. International Business Finance (3) I, II**

Prerequisite: Finance 323.  
The financing of international business transactions; international payments and their environment; international financial institutions.

**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. (Formerly numbered Finance 231.)

**333. Law of Real Property (3) I, II**

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) I, II**

Prerequisites: Finance 140; accounting major or completion of Finance 323 and 335.  
Legal concepts and cases involving business organization, negotiable instruments, property, security devices, creditors' rights, bankruptcy, insurance, wills, trusts, estates, and suretyship. Special emphasis on problem-solving techniques. Not open to students with credit in Finance 141.

**341. Law in a Business Society (3) I, II**

Prerequisite: Finance 140.

The nature of law as a process of resolving economic disputes and social conflicts. Analysis of the rationale in statutes, judicial decisions, and doctrine. The role of law in the development of business concepts.

**389. Personal Financial Planning (3)**

Prerequisites: Finance 327 and credit or concurrent registration in Accountancy 410.

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. (Formerly numbered Business Administration 389.)

**421. Security Analysis and Investment Strategies (3) I, II**

Prerequisite: Finance 327.

Theory and practice of security valuation and market behavior by advanced technical and fundamental analysis. Strategies for optimizing profit and minimizing risk in securities transactions. Institutional and personal portfolio management.

**423. Financial Analysis and Management (3) I, II**

Prerequisites: Finance 325 and Economics 490.

Integration of various aspects of finance, application of financial theory. Financial decision making in the firm.

**425. Business Forecasting (3) I, II**

Prerequisites: Finance 323, Management 301 or 302, and Marketing 370.

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, S**

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 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.

**437. Housing: Policy and Analysis (3) I, II**

Prerequisite: Finance 331.

Entrepreneurial behavior in the housing sector. Housing market analysis. Public policy and social aspects of housing. Community and environmental factors.

**445. Estate Planning (3) I, II**

Programming fundamentals with emphasis on economic, actuarial, and legal principles, program coordination and integration with wills; guardianships; estate planning fundamentals; taxation; business life insurance. Analysis of life insurance selling as a career.

**496. Selected Topics in Finance (1-4) I, II**

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.

May be repeated with new content. Maximum credit six units.

A comprehensive and original study of a problem connected with finance under the direction of one or more members of the finance staff.



### UPPER DIVISION COURSES IN FINANCE (Also Acceptable for Advanced Degrees)

#### 521. Life and Health Insurance (3) II

Prerequisite: Finance 542.

Economic and social aspects of life and health insurance; nature of life and health insurance and of annuities; theory of probabilities, premiums, reserves and nonforfeiture values; company and agency operations and management; legal aspects; relationship to personal financial planning.

#### 525. Employee Benefits and Retirement Planning (3) II

Prerequisite: Finance 323.

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.

#### 542. Insurance Principles and Practices (3) I, II

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

Nature and extent of personal, business, and social risk. Risk-handling techniques; insurance principles and practices; basic contracts analysis; insurance underwriting and rating; insurance problems and trends; personal and business risk management. Not open to students with credit in Finance 342 or 700.

### GRADUATE COURSES IN FINANCE Refer to the Graduate Bulletin.

## Information Systems

### Faculty

Emeritus: Archer, Gibson, Langenbach, LeBarron, Spaulding, Straub  
Chair: Sondak  
Professors: Crawford, Sondak, Vik  
Associate Professors: Feeney, Flatley, Hatch, Koster, Saltzer, Saraswat  
Assistant Professors: Rittenhouse, Van Zandt  
Lecturers: Birch, Schooley

### Offered by the Department

Master of Science degree in business administration.  
Master of Business Administration.  
Major in information systems with the B.S. degree in business administration.  
Teaching major in business for the single subject teaching credential.  
Minor in information systems.

## Information Systems Major

### With the B.S. Degree in Business Administration

Information systems involves applications of computers in business and other organizations. In the major, students learn to analyze business problems and to design and implement computerized systems to solve them. The major is designed to prepare students for entry-level positions as systems analysts and to provide a foundation for professional growth in information systems management.

**Preparation for the Major.** Accountancy 201, 202; Finance 140; Information Systems 180, 280, 290; Economics 101 and 102; Mathematics 120 or 150; and Economics 201 or Mathematics 119. (30-32 units.) These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C-.

**Upper Division Writing Requirement.** Information Systems 396W with a grade of C (2.0) or better.

**Major.** A minimum of 39 upper division units to include Finance 323; Information Systems 380, 385, 396W, 480, 486; Management 302, 350, 360, 405; Marketing 370; and six units of electives selected from Information Systems 383, 384, 387, 388, 482, 483, Management 301, 462, 464. The following electives are suggested for students with these career goals:

**Applications programming:** Information Systems 383, 384.

**Office automation:** Information Systems 387, 388.

**Systems design:** Information Systems 388, 483.

A minimum of 52 units of course work applicable to the bachelor's degree must be completed outside the areas of business administration and economics.

## Business Major

### For the Single Subject Teaching Credential

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 the College of 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.

Student program must be approved in advance by the College of Business Administration single subject credential adviser.



## Information Systems Minor

The minor in information systems consists of a minimum of 21 units to include Information Systems 180, 280, 380, 385, 480; and six units selected from Information Systems 383, 384, 388, 396W, 482, 483, 486.

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. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Permission to take business minors must be obtained from the business minor adviser in the college of the student's major.

### LOWER DIVISION COURSES IN INFORMATION SYSTEMS

#### 180. Principles of Information Systems (3)

Applications of computerized systems in business organizations. Basic concepts of computer organization, data processing systems, decision support systems, systems analysis, and computer programming. Programming in a computer language to solve business problems.

#### 280. COBOL Programming (3)

Prerequisite: Information Systems 180.

Introduction to COBOL programming. Emphasis on coding techniques, file organization, and report preparation.

#### 290. Business Communication (3)

Principles of effective communication applied to business and industrial messages. Organization and presentation of written and oral reports.

### UPPER DIVISION COURSES IN INFORMATION SYSTEMS

(Intended for Undergraduates)

#### 380. Information Systems Analysis and Design (3)

Prerequisite: Completion of lower division courses required in the major or minor.

Concepts and techniques for the analysis, design, and implementation of computer-based information systems.

#### 383. Advanced COBOL Programming (3)

Prerequisite: Information Systems 280.

Advanced application program development in COBOL emphasizing structured programming, table handling, and file access methods.

#### 384. Comparative Programming Languages (3)

Prerequisite: Information 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)

Prerequisite: Completion of lower division courses required in the information systems major or minor.

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.

#### 387. Information and Records Management (3)

Management of information resources derived from both internal and external sources. Includes traditional records management, computer center administration, and information center concept.

#### 388. Office Automation Systems and Technologies (3)

Prerequisite: Information Systems 380.

Basic concepts, tools, technologies, and techniques for improvement of office information systems. Office information systems including technological, organizational, managerial, engineering, implementation, and evaluation aspects.

#### 396W. Reporting Techniques for Business Professionals (3)

Prerequisite: Information Systems 290.

Advanced preparation of oral and written reports used in business and other organizations. Individualized study of reports in student's career field. 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. (Formerly numbered Business Administration 390.)

#### 480. Data Management Systems (3)

Prerequisite: Information Systems 380.

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 Systems Practicum (3) Cr/NC

Prerequisites: Information Systems 380 and six additional upper division units in information systems.

Information system design or development project applying knowledge gained in previous course work done under joint supervision of course instructor and an information systems manager.

#### 483. Distributed Information Systems Design (3)

Prerequisite: Information Systems 380.

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.

#### 486. Advanced Systems Analysis and Design (3)

Prerequisite: Information Systems 380.

Systems analysis emphasizing decision support systems, management of design and development of information systems, and computerized aids in information system design.

#### 490W. Reporting Techniques for Accountants (3)

Prerequisite: Twelve upper division units in accounting.

Advanced preparation of written and oral reports with application to professional needs of accountants. 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.

#### 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.

### GRADUATE COURSES IN INFORMATION SYSTEMS

Refer to the Graduate Bulletin.



## Management

### Faculty

Emeritus: Pierson, Srbich  
 Chair: Beatty  
 Professors: Atchison, Beatty, Belasco, Belcher, Chen, Galbraith, Ghorpade, Hampton, Lackritz, Mitton, Peters, Robbins, Sherrard, Unterman  
 Associate Professors: Jenner, Nebeker, Schlesinger, Wright  
 Assistant Professors: Brady, Castaldi, De Noble  
 Lecturers: Levine, Omens, Yassour

### Offered by the Department.

Master of Science degree in business administration.  
 Master of 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 business management.  
 Minor in personnel and industrial relations.  
 Minor in production and operations management.

## Management Major

### With the B.S. Degree in Business Administration

The major in management is a flexible program which allows the student to specialize in two areas of study in the major or to obtain a broad background in management with a specialization in one of the areas of study within the major.

#### (1) Professional Curriculum Within the Major Field

**Preparation for the Major.** Accountancy 212; Finance 140; Information Systems 180, 290; Economics 101 and 102; Mathematics 119; and Mathematics 120 or 150. (25-27 units.) These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C-.

**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.** Accountancy 315; Finance 323; Management 301 or 302, 350, 351, 352, 356, 360, 405; Marketing 370. (31 units.)

#### (2) Areas of Specialization Within the Major Field

Select 12 units from Management 366, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468. (Six units must be within one of the areas below.)

(a) **Personnel and Industrial Relations:** Management 452, 453, 460.

(b) **Production and Operations Management:** Management 461, 462.

(c) **Organizational Behavior:** Management 451, 454.

(d) **Statistics and Management Science:** Management 366, 463, 464.

(e) **Business Environment:** Management 455, 456.

(f) **Strategic, General, and International Management:** Management 450, 457, 458, 459, 465, 466, 467.

#### (3) Pattern Requirements Outside the Department of Economics and the College of Business Administration

A minimum of 52 units of course work applicable to the bachelor's degree must be completed outside the areas of business administration and economics.

## Business Major

### For the Single Subject Teaching Credential

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 the College of 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.

Student program must be approved in advance by the College of Business Administration single subject credential adviser.

## Business Management Minor

The minor in business management consists of a minimum of 22 units to include Accountancy 212; Economics 101, 102; Management 350; and nine units selected from Management 351 or 352, 356, 360.

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. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Permission to take business minors must be obtained from the business minor adviser in the college of the student's major.

## Personnel and Industrial Relations Minor

The minor in personnel and industrial relations consists of a minimum of 22 units to include Accountancy 212; Economics 101, 102; Management 350, 352; and six units selected from Management 351, 452, 453, 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. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Permission to take business minors must be obtained 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 22 units to include Accountancy 212; Economics 101, 102; Management 301 or 302, 350, 360; and three units selected from Management 366, 461, 462. Prerequisites to the minor include Economics 201 or 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. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Permission to take business minors must be obtained from the business minor adviser in the college of the student's major.

### LOWER DIVISION COURSE IN MANAGEMENT

#### 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.

### UPPER DIVISION COURSES IN MANAGEMENT (Intended for Undergraduates)

#### 301. Statistical Analysis for Business (3) I, II

Prerequisites: Mathematics 120; Economics 201 or Mathematics 119. Completion of lower division courses required in the major or minor. Proof of completion of prerequisites required. Statistical methods applied to business decision making.

#### 302. Quantitative Methods (3)

Prerequisites: Mathematics 120; Economics 201 or Mathematics 119. Completion of lower division courses required in the major or minor. Proof of completion of prerequisites required. A study of various management science techniques such as simulation, transportation and simple linear programming and queuing theory.



**350. Management and Organization (3) I, II**

Prerequisite: Completion of lower division courses required in the major or minor. Proof of completion of prerequisite required.

Concepts of organizing activities to achieve goals. Effects of environment, technology and human behavior on organization design. Managerial processes including planning, decision making, influence and control required to operate and change organizations.

**351. Organizational Behavior (3) I, II**

Prerequisite: Management 350.

Human behavior in organizations at the individual, interpersonal and group level including the effect of organization structure on behavior. Emphasis on managerial behavior as it relates to human motivation, influence, leadership, communication, group dynamics and conflict resolution.

**352. Personnel and Industrial Relations (3) I, II**

Prerequisite: Management 350.

Management of human resources including manpower planning and staffing, training and development, performance appraisal, compensation and union-management relations. Emphasis on effect of economic, sociological and psychological factors on concepts and practices.

**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.

**360. Fundamentals of Production and Operations Management (3) I, II, S**

Prerequisite: Management 350.

Integration of principles and concepts for scheduling operations. Emphasis on master scheduling, material requirements planning, inventory planning and control, capacity requirements planning, and production activity control.

**366. Statistical Methodology for Business Research (3)**

Prerequisite: Management 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.

**405. Business Strategy and Integration (3) I, II**

Prerequisites: Finance 323, Management 301 or 302, 350 and Marketing 370.

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 Theory and Analysis (3)**

Prerequisite: Management 351.

Organizations as systems. Analysis of the impact of technological, structural and administrative factors on management.

**452. Wage and Salary Administration (3) I, II**

Prerequisite: Management 352.

Major problems in the determination and control of compensation from employment. Comparison of underlying theory to current practice.

**453. Union-Management Relations (3) I, II**

Prerequisite: Management 352.

Relationships and interactions among unions, workers, and management. Emphasis on unionization, collective bargaining and central administration, interaction of union and management relative to society.

**454. Interpersonal Processes (3)**

Prerequisite: Management 351.

Interpersonal aspects of management: interpersonal perception, communication, group dynamics, and influence from a managerial perspective.

**455. 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.

**456. Conceptual Foundations of Business (3) I, II**

Prerequisite: Completion of Foundations section of General Education.

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.

**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.

**459. Strategic Management of Not-For-Profit Organizations (3)**

Prerequisite: Management 405.

Use of the latest managerial techniques for the strategic formulation and implementation of Not-for-Profit institutions such as foundations, schools, etc. Substitute measurements of success of objectives where no normal profits appear.

**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.

**461. Operations Management (3) I, II**

Prerequisite: Management 360.

Use of tools for effective utilization of resources in manufacturing activities. Advanced studies in various scheduling techniques. Includes industrial engineering, project management, quality control, linear programming, learning curves, and inventory models.

**462. Operation Scheduling and Control Systems (3) I, II**

Prerequisite: Management 360.

Studying production systems through plant visits, case studies, and class projects. Computerized simulation package used to facilitate student understanding of production scheduling systems.

**463. Management Science: Deterministic Systems (3)**

Prerequisite: Management 302.

Derivation and application of optimization techniques for deterministic systems. Linear programming, nonlinear dynamic and integer programs.

**464. Management Science (3)**

Prerequisite: Management 302.

Study of current applications of operations research techniques to the solution of business and industrial problems. Readings, projects, cases, and field work as appropriate.

**465. Formal Planning Systems (3)**

Prerequisite: Management 405.

Theory and practice of formalized, systematic corporate and divisional planning; nature of the planning process; role of the corporate planner; models and techniques of planning; design and implementation of formal planning systems.



**466. International Business Strategy and Multinational Enterprises (3)**

Prerequisite: Management 405.

Business activities across national boundaries, including strategies, policies, risks, organizing, directing and controlling. Cases, readings and directed study of various developed and developing countries.

**467. Negotiation Management (3) II**

Prerequisite: Management 405.

Negotiation related to management of a strategy. Exchange of ideas with intention of changing relationships, as in acquiring, divesting, purchasing, hiring, training, merging, and evaluating.

**468. Women in Management (3) I, II**

Prerequisite: Management 350.

Personal and organizational issues women face at work in both manager and worker roles. Barriers, strategies, conflict, male/female dynamics. Practice and skill building for effective managing.

**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.

May be repeated with new content. Maximum credit six units.

A comprehensive and original study of a problem connected with management under the direction of one or more members of the management staff.

**GRADUATE COURSES IN MANAGEMENT**

Refer to the Graduate Bulletin.

**Marketing****Faculty**

Emeritus: Akers, Darley

Chair: Vanier

Professors: Barber (Associate Dean, Graduate Studies), Belch, M., Haas, Hale, Lindgren, McFall, Sciglimpaglia, Settle, Vanier, Wotruba

Associate Professors: Belch, G., Krentler, Tyagi

Assistant Professor: Villarreal-Camacho

Lecturer: Blanchette

**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.

**Marketing Major****With the B.S. Degree in Business Administration**

**Preparation for the Major.** Accountancy 212; Finance 140; Information Systems 180, 290; Economics 101 and 102; Mathematics 120 or 150; and Economics 201 or Mathematics 119. (25-27 units.) These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C-.

**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 44 upper division units to include Finance 323; Management 301, 350, 405; Marketing 370, 371, 470, 471, 479; eighteen units selected from Marketing 372, 373, 374, 375, 376, 472, 473, 474, 475, 476, and 477. A minimum of 52 units of course work applicable to the bachelor's degree must be completed outside the areas of business administration and economics.

**Business Major****For the Single Subject Teaching Credential**

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 the College of 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.

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 20 units to include Accountancy 201; Marketing 370; Economics 102; and 12 units selected from Management 301, Marketing 371, 372, 373, 374, 375, 376, 377, 470, 472, 473, 474, 475, 476, and 477.

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. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Permission to take business minors must be obtained from the business minor adviser in the college of the student's major.



### UPPER DIVISION COURSES IN MARKETING (Intended for Undergraduates)

#### 370. Marketing (3) I, II

Prerequisite: Completion of all lower division course requirements for the major or minor. Marketing majors must complete this course with a minimum grade of C. Proof of completion of prerequisite required.

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 Behavior (3) I, II

Prerequisite: Marketing 370 with a minimum grade of C.

Examination of the nature of markets and of the factors influencing market development and change. Study of the individual consumer's behavior in relation to the selling-buying process.

#### 372. Retailing Principles (3) I, II

Prerequisite: Marketing 370 with a minimum grade of C.

Study of retail stores, emphasizing the problems of store managers and merchandising executives; store location, organization, personnel, sales promotion, buying and handling of merchandise, inventory, turnover, and control methods. Problems of profitable operation under changing conditions.

#### 373. Marketing Communication and Promotion (3)

Prerequisite: Marketing 370 with a minimum grade of C.

Management of the marketing communications function. Topics include advertising theory and measurement; communications theory; promotional strategies; public relations and publicity; consumer behavior and analysis; and consumer education and promotional ethics.

#### 374. Physical Distribution Management (3)

Prerequisite: Marketing 370 with a minimum grade of C.

Physical distribution organization and functions. Economic and operational characteristics of modes of transportation, documentation, terminal operations, materials handling, claims management, and government regulations.

#### 375. Purchasing and Buying (3) I, II

Prerequisites: Marketing 370 with a minimum grade of C and Management 350.

Policies for purchasing raw materials, parts, supplies and finished goods for manufacturing operations, for commercial uses, and for wholesale and retail resale. Buying procedures, inventory control, vendor relations, legal problems, quality control, financing.

#### 376. International Marketing (3) I, II

Prerequisite: Marketing 370 with a minimum grade of C.

Marketing in an international setting. Topics include entry strategies, importing-exporting, barter, channel selection, transfer pricing, advertising and selling differences, and the external environment within which the marketing manager operates.

#### 377. Contemporary Selling Practices and Strategy (3) I, II

Prerequisite: Marketing 370 with a minimum grade of C.

Personal selling strategies and practices in use today such as territory management, consultative selling, negotiation, and systems selling. Selling as an integral part and total marketing strategy.

#### 470. Marketing Research (3) I, II

Prerequisites: Completion of lower division courses in the major or minor. A minimum grade of C in Management 301 and Marketing 370. Proof of completion of prerequisites required.

Methods and procedures used to generate and interpret information for marketing decision making. Topics include problem analysis, sources of information, alternative research designs, data collection, analysis and interpretation.

#### 471. Marketing Research Project (1) I, II

Two hours of activity.

Prerequisite: Marketing 470.

Application of marketing research techniques to specific topics. Design, implementation and analysis of a marketing research study. Use of computerized statistical methods for data analysis.

#### 472. Advertising Management (3)

Prerequisites: Marketing 371 and 373.

The management of the advertising and sales promotion function.

#### 473. Sales Management (3) I, II

Prerequisite: Marketing 370 with a minimum grade of C.

Consideration of the structure of sales organization; sales policies; selection, training, compensation, evaluation and control of the sales force; sales analysis; sales quotas; sales costs and budgets; markets and product research and analysis; coordination of personal selling with other forms of sales effort.

#### 474. Industrial Marketing (3) I, II

Prerequisites: Marketing 370 with a minimum grade of C and Management 350.

Study of industrial products and services and how they are marketed; classifications of industrial products and customers; buying procedures; applications of marketing research; analysis of industrial product planning; industrial channels of distribution; industrial promotion applications and pricing practices.

#### 475. Marketing Problems (3) I, II

Prerequisite: Marketing 370 with a minimum grade of C.

Complex cases in marketing involving analysis of business situations.

#### 476. Advanced Marketing Research (3) I, II

Prerequisite: Marketing 470.

Marketing research methods. Analysis and interpretation of data generated by research. Topics in survey methods and statistical analysis. Use of computerized statistical methods such as cross-tabulation, analysis of group differences, correlation and multivariate analysis.

#### 477. Marketing Nonprofit Organizations and Social Causes (3) I, II

Prerequisite: Marketing 370 with a minimum grade of C.

Marketing in nonprofit organizations and other nontraditional situations. Application of marketing techniques to development of marketing programs in such institutions.

#### 479. Marketing Management (3) I, II

Prerequisites: Marketing 371 and 470. Completion of lower division courses required in the major or minor. Proof of completion of prerequisites required.

Planning and implementing marketing strategy by integrating the specific elements in the marketing function. The application of the appropriate decision techniques in developing the overall marketing mix and in solving marketing problems.

#### 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.

May be repeated with new content. Maximum credit six units.

A comprehensive and original study of a problem connected with marketing under the direction of one or more members of the marketing staff.

### GRADUATE COURSES IN MARKETING Refer to the Graduate Bulletin.



## Chemistry

### In the College of Sciences

The department is on the approved list of the American Chemical Society.

#### Faculty

Emeritus: Harrington, Isensee, Joseph, Robinson, Rowe, Spangler, Wick  
Chair: Roeder  
Professors: Abbott, Bennett, Cobble, Coffey, Dahms, Grubbs, Hellberg, Jensen, Jones, Landis, Laub, Lebherz, Malik, Malley, Mathewson, O'Neal, Richardson, Ring, Roeder, Sharts, Stewart, Wadsworth, Walba, Woodson  
Associate Professors: Chatfield, Stumph

#### 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 A.B. degree in applied 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.

## Chemical Physics Major

### With the B.S. 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.

**Preparation for the Major.** Chemistry 200, 201, 231, and 251; Mathematics 150, 151 and 252; Physics 195, 195L, 196, 196L, 197, 197L. (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 43 upper division units to include Chemistry 410A-410B, 431, 520A and 550; Mathematics 340A, 340B; Physics 311, 350A, 354A-354B, 357, 400A and 460.

Recommended: Mathematics 340B, 340C. Individual master plans for each student are filed with Evaluations.

## Chemistry Majors

### In Applied Arts and Sciences

Three majors in chemistry are offered in applied arts and sciences, as follows:

- (1) Chemistry major with the B.S. degree and Certificate of the American Chemical Society, a program designed to qualify graduates for many types of positions as chemists and for admission to graduate work in chemistry;
- (2) Chemistry major with the A.B. degree and Certificate of the American Chemical Society, a program designed to prepare students for graduate work in chemistry; and
- (3) Related Professions major, a program available only to students who are taking a premedical or predental curriculum.

#### Certificate of the American Chemical Society

The Department of Chemistry is on the approved list of the American Chemical Society. Programs leading to a chemistry major with the B.S. degree or the A.B. degree are designed to meet the standards prescribed for the Certificate of the American Chemical Society. The program leading to the Related Professions major is not offered with the Certificate.

## Chemistry Major

### With the B.S. Degree in Applied Arts and Sciences 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.

The curriculum outlined below for the B.S. degree in applied arts and sciences is based upon the recommendations of the Committee for Professional Training of Chemists of the American Chemical Society. It qualifies graduates for many types of positions as chemists and provides the training required by most universities for admission to graduate work in chemistry.

**Preparation for the Major.** Chemistry 200, 201, 231, 237, and 251; Mathematics 150, 151, and 252; and Physics 195, 195L, 196, 196L, 197, 197L. (45 units.)

**Upper Division Writing Requirement.** Passing the University Writing Examination with a grade of C (2.0) or better, or screening in Chemistry 457A or 457B.

**Major.** A minimum of 36 upper division units to include Chemistry 410A-410B, 431, 437, 457A-457B, 520A, 550, 560A, one unit of 498, and 11 units of upper division electives in chemistry. Six of the 11 units may be in related subjects with the approval of the department.

#### 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
† Mathematics 150, 151 .....	5	4	Chemistry 431, 437 .....	—	5
Physics 195, 195L .....	—	4	Mathematics 252 .....	4	—
# General Education .....	6	3	Physics 196, 196L .....	4	—
			Physics 197, 197L .....	—	4
			# 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 457A-457B .....	2	2
Chemistry 560A .....	3	—	Chemistry 498 .....	1	—
Chemistry Elective .....	—	3	Chemistry 520A .....	3	—
© American Institutions .....	3	3	Chemistry 550 .....	2	—
# General Education .....	6	6	Chemistry Electives .....	3	5
			General Electives .....	—	5
			# General Education .....	6	3
	16	15		17	15

\* Refer to catalog section on General Education requirements. The department strongly recommends that students take German 101 and 102 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.

© Students are advised to choose the appropriate course in the Humanities or Social Science sections of General Education to meet half of this six-unit requirement. If this requirement is met entirely by examination, add three units to General Education and three units to General Electives.

#### Emphasis in Biochemistry

**Preparation for the Major.** Chemistry 200, 201, 231, 237, 251; Mathematics 150, 151, 252; Physics 195, 195L, 196, 196L; Biology 201, 202. (49 units.) Physics 197, 197L strongly recommended.

**Upper Division Writing Requirement.** Passing the University Writing Examination with a grade of C (2.0) or better, or screening in Chemistry 457A or 457B.



## 232 / Chemistry

**Major.** A minimum of 37 upper division units to include Chemistry 410A-410B, 431, 457A, 550, 560A-560B, 567, and one unit of 498; Biology 352 and three additional units of biology to be specified by the adviser; and six units selected from Chemistry 520A, 537; Biology 350, 552, 552L, 556, 557, 560, 563, 576, 577, 583, 584, 585, 590.

## Chemistry Major

### With the A.B. Degree in Applied Arts and Sciences 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, 151, and 252; and Physics 195, 195L, 196, 196L, 197, 197L. (45 units.)

**Upper Division Writing Requirement.** Passing the University Writing Examination with a grade of C (2.0) or better, or screening in Chemistry 457A or 457B.

**Major.** A minimum of 25 upper division units in chemistry to include Chemistry 410A-410B, 431, 437, 457A-457B, 520A, 550; one unit of 498; and three units of upper division electives in chemistry to be selected from Chemistry 510, 520B, 530, 537, 560A.

### OUTLINE FOR THE A.B. 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	—
† Math. 104, 140, 150 .....	5	5	Mathematics 151, 252 .....	4	4
Physics 195, 195L .....	—	4	Physics 196, 196L .....	4	—
# General Education .....	6	3	Physics 197, 197L .....	—	4
			# General Education .....	3	3
	16	17		16	16
	Units			Units	
	1st Sem.	2nd Sem.		1st Sem.	2nd Sem.
<b>Third year</b>			<b>Fourth year</b>		
Chemistry 410A-410B .....	4	3	Chemistry 457A-457B .....	2	2
Chemistry 431, 437 .....	5	—	Chemistry 498 .....	1	—
© American Institutions .....	3	3	Chemistry 520A .....	3	—
# General Education .....	3	9	Chemistry 550 .....	2	—
			Chemistry Electives .....	—	3
			General Electives .....	4	3
			# General Education .....	3	6
	15	15		15	14

# Refer to catalog section on General Education requirements. The department strongly recommends that students take German 101 and 102 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.

© Students are advised to choose the appropriate course in the Humanities or Social Science sections of General Education to meet half of this six-unit requirement. If this requirement is met entirely by examination, add three units to General Education and three units to General Electives.

## Chemistry Major

### With the A.B. 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."

This plan is designed for only those students who desire the training in a premedical or predoctoral curriculum. This plan cannot be taken by students who intend to become professional chemists or who intend to earn advanced degrees in chemistry or who plan to teach in community colleges. Application for admission to the plan must be made to the department

chairman upon achieving junior class standing. All transfer students with upper division standing must apply before the second semester of work at San Diego State University. With an appropriate choice of electives, graduates can meet the requirements for admission to medical, dental, and pharmaceutical schools.

**Preparation for the Major.** Chemistry 200, 201, 231, 237, 250; Physics 195, 195L, 196, 196L; Mathematics 104, 140 (unless exempted by examination), 150, 151; Biology 200A or 201, 200B or 202. (50 units.)

**Upper Division Writing Requirement.** Passing the University Writing Examination or screening in Chemistry 457A or 457B.

**Major.** A minimum of 24 upper division units in chemistry to include either Chemistry (310A-310B, 431, 577, ten units of electives in chemistry) or (410A-410B, 431, 457A-457B, 550, 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

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

All candidates for a teaching credential must complete all requirements for a chemistry major for either the A.B. 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.

## 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 250; 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.

\*\* 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.

### LOWER DIVISION COURSES

#### 100. Introduction to General Chemistry with Laboratory (4) I, II

Three lectures and three hours of laboratory.

Prerequisite: Two years of high school algebra or equivalent.

Elementary principles of chemistry used to illustrate nature and development of modern scientific thought. Not open to students with credit in Chemistry 200.

#### 107. Glass Blowing (1)

Three hours of laboratory.

Prerequisite: Chemistry 201.

Elementary training in the manipulation of glass.

#### 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 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**

Three lectures and six hours of laboratory.

Prerequisites: High school chemistry or a grade of "C" or better in Chemistry 100, and two years of high school algebra or equivalent.

General principles of chemistry with emphasis on inorganic materials. Students with credit for both Chemistry 100 and 200 will receive a total of 5 units of credit toward graduation.

**201. General Chemistry (5) I, II**

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.

**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.

**250. Techniques of Analytical Chemistry (5) I, II**

Three lectures and six hours of laboratory.

Prerequisite: Chemistry 201 or 202. Enrollment in this course should immediately follow completion of the prerequisite.

Theory and practice of chemical analysis for life science majors. Not open to students with credit in Chemistry 251.

**251. Analytical Chemistry (5) I, II**

Three lectures and six hours of laboratory.

Prerequisites: Chemistry 201 and credit or concurrent registration in Mathematics 122 or 150. It is recommended that students who plan to enroll in this course do so the semester following completion of the prerequisites.

Theory and practice of gravimetric and volumetric methods of chemical analysis and introduction to instrumental methods of analysis. Not open to students with credit in Chemistry 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)

**310A-310B. Fundamentals of Physical Chemistry (3-3)**

Prerequisites: Chemistry 250 or 251, Mathematics 122, and Physics 180B and 182B. Chemistry 310A is prerequisite to 310B. Not open to students who have credit in Chemistry 410A or 410B.

Fundamental principles of theoretical chemistry. This course cannot apply to the A.B. and certificate or B.S. major in chemistry. Intended mainly for life science majors and preprofessional health students.

**361A-361B. Fundamentals of Biochemistry (3-3) I, II**

Prerequisites: Chemistry 230 or 231.

The chemistry of intermediary metabolism and its regulation. Not open to students with credit in Chemistry 560A-560B.

**410A-410B. Physical Chemistry (4-3) I, II**

410A: Three lectures and three hours of laboratory.

410B: Three lectures.

Prerequisites: Chemistry 201, Mathematics 252, and credit or concurrent registration in Physics 197 and 197L.

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.)

**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.

**457A-457B. Advanced Laboratory Techniques (2-2) I, II**

Six hours of laboratory.

Prerequisites: Chemistry 410A and 550. Chemistry 457A is prerequisite to 457B.

Instrumental methods and physical chemistry concepts applied to advanced projects in chemistry. Emphasis on maintenance of the laboratory notebook with some report writing.

**467. Clinical Biochemistry Laboratory (2)**

Six hours of laboratory.

Prerequisite: Credit or concurrent registration in Chemistry 361A.

Biochemical laboratory techniques. Methods used in clinical laboratories.

**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.

**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)

**500A-500B. Principles of Chemical Engineering (3-3)**

(Same course as Mechanical Engineering 584A-584B.)

Prerequisite: Credit or concurrent registration in Mechanical Engineering 350 or Chemistry 310A or 410A.

Industrial stoichiometry; fluid flow and heat transfer as applied to unit operations such as evaporation, distillation, extraction, filtration, gas-phase mass transfer, drying, and others. Problems, reports, and field trips.

**501. Chemical Oceanography (3)**

Three lectures and occasional field trips.

Prerequisites: Chemistry 201 and 231. Strongly recommended: Chemistry 250 or 251.

Recommended: Chemistry 310B or 410B and Oceanography 320 or 541.

The application of the fundamentals of chemistry to the study of oceans.

**502. Chemical Literature (1)**

Prerequisite: Upper division standing in chemistry.

An introduction to the availability, scope and use of the chemical literature.

**510. Advanced Physical Chemistry (3)**

Prerequisite: Chemistry 410B.

Mathematical tools essential to solving problems in chemical thermodynamics, statistical mechanics, chemical kinetics, quantum chemistry and molecular structure and spectroscopy, with applications.

**520A. Inorganic Chemistry (3)**

Prerequisite: Credit or concurrent registration in Chemistry 310B or 410B.

The physical basis of the periodic system, complex inorganic compounds, and the nature of the chemical bond.

**520B. Inorganic Chemistry (3) II**

Prerequisite: Chemistry 520A.

An advanced systematic study of representative and transition elements and their compounds.

**530. Theoretical Organic Chemistry (3)**

Prerequisites: Chemistry 310A or 410A, and 431. Recommended: Credit or concurrent registration in Chemistry 310B or 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 310A or 410A. Chemistry 457A-457B recommended.

Chemical, physical, and spectral methods discussed and employed to determine structure of organic compounds. Purification and separation techniques stressed.

**550. Instrumental Methods of Chemical Analysis (2)**

Prerequisites: Chemistry 431 and credit or concurrent registration in Chemistry 410B.

Theory and application of those instrumental methods of chemical separation and analysis most frequently used in all subdisciplines of chemistry.

**551. Advanced Analytical Chemistry (3) II**

Prerequisite: Chemistry 550.

Expanded treatment of instrumental methods for separation and quantitation 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 310A or 410A.

The structure, function, metabolism, and thermodynamic relationships of chemical entities in living systems. Not open to students with credit in Chemistry 361A-361B.

**567. Biochemistry Laboratory (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.

**577. Radiochemical Analysis (4)**

Two lectures and six hours of laboratory.

Prerequisite: Chemistry 310A or 410A.

Principles and techniques of radioactivity applied to the various fields and problems of chemistry. Instrumentation, tracer application, activation analysis, nuclear reactions and radiolysis.

**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 six units.

## GRADUATE COURSES

Refer to the Graduate Bulletin.



## Chinese

In the College of Arts and Letters

### Faculty

Professor: Woo

**Offered by the Department of  
Classical and Oriental Languages and Literatures**

Courses in Chinese.

Major or minor work in Chinese is not offered.

### Foreign Language Requirement for the A.B. 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 303 or the equivalent level of achievement. The usual sequence of course work is Chinese 101, 202, and 303. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

#### 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, 202, 303, 304 taken out of sequence.

#### 101. Elementary (4) I

Four lectures and one hour of laboratory.

Pronunciation, oral practice, readings on Chinese culture and civilization, minimum essentials of grammar. Not open to students who have completed three years of high school Chinese unless the third course was completed five or more years ago.

#### 202. Elementary (4) II

Four lectures and one hour of laboratory.

Prerequisite: Chinese 101.

Continuation of Chinese 101. Not open to students who have completed four years of high school Chinese unless the fourth 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.

#### UPPER DIVISION COURSES (Intended for Undergraduates)

**All upper division courses in Chinese are taught in Chinese unless otherwise stated.**

#### 303. Readings in Contemporary Chinese (4) I

Prerequisite: Chinese 202.

Readings in contemporary authors: poetry, short stories, essays.

#### 304. Readings in Chinese (4) II

Prerequisite: Chinese 303.

Readings ranging from classical to contemporary sources.

#### 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.

## Classics

In the College of Arts and Letters

### Faculty

Emerita: Burnett

Professors: Eisner, Genovese, Hamilton, Schaber, Warren

Lecturer: Farrand

**Offered by the Department of Classical and Oriental Languages and Literatures**

Major in classics with the A.B. degree in liberal arts and sciences.

Concentration in classical humanities.

Concentration in Greek.

Concentration in Latin.

Concentration in Greek and Latin.

Teaching major in classics (concentration in Latin) for the single subject teaching credential in foreign languages.

Minor in classical humanities.

Minor in classics.

Classics is the discipline which embraces the study of all aspects of ancient Greek and Roman civilizations, especially literature. The foundation and basic tool for a fuller appreciation of classical culture is a familiarity with ancient Greek or Latin. Courses marked by the letters "G" or "L" are language courses in Greek or Latin and therefore satisfy foreign language requirements. Courses referred to simply as "classics" require no knowledge of Greek or Latin and are taught entirely in English.

#### 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 A.B. 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.



**Concentration in Classical Humanities**

**Preparation for the Major.** Choice of Classics 101G-202G, Classics 250G, Classics 101L-202L, or Classics 250L. (8-10 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 course work 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 304W, History 396W or 430W.

**Major.** A minimum of 30 upper division units to include Classics 320, 330, History 500A-500B, and Philosophy 301 (prerequisites are waived for students in this major); six units from classics, Anthropology 478, Art 568, Religious Studies 310, or Speech Communication 350; 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.

**Concentration in Greek**

**Preparation for the Major.** Classics 101G-202G or Classics 250G. (8-10 units.)

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through course work 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 304W, History 396W or 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 301; 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.

**Concentration in Latin**

**Preparation for the Major.** Classics 101L-202L or Classics 250L. (8-10 units.)

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through course work 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 304W, History 396W or 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 301; 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.

**Concentration in Greek and Latin**

**Preparation for the Major.** Classics 101G-202G, or Classics 250G; Classics 101L-202L, or Classics 250L. (16-20 units.)

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through course work 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 304W, History 396W or 430W.

**Major.** A minimum of 30 upper division units to include Classics 320; nine additional units selected from classics, History 500A, 500B, or Philosophy 301; 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 (Concentration in Latin)****For the Single Subject Teaching Credential in Foreign Languages**

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

This major may be used by students in teacher education as an undergraduate major for the A.B. degree in liberal arts and sciences.

**Preparation for the Major.** Classics 101L-202L or 250L. (8-10 units.)

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through course work 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 304W, History 396W or 430W.

**Major.** A minimum of 30 upper division units to include Classics 303L, 304L, 320, 450L, 496L (3 units), 599L (Special Study in Latin: Teaching Methods, 3 units), History 500B; nine units selected from Classics 310, 330, 340, 350, 496C (maximum of 9 units for 496C and 496L), History 500A, or Philosophy 301.

**Classical Humanities Minor**

The minor in classical humanities consists of a minimum of 15 units, at least 12 of which must be upper division. Lower division units may be selected only from Classics 120, 140, or 296. Six to nine upper division units must be selected from courses in classics (non-language) and three to six units from Anthropology 478, Art 568, History 500A, 500B, Philosophy 301, Religious Studies 310, or Speech Communication 350.

Students should note that some of these upper division courses have lower division prerequisites, 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.

**Classics Minor**

The minor in classics consists of a minimum of 15-22 units, 12 of which must be upper division and nine of which must be in Latin or in Greek. Three to nine upper division units must be selected from classics (non-language), History 500A, 500B, or Philosophy 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.

**Foreign Language Requirement for the A.B. 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 303L. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

**LOWER DIVISION COURSES**

No credit will be given for Classics 101G, 202G, 303G, 304G taken out of sequence.  
No credit will be given for Classics 101L, 202L, 303L, 304L taken out of sequence.

**101G. Elementary Greek I (5)**

Introduction to ancient Greek, emphasizing grammatical foundations of New Testament and Attic prose. Aimed toward rapid comprehension. 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. Aimed toward rapid comprehension. 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) I, II**

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. The Heritage of Greece and Rome (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) S 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) S 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)

**303G. Readings in Greek Prose (3) I**

Prerequisite: Classics 202G or 250G.

Readings selected from Greek history, philosophy, oratory, and New Testament. Authors may include Xenophon, Plato, Lysias, the Evangelists. Emphasis on rapid reading.

**303L. Readings in Latin Prose (3) I**

Prerequisite: Classics 202L or 250L.

Readings selected from classical Latin history, philosophy, oratory, letters. Authors may include Sallust, Cicero, Pliny the Younger. Emphasis on rapid reading.

**304G. Readings in Greek Poetry (3) II**

Prerequisite: Classics 303G.

Readings selected from Greek epic, elegy, tragedy. Authors may include Homer, Sophocles, Euripides.

**304L. Readings in Latin Poetry (3) II**

Prerequisite: Classics 303L.

Readings selected from classical Latin epic, lyric, elegy, comedy. Authors may include Vergil, Catullus, Ovid, Plautus.

**310. Greek and Roman Mythology (3) I, II**

Mythological elements in Greek and Roman art, literature, and religion.

**320. Classical Literature (3) I**

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**

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)**

Greek and Roman civilization from Bronze Age to Late Empire. Integration of history, philosophy, literature, the arts, and society.

**350. Eros and Amor (3)**

Reading in translation of Greek and Latin works concerned with love and sexuality. Emphasis on the great literary *affaires d'amour* as well as common, mythical, and philosophical attitudes. Authors such as Sappho, Euripides, Plato, Catullus, Ovid, Longus. Literary criticism and cultural comparisons.

**450L. Advanced Latin (3) I, II**

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 304G or 304L. For 599G: 304G. For 599L: 304L.

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 Human Services

The clinical services area is accredited by the American Speech-Language-Hearing Association.

#### Faculty

Emeritus: Earnest, Kopp, Pfaff  
Chair (Acting): Novak  
Professors: Nichols, Riedman, Singh, Thile  
Associate Professors: Allen, Dworkin, Hodson, Jones, Newhoff, Novak  
Assistant Professors: Cheng, Christensen, Davies, Gomes, Williams  
Lecturers: Fischer, Frank, Launer

#### Offered by the Department.

Master of Arts degree in communicative disorders.  
Major in communicative disorders with the A.B. degree in applied arts and sciences.  
Minor in communicative disorders.  
Certificate in professional services bilingual/bicultural.  
Special education specialist credential for the communication handicapped.  
Clinical-rehabilitative services credential.

### Communicative Disorders Major

#### With the A.B. 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 the major.

**Preparation for the Major.** Passing the SDSU Mathematics Placement Examination; Communicative Disorders 106 and 205; Physics 201; Psychology 101 and 260. (15 units.) Psychology 270 is recommended for students planning to apply for the graduate program in communicative disorders.

**Upper Division Writing Requirement.** Passing the University Writing Examination or one of the approved writing courses with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units in communicative disorders to include Communicative Disorders 320, 321, 322, 340, 341, 531, and eight units of electives selected from Communicative Disorders 358, 401, 422, 423, 458, 530, 539, 543, 547, 550, 551, 552, 553, 554, 555.

### 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, 531, or 550. Communicative Disorders 341 is not required for the minor.

Prerequisites for the minor include Physics 201, Psychology 101 and 260. (10 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.

\* Prerequisites for this course waived for students in this minor.

### Professional Services Bilingual/Bicultural Certificate

The Professional Services Bilingual/Bicultural Certificate in Communicative Disorders is designed primarily for persons who plan to work with bilingual populations with communicative disorders. The certificate program is awarded at the undergraduate level but both undergraduate and graduate students may enroll.

To be a candidate for the certificate, the student must be actively seeking or have completed a credential or degree program in communicative disorders since the certificate is

coordinated with these endeavors. Candidates seeking admission to the certificate program must schedule an interview with the department certificate coordinator to ascertain specific requirements and units. They must demonstrate a proficiency in two languages (English is one) and satisfy admission requirements of the University and the department as listed in the General Catalog or Graduate Bulletin. The certificate is limited to those languages for which there is an available clinical population. Consult the certificate coordinator for approved languages.

The certificate program requires completion of a minimum of 24 units of substantive course work and 100 supervised contact hours of practicum. The certificate is competency based and specific requirements may be waived upon demonstration of competency. Course requirements include Communicative Disorders 571, 572; Linguistics 553; Policy Studies in Language and Cross-Cultural Education 551; six units in cultural awareness and differences; three units in cultural aspects of language; and three units in multicultural education or the bilingual exceptional child. Specific courses are to be selected in conjunction with the certificate coordinator.

### Credentials

The Department of Communicative Disorders offers academic and practica course work 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

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 Subjects Credential (Elementary)

— or —

1. A basic teaching credential.
2. Students should consult with appropriate advisers in the College of Education for specific requirements.
3. Students applying to the program at the postbaccalaureate level must satisfy the admission requirements of the department for classified graduate standing.
4. 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 subjects 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. Courses outside of the Department of Communicative Disorders including Psychology 101, 260, 270, Physics 201.
  - b. Advanced work in the area of specialization in the Department of Communicative Disorders including:
    - (1) Communication Handicapped Specialization generic course work: Communicative Disorders 106, 205, 320, 321, 322, 340, 341, 358, 453\*, 531, 551, 552, 553.
    - (2) Additional course work required for the specific area of emphasis within the credential (Severe Oral Language, Deaf, Deaf-Blind, Speech and Hearing), selected by the student in conjunction with an adviser.
3. A postbaccalaureate year (minimum of 30 semester units) is required of all candidates.

\* Additional prerequisites required for this course.

**Clinical-Rehabilitative Services Credential**

Clinical-Rehabilitative Services (C-RS) Credentials are available in the following areas:

Language, Speech and Hearing (LSH)  
Audiology  
Severe Language Handicapped/Aphasic (SLH)  
(Special Class Authorization) (SCA)

A postbaccalaureate year (minimum of 30 semester units) is required of all candidates. The following generic courses within the Department of Communicative Disorders are required: Communicative Disorders 106, 205, 320, 321, 322, 325 or 357, 340, 341 or 545\*, 423, 524\*, 526, 527\*, 530, 531, 546, and 551. Courses from other departments include: Psychology 101 or Sociology 101; Psychology 210, 260 or Biology 150; Psychology 330 or Family Studies and Consumer Sciences 270; Psychology 340 or Sociology 440 or Family Studies and Consumer Sciences 436, 271 or 576; Physics 201; Special Education 500, 596†.

The Advanced Specialization Program in Language, Speech and Hearing (LSH) requires the following additional courses: Communicative Disorders 401, 422, 433, 528, 528L, 529, 552, 553, 626, and 646 (or 546). 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 325 (SLH class placement), 529, 554, 555, and 433 (SLH class placement). Courses in other departments include Teacher Education 410A, 430A or 431, 637, 638A; Special Education 501.

In addition to the generic program, the Advanced Specialization Program in Audiology requires the following courses within the Department of Communicative Disorders: Communicative Disorders 358, 433 (Audiology class placement), 529, 542, 542L, 543, 547, 550, 552, 553, 600, 644, 649 (Pediatrics), 656 and 657.

\* Additional prerequisites required for this course.

† See Department Credential Coordinator for options.

**Certificates and Licensure****Preparation Leading to the Certificate of Clinical Competence from the American Speech-Language-Hearing Association**

Students may complete the academic and clinical practice requirements leading to the Certificate of Clinical Competence in Speech-Language Pathology (CCC-Sp) or to the Certifi-

cate of Clinical Competence in Audiology (CCC-A) given by the American Speech-Language-Hearing Association (ASHA). The certificate requires 60 units of course work, 30 units of which must be completed at the graduate level; 300 clock hours of supervised clinical experience, 150 hours of which must be completed at the graduate level; a clinical fellowship year; and a national examination. The academic and practica requirements must meet certain specifications. Consult an adviser in the area in which certification is desired for specific information.

**Preparation Leading to the State Credential and the Professional Certificate from the Council on Education of the Deaf**

Students may complete the academic and practica requirements leading to the State Credential and the Professional Certificate given by the Council on Education of the Deaf. The Professional Certificate requires a specific pattern of courses and teaching experiences and evidence of successful classroom teaching following completion of the academic requirements. Consult an adviser in the Program for Education of 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 course work in the area (Speech Pathology or Audiology) in which the license is to be granted, 275 clock hours of clinical experience, nine months of full-time experience (Required Professional Experience), and a national examination. Most Licensure and ASHA Certification requirements may be fulfilled concurrently. Consult an adviser in the area in which licensure is desired for specific information.

**LOWER DIVISION COURSES****104. Voice and Articulation (3) I, II**

Vocal and articulatory dynamics as bases of standard and nonstandard 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 the 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. Fifteen hours of observation or project required. 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.

**205. Introduction to Audiology (2) I, II**

Prerequisite: 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. Fifteen hours of observation required.

**UPPER DIVISION COURSES**

(Intended for Undergraduates)

**305. Speech and Language Development and Communication Disorders (3) I, II**

Normal development of speech and language. 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 and Physiology of Speech (3) I, II**

Two 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. Laboratory exercises and demonstrations using charts, models, histological materials and cadavers.

**322. Psychological Foundations of Communicative Disorders (3)**

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.

**325. Fieldwork in Communication Disorders: School Settings (1-3) I, II Cr/NC**

Two hours for each unit of credit.

Prerequisites: Departmental approval, affidavit for Certificate of Clearance, and credit or concurrent registration in Communicative Disorders 106.

Field observation and participation under supervision with small groups or with individuals who have speech, hearing or language impairment. Maximum credit three units.

**340. Audiometry: Principles (3)**

Prerequisites: Communicative Disorders 205, Physics 201, Psychology 260 and concurrent registration in Communicative Disorders 341.

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.

**341. Techniques of Audiometry (1) I, II**

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Communicative Disorders 340.

First enrollment should be concurrent with Communicative Disorders 340 to provide laboratory experience with pure tone, speech, and impedance audiometric tests presented in Communicative Disorders 340; also develops audiological competencies needed by nurses for the California School Audiometrist Certificate. May be repeated to obtain the contact hours in audiometric screening required by the American Speech-Language-Hearing Association and to develop the audiological competencies required by the Clinical-Rehabilitative Services Credential. Maximum credit two units.

**357. Fieldwork with the Deaf (1-2) I, II Cr/NC**

Prerequisite recommended: Communicative Disorders 205.

Field observation and participation under supervision with small groups of hearing impaired youngsters. Maximum combined credit six units for Communicative Disorders 357, 556, and 656.

**358. Manual Communication for the Hearing Impaired (2) I, II Cr/NC**

Prerequisites: Demonstrated professional need and consent of instructor. Recommended: Communicative Disorders 106 or 205; credit or concurrent registration in Communicative Disorders 357.

Structure, vocabulary and syntax of manual communication including the development of competencies in manual communication and in the use of manual communication as a method of teaching the hearing impaired.

**401. Voice Disorders (3)**

Two lectures and three hours of laboratory.

Prerequisite: Communicative Disorders 321.

Theory and practice in the remediation of voice problems. Perceptual training and measurement of vocal dimensions.

**422. Remediation for Fluency Disorders in School-Aged Children (2)**

Prerequisite: Communicative Disorders 322.

Theoretical and phenomenological understanding of stuttering as a communicative disorder; explanations for learning of dysfluent behaviors; and applied techniques involved in rehabilitation of school-aged children with dysfluent speech.

**423. Organic Communicative Disorders (3)**

Prerequisites: Communicative Disorders 320, 321, 340, 341, and 531; competency examination.

Survey of cleft palate, cerebral palsy and neuromotor disorders, adult aphasia, autism, and neurologically based language disorders in children. Includes etiological factors, speech, language and related symptomatology, as well as speech and language evaluation and therapy procedures. (Formerly numbered Communicative Disorders 323.)

**425. Fieldwork in Communicative Disorders: Community Centers (1-3) Cr/NC**

Two hours for each unit of credit.

Prerequisites: Departmental approval; Communicative Disorders 325.

Field observation and participation under supervision with small groups or with individuals who have speech, hearing, or language impairments. Hospital and community agency settings.

**433. Clinical Practice in Public Schools (4 or 5) I, II Cr/NC**

Prerequisites: Communicative Disorders 529, four units of practica; postbaccalaureate standing; California Basic Education Skills Test; Certificate of Clearance; departmental approval prior to admission.

Clinical practice in elementary or secondary schools or community colleges in speech-language pathology or audiology. Applies only toward the Clinical-Rehabilitative Services Credential (C-RS) or for the Certificate of Clinical Competency in Speech-Language Pathology (ASHA). Enroll in section A for the Language, Speech and Hearing Credential (LSH). Candidates seeking the Special Class Authorization or Severe Language Handicap (SLH) Credential must enroll in both sections A and B, sequentially or concurrently.

A. Clinical Practice in the Public Schools: Language, Speech and Hearing, 4 units (120 clock hours).

B. Clinical Practice in the Public Schools: Severe Language Handicaps, 5 units (150 clock hours).

**453. Directed Internship: Communication Handicapped (1-4) I, II Cr/NC**

Prerequisites: Two units of Communicative Disorders 556 and one unit of Communicative Disorders 656 or Communicative Disorders 529 and four units of Communicative Disorders 526, 546, 626, 646. Basic teaching credential. Prior to admission applicants must receive departmental approval. Application to take course should be made during preceding semester.

Teaching in public school with exceptional individuals. Applies toward the Special Education Specialist Credential for the Communication Handicapped (Deaf, Deaf-Blind, Speech and Hearing or Severe Oral Language) and Certificate of Clinical Competence in Speech-Language Pathology or Professional Certificate from the Council on Education of the Deaf. Applicants should consult with coordinator of Speech-Language Pathology or coordinator of Education of Hearing Impaired for specific hour requirements. (Formerly numbered Special Education 480.)

**458. Total Communication for Teachers of the Hearing Impaired (2)**

Prerequisite: Communicative Disorders 358. Concurrent registration in 458L recommended.

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.

Prerequisite: Credit or concurrent registration in Communicative Disorders 458.

Laboratory experience to develop receptive and expressive total communication skills. Maximum credit two units.



**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)

**524. Clinical Procedures in Communicative Disorders (3) I, II**

Prerequisites: Communicative Disorders 322, 423, 552, 553.

Remediation models and clinical approaches, procedures, and techniques. Integration of theoretical information and clinical applications. (Formerly numbered Communicative Disorders 324.)

**526. Clinical Practice in Speech-Language Pathology (1) I, II, S**

Three hours of laboratory.

Prerequisites: Communicative Disorders 325 or documented 25 hours of observation, 524.

527. Admission is based on passage of a competency examination prior to enrollment and departmental approval.

Supervised practice with representative speech and language problems. Up to three units may be taken concurrently; maximum credit three units. One unit represents 26 hours of direct clinical practice. Qualified transfer students must enroll in at least one unit of 526 prior to 626. (Formerly numbered Communicative Disorders 326.)

**527. Diagnostic Methods in Speech-Language Pathology (3) I, II**

Prerequisites: Communicative Disorders 423, 552, 553. Credit or concurrent registration in Communicative Disorders 524.

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.

**528. Diagnostic Practicum in Speech-Language Pathology (3) I, II**

One lecture and six hours of supervision.

Prerequisite: Communicative Disorders 527 and passage of a competency examination.

Supervised clinical practice in diagnostic methods.

**528L. Diagnostic Practicum in Communicative Disorders: Multidisciplinary Assessment (2) I, II**

Four hours of activity.

Prerequisites: Communicative Disorders 527 and concurrent registration in 528.

Participation in Central Intake process of SDSU Clinical Training Center, including diagnostic team assessments and staffings.

**529. Orientation to Public School Practicum (3)**

Prerequisites: Communicative Disorders 524 and 527. Minimum of 50 hours of supervised clinical practicum, plus departmental approval. Recommended: Credit or concurrent registration in Communicative Disorders 526, 546, 626 or 646.

Goals, materials and procedures for organizing and administering speech, language and hearing programs in the school. Fifteen hours of observation and fifteen hours of screening required. Should be taken the semester before Communicative Disorders 433 or 453.

**530. Family Communication Dynamics (3)**

Prerequisites: Communicative Disorders 322 and 526.

The communication environment in the home. Parent-child interaction in relation to the origin and alleviation of functional and organic speech disorders.

**531. Language Structure (3)**

Prerequisite: Communicative Disorders 106.

Systematic study of the design features of language as they relate to communication behavior. The primary focus is the role of language structure in disordered communication.

**539. Neuropathologies of Speech, Hearing and Language (3) II**

Prerequisites: Communicative Disorders 321 and 340. Recommended: Communicative Disorders 423.

Research and theory concerning the nature, etiologies and principles of treatment of disorders of speech, hearing and language resulting from pathologies of the nervous system.

**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)**

Prerequisites: Communicative Disorders 341 and concurrent registration in 542L.

Pure tone and speech audiometry; masking; impedance audiometry; tests for nonorganic and for sensorineural hearing loss; reporting test results; audiometer calibration. (Formerly numbered Communicative Disorders 342.)

**542L. Audiometry: Laboratory (1)**

Prerequisites: Communicative Disorders 341 and concurrent registration in 542.

Laboratory experience in administering audiometric test batteries and in calibrating audiometric equipment. (Formerly numbered Communicative Disorders 342.)

**543. Hearing Amplification (1 or 3) I**

Prerequisites: Module I: Communicative Disorders 340. Module II: Communicative Disorders 542.

Module I includes hearing aid components, functions, trouble shooting and client orientation to amplification (1 unit). Module II includes hearing aid evaluations, fittings, and electro-acoustical hearing aid analysis (2 units). Students may elect Module I (1 unit) or Modules I and II (3 units).

**545. Clinical Practice in Audiologic Assessment (1) I, II, S**

Three hours of laboratory.

Prerequisite: 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. (Formerly numbered Communicative Disorders 345.)

**546. Clinical Practice with Hard of Hearing (1) I, II, S**

Three hours of laboratory.

Prerequisites: Communicative Disorders 526, 551. Recommended: Communicative Disorders 543, Module I; 552 and 553.

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. (Formerly numbered Communicative Disorders 346.)

**547. Hearing Conservation (2-3) II**

Prerequisite: Communicative Disorders 341.

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. Problems of Deafness (3) II**

Educational programs, services and resources for hearing impaired; historical background, philosophy, sociological and psychological problems.



**551. Speech Reading and Auditory Training (3)**

Prerequisites: Communicative Disorders 320 and 340; competency examination. Recommended: Communicative Disorders 357, 531 and 553.

Theory and methods of speech reading; auditory rehabilitation methods including survey of amplification systems. Fifteen hours of observation in program for deaf, severely hard of hearing.

**552. Articulation Disorders and Methods (3) II**

Prerequisites: Communicative Disorders 320, 321, 340, 531.

Significant theories and research in prevention and remediation of articulatory disorders. Includes emphases on speech habilitation of hearing impaired, cognitive and motor processing.

**553. Language Disorders and Methods (3) I, II**

Prerequisites: Communicative Disorders 320, 321, 340, 531.

Theories and research in language acquisition and language disorders. Assessment of, and intervention with, language impaired children, including hearing impaired individuals.

**554. Communicatively Handicapped Child in the School (1) II**

Each section meets three hours weekly for five weeks. Additional observations arranged.

Prerequisites: Communicative Disorders 526 and postbaccalaureate status.

Assessment and remediation procedures for communicatively handicapped child in school. Each one-unit section focuses on a particular aspect. For students planning to be itinerant speech-language pathologists working with resource teachers serving Language Learning Disabled Child (LLD) and child with multiple problems or for candidates working toward special class authorization for language impaired pupils. Students may enroll for more than one section. Candidates for Clinical-Rehabilitative Services (C-RS) Severe Language Handicapped (LSH) Credential and Special Education Specialist Credential for Communicatively Handicapped: Severe Oral Language Classroom option must enroll for all three sections. Sections should be taken in sequential order.

A. Language Learning Disabled Child

B. Sensory Motor Integration

C. Communicatively Handicapped Child in the Special Day Class

**555. Curriculum for the Communicatively Handicapped (3)**

Prerequisites: Communicative Disorders 526 or 556, and 552 and 553.

Application of cognitive processing theory to the development and evaluation of curriculum, materials, and procedures; selection of learning modalities and appropriate modification of curriculum. (Formerly numbered Special Education 575.)

**556. Clinical Practice with the Deaf (1) I, II, S**

Three hours of laboratory.

Prerequisites: Communicative Disorders 357, 358; credit in two of the following and concurrent registration in the third: Communicative Disorders 551, 552, 553. 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. (Formerly numbered Communicative Disorders 356.)

**558. Advanced Sign Language (2) I, II**

Prerequisite: Communicative Disorders 458.

Theory of sign language for the classroom interpreter. Emphasis on conceptual sign, signed idioms and appropriate usage for the academic setting.

**560. Motor Speech Disorders (3) I**

Prerequisite: Communicative Disorders 539.

Dysarthrias and apraxia of speech. Techniques of differential diagnosis and treatment of these motor speech disorders.

**565. Nonvocal Communication for Disabled (3) II**

Prerequisites: Communicative Disorders 526 or 556 and 531 or 12 units of upper division course work in major and approval of instructor.

Communication needs of severely physically impaired. Nonvocal communication approaches and assistive devices. Criteria for assessing communication needs and competencies, selecting and evaluating appropriate systems. Project required.

**568. Spanish and Sign Language (2)**

Prerequisite: Demonstrate competence at the intermediate level in either Spanish or sign language.

Rudiments of sign language taught to Spanish speakers and the basics of Spanish to users of sign language. Emphasis on communication needs within health care setting, public school setting and informal social setting.

**571. Assessing the Bilingual Child with Communicative Disorders (3)**

Prerequisites: Communicative Disorders 531 and Linguistics 553.

Assessment procedures applicable for bilingual child with communicative disorders. Consideration of available instruments, appropriateness for target populations and validity of adaptations.

**572. Remediation of Communicative Disorders in the Bilingual Population (3)**

Prerequisite: Communicative Disorders 571.

Intervention strategies and procedures for bilingual individual with communicative disorders. Selection criteria, factors influencing planning, program models and specific procedures for different ethnic groups and types of communicative disorders.

**580. Communication Problems of the Aging (3)**

Prerequisites: Twelve upper division units in 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 six units. Maximum credit three units applicable to a master's degree.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.



## Comparative Literature

### In the College of Arts and Letters

#### Faculty

Faculty assigned to teach courses in comparative literature are drawn from departments in the College of Arts and Letters.

#### Offered by Department of English and Comparative Literature

Major in comparative literature with the A.B. degree in liberal arts and sciences.

Teaching major in comparative literature for single subject teaching credential in English.

Minor in comparative literature.

#### 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 A.B. 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 comparative literature and English courses can apply to the degree.

A minor is not required with this major.

**Preparation for the Major.** Any two lower division courses in comparative literature.

**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 500W, 508W, 581W, 582W with a grade of C (2.0) or better.

**Major.** A minimum of 24 upper division units in comparative literature courses or one of the following alternatives: (1) 18 units in comparative literature and six units in a foreign language literature (recommended for students who expect to do graduate work in comparative literature); or (2) 18 units in comparative literature and six units in English language literature, comprised of upper division courses in either British or American literature.

### Comparative Literature Major

#### For the Single Subject Teaching Credential in English

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.

### 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 three lower division units must be either in Comparative Literature 210 or in a course preparatory to the student's interest area. The 12 units of upper division work must be selected, with adviser's approval, from within one of the following interest areas:

**European:** Comparative Literature 405, 510, 511, 512, 513, 514, 526;

**Asian and Third World:** Comparative Literature 430, 440, 445, 526;

**Literary Theory, Criticism and Genres:** Comparative Literature 560, 561, 562, 563, 580, 581;

**Literature and Society:** When appropriate, Comparative Literature 470, 490, 495, 550, 561, 562, 563, 571, 580.

In addition the following variable content courses may be used in any of the above categories when they are appropriate: Comparative Literature 470, 490, 495, 550, 561, 562, 563, 571, 577, 580, 581.

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.

#### LOWER DIVISION COURSES

Since all reading assigned for classes in comparative literature is in English, knowledge of a foreign language is not required.

#### 200. 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.

#### 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. Recommended for majors in comparative literature.

#### 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.

#### UPPER DIVISION COURSES

##### (Intended for Undergraduates)

#### 405. The Bible as Literature (3) I, II

Same course as English 405.

Prose and poetry of the King James version. (Formerly numbered Comparative Literature 505.)

#### 430. Asian Literature (3)

Selections from the literature of Asia: Chinese, Japanese, Indian, etc. Topic to be announced in Class Schedule. May be repeated with new title and content. Maximum credit six units of which three units may be applicable to General Education.

#### 440. African Literature (3)

Comparative study of African literature as well as Black literature of North and South America and the Caribbean; intercontinental influences and the theme of Black identity.

#### 445. Modern Latin American Literature (3) I, II

Reading selections from major Latin American authors.

#### 470. Folk Literature (3)

Studies in the ballad, bardic poetry, oral and popular literature and folklore. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units of which three units may be applicable to General Education.

#### 490. Literary Movements (3)

A movement or theme in world literature—such as symbolism, realism, existentialism, alienation, or revolution. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

#### 495. Literature and Other Disciplines (3) Cr/NC

Comparative study of relationship between literature and another field, such as philosophy, psychology, political science, or sociology. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

#### 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)

#### 510. Medieval Literature (3)

Representative selections from authors of the Middle Ages.



**511. Continental Renaissance (3)**

Representative selections from authors of the Renaissance period in continental Europe.

**512. Seventeenth and Eighteenth Century European Literature (3)**

Selected works by European writers prior to 1800.

**513. Nineteenth Century European Literature (3)**

Selected works by European writers between 1800 and 1900.

**514. Modern European Literature (3)**

Selected works by European writers of the twentieth century.

**526. Modern Jewish Literature (3) I, II**

Selected works by Jewish authors from the last half of the nineteenth century to the present, with emphasis on the United States and Israel.

**550. Seminar (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.

**560. The Epic (3)**

Selected epic poems from world literature; emphasizes the Western epic tradition from Homer to the present. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units applicable on a master's degree.

**561. Fiction (3)**

A comparative approach to themes and forms in fiction (novel and short story). Focus of course to be set by instructor. May be repeated with new 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 applicable on a master's degree.

**563. Poetry (3)**

A comparative approach to themes and forms in poetry. Focus of course to be set by instructor. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units applicable on a master's degree.

**571. Literary Use of Legend (3)**

Literary treatment of such legendary figures as Don Juan, Faust, and Ulysses, in a wide range of literature and genres. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**577. Major Individual Authors (3)**

In-depth study of the works of a major author, such as Sophocles, Dante, Cervantes, Goethe, 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.

**581. Literary Uses of Languages (3)**

Study of the functions of language in literary writings. May take the form of translation workshop, stylistic studies, etc. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

**595. Literature and Other Arts (3)**

Prerequisite: Six lower division units in English, comparative literature or the arts.

Comparative study of literature and such arts as painting, sculpture, architecture, music, dance and film. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**Criminal Justice Administration**

In the School of Public Administration and Urban Studies  
In the College of Professional Studies and Fine Arts

**Faculty**

Professor: Gitchoff

Associate Professors: Boostrom, 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.

**Criminal Justice Administration Major****With the B.S. Degree in Applied Arts and Sciences**

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 110, and a three-unit course in elementary statistics (e.g., Sociology 201, Mathematics 250). (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.

**LOWER DIVISION COURSE****200. Introduction to Criminal Justice Administration (3) I, II**

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**

Prerequisite: Criminal Justice Administration 200.

Interrelationship of social control, social policy and administration of criminal justice in contemporary American society.

**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.

**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**

Prerequisite: Consent of instructor.

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.



## Drama

### In the College of Professional Studies and Fine Arts

The Department of Drama is a Member of the  
National Association of Schools of Theatre.

#### Faculty

Emeritus: Howard, Povenmire, Powell, Sellman  
Chair (Acting): McKerrow  
Professors: Amble, Annas, Harvey, M., Lessley, McKerrow, Owen, Salzer, Stephenson  
Associate Professors: Childs, Fields, Harvey, A.C.  
Assistant Professors: Bellinghiere, Christian, Reid

#### Offered by the Department

Master of Arts degree in drama.  
Master of Fine Arts degree in drama.  
Major in drama with the A.B. degree in applied arts and sciences.  
Emphasis in acting.  
Emphasis in children's drama.  
Emphasis in design for drama.  
Emphasis in design for television.  
Emphasis in directing.  
Teaching major in drama for the single subject teaching credential in English.  
Minor in drama.

## Drama Major

### With the A.B. 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.

#### General

**Preparation for the Major.** Drama 105, 110, 120, 130, 231, 240, and 250. (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 41 upper division units in drama to include Drama 420, 440, 442 (eight units of Drama 442 must be taken prior to graduation), 457, 458 or 459, 460A-460B, and 15 units of electives in drama selected with the approval of the adviser.

#### Emphasis in Acting

**Preparation for the Major.** Drama 105, 110, 120, 130, 231, 232, 240, and 250. (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 44 upper division units in drama to include Drama 420, 434, 440, 442 (eight units of Drama 442 must be taken prior to graduation), 457, 458 or 459, 460A, 460B, 532, 533A-533B, 551, and either 310, 330, 351, or 431.

#### Emphasis in Children's Drama

**Preparation for the Major.** Drama 105, 110, 120, 130, 231, 240, 250 and 255. (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 43 upper division units to include Drama 310, 329A or 329B, 420, 440, 442 (eight units of Drama 442 must be taken prior to graduation), 457, 460A, 460B, 480, 511, 515; Elementary Education 512 (three units); and three units selected from Drama 431, 434, 458, 532, 545A.

#### Emphasis in Design for Drama

**Preparation for the Major.** Drama 105, 110, 120, 130, 231, 240, and 250. (21 units.)

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 304W with a grade of C (2.0) or better.

**Major.** A minimum of 43-44 upper division units in drama to include Drama 420, 440, 442 (eight units of Drama 442 must be taken prior to graduation), 452, 457, 458 or 459, 460A-460B, 540, 545A, 552, 560 (one unit taken each semester up to maximum of three units), and either 448, 545B, 546, or 554.

#### Emphasis in Design for Television

**Preparation for the Major.** Drama 105, 120, 240, 250, Telecommunications and Film 120, 122, 123, and 260 or 280. (Prerequisites for Telecommunications and Film 260 and 280 are waived for students in this emphasis.) (24 units.)

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 304W with a grade of C (2.0) or better.

**Major.** A minimum of 38 upper division units to include Drama 440, 442 (eight units of Drama 442 must be taken prior to graduation), 448, 452, 540, 545A, 545B; Telecommunications and Film 315, 401, 550A, and either Drama 546 or three units of Telecommunications and Film 499 or 550B.

#### Emphasis in Directing

**Preparation for the Major.** Drama 105, 110, 120, 130, 231, 240, and 250. (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 in drama to include Drama 420, 431, 434, 440, 442 (eight units of Drama 442 must be taken prior to graduation), 452, 457, 459, 460A-460B, 532, 533A, 545A, 552, and either 351, 515, or 551.

## Drama Major

### For the 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 the College of Education.

This major may be used by students in teacher education as an undergraduate major for the A.B. degree in applied arts and sciences.

**Preparation for the Major.** Drama 105, 110, 120, 130, 231, 240, 250. (21 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 31 upper division units to include Drama 310, 420, 440, 442 (eight units of Drama 442 must be taken prior to graduation), 457, 460A-460B, 480, 545A.

**Credential requirements.** A minimum of 21 units as follows: English 100, 200, 250A or 250B; three units selected from English 260A, 260B, 560A, 560B; three units selected from English 500W, 508W; three units selected from English 527, 533, 541A, 541B, 546; and three units selected from Linguistics 410, 520, 524.

## 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 130, 231, 240, 250, 420, 457, 458 or 459, and 460A or 460B.

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.



### LOWER DIVISION COURSES

#### 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.

#### 110. Voice and Diction for the Theatre (3) I, II

Prerequisite: Drama 105.

Exercises and drills to improve the quality, flexibility and effectiveness of the speaking voice leading to good usage in standard American speech. Preparatory to further courses in drama.

#### 120. Dramatic Heritage (3) I

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. Elementary Acting (3) I, II

Prerequisite: Drama 110.

Development of individual's ability to express thought and emotion through effective use of the voice and body. These fundamental skills may be applied to stage, radio, and television acting. In addition to classroom experience, students will participate in 24 hours of related activity.

#### 231. Intermediate Acting (3) I, II

Two lectures and two hours of activity.

Prerequisite: Drama 130.

Continuation of Drama 130, emphasizing application of fundamental skills to problems of emotion, timing, characterization, and ensemble acting.

#### 232. Movement and Mime for the Theatre (3) I

Two lectures and three hours of laboratory.

Prerequisite: Drama 105.

Basic disciplines of locomotor and axial body movement for the stage director and actor; introduction to mime. The relationship between body expression and character portrayal.

#### 240. Dramatic Production (3) I, II

Two lectures and three hours of laboratory.

Prerequisite: Drama 105.

Technical practices and organization of production for theatre and television. Practice in drafting and construction of scenery for the college productions.

#### 250. Elementary Stage Costume and Makeup (3) I, II

Two lecture-demonstrations and three hours of laboratory.

Prerequisite: Drama 105.

Basic theories, techniques, and procedures of costume production and makeup application for stage, film, and television. Practical training in the construction of stage costumes and application of makeup for departmental productions. One building or running crew required.

#### 255. Children's Theatre (3) I

Examination of existing philosophies and practices dealing with children's theatre presentations. Theory and technique of selecting and producing plays for children. Introduction to directing for children's theatre. Practical experience through participation in university-sponsored productions.

#### 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 Drama Activities (1) I, II

Three hours.

Planning, preparation, management and supervision of drama tournaments, festivals and other interscholastic and intrascholastic activities under the supervision of the drama staff. Maximum credit two units.

#### 310. Creative Drama (3) I, II

Principles and techniques of creative drama with children, young adults, adults and senior citizens, in classroom, theatre work, in conjunction with therapeutic programs, or as a recreation activity. Development of individual mentally, emotionally and socially through use of dramatic play, imaging, improvisation, theatre games.

#### 320. Speaking the Classic Theatre (3) I, II

Prerequisites: Drama 110, 231.

Techniques of vocal expression in the theatre, primarily in Shakespeare and classical drama. Emphasis on individualized instruction and vocal problem solving.

#### 325. Dramatic Works: Production Laboratory (3) Cr/NC I, II

Nine hours of laboratory.

Staging of full-length plays in traditional and experimental productions. Maximum credit six units.

#### 328A-328B. Musical Theatre Touring Company (3-3) I, II Cr/NC

Six hours of activity.

Production of musical theatre performances in a touring group. Practical experience through performances to community organizations, schools in Southern California area.

#### 329A-329B. Children's Theatre Workshop (3-3) Cr/NC

Six hours of activity.

Prerequisites: Drama 255 and consent of instructor.

Production of plays for child audiences, with emphasis on elementary and junior high levels. Practical experience through participation in university-sponsored productions.

#### 330. Accents and Dialects for the Stage (3) II

Prerequisite: Drama 130.

Various accents and dialects most frequently occurring in stage productions.

#### 350. Acting Studies in the Musical Theatre Repertoire (3) I

Two lectures and two hours of activity.

Prerequisite: Admission by audition only.

Basic performance techniques for actor-singer-dancer in musical theatre production. Application of acting theory to musical literature: soliloquy, recitative, duet. (Formerly numbered Drama 327.)

#### 351. Song Analysis and Scene Repertoire for Musical Theatre (3) II

Prerequisite: Drama 350.

Vocal selections and scenes in musical theatre. Significance of dramatic placement in libretto, characterization requirements, and appropriate performance styles for repertoire development. (Formerly numbered Drama 326.)

#### 420. Play Analysis (3) I, II

Prerequisites: Drama 105 and 120.

Representative dramas for the stage are read, discussed and analyzed in writing in terms of environment, structure, action, character and style.

#### 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: selecting audition piece, rehearsing, and performing auditions. Instruction in preparing resumes and photographs for profession.

#### 440. Scenic Design (3) I

Prerequisite: Drama 240.

Techniques and procedures in the application of principles of design, color and perspective in the designing and painting of scenery for various types of productions for stage, television and cinema.



**442. Theatre Workshop (1-6) I, II Cr/NC (3-6) S Cr/NC**

Two hours of activity per unit.

Practical theatre production experiences to include set crew and construction, costume crew and construction, make-up, lighting, sound, theatre management, or other faculty approved areas. Must be repeated for a total of eight units.

**445. Rehearsal and Performance (1-6) Cr/NC**

Two hours per unit.

Practical experience in departmental public performance. Maximum credit six units.

**448. Advanced Dramatic Production (3)**

Two lectures and three hours of laboratory.

Prerequisite: Drama 240.

Scenery drafting and construction, with attention to the multiple-set play. Planning of scenery construction and rigging for stage and television productions.

**452. Costume History and Design for the Theatre (3) I**

Two lectures and three hours of laboratory.

Prerequisite: Drama 250.

Chronological study of clothing and theatrical dress from earliest times to the present, with practical applications in terms of contemporary costume design for the theatre. Egyptian through Cavalier periods. Elements and principles of costume design.

**457. Stage Direction (3) I, II**

Two lectures and three hours of laboratory; attendance of one-act plays and selected performances.

Prerequisites: Drama 231, 420, and consent of instructor.

Planned for prospective directors of plays in schools, colleges, and community theatres. A comprehensive study of the various problems confronting a stage director.

**458. Stage Direction: Scenes (3) I, II**

Two lectures and two hours of activity; attendance of one-act plays and selected performances.

Prerequisites: Drama 457 and consent of instructor.

Experience and group evaluation in directing scenes in acting classes.

**459. Stage Direction: One-act Plays (3) I, II**

One lecture and four hours of activity; attendance of one-act plays and selected performances.

Prerequisites: Drama 457 and consent of instructor. (May be substituted for Drama 458 as requirement in directing.)

Experience and group evaluation in directing one-act plays before departmental or public audiences.

**460A-460B. History of the Theatre (3-3) I, II**

The theatre from primitive times to the present. 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 460B may be taken without 460A.

**475. Theatre Management and Promotion (3) II**

Two lectures and three hours of laboratory.

A practical and correlated study of the college, university, high school and children's theatre; principles of organization, programming, production, budgets, ticket office, and promotional procedures.

**480. Methods and Materials of Instruction (2) I**

Professional preparation emphasizing organization and practices in the teaching of Dramatic Arts.

**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 Accepted for Advanced Degrees)

**511. Styles in Creative Drama (3) I, II**

Prerequisite: Drama 310.

Advanced techniques and procedures in the teaching of creative drama. Lectures and reading on the application of creative drama with emphasis on the different styles of creative drama available to the practitioner. Practical experience through work with children.

**515. Directing for Children's Theatre (3) II**

Prerequisite: Drama 255.

Staging and technical problems relative to the production of plays for children; casting procedures, blocking and characterization principles, rehearsal and scenic techniques. Practical experience through university-sponsored productions.

**520. History of Musical Theatre (3) I**

Prerequisite: Drama 460A.

Musical theatre from early Viennese operettas to musicals of modern times; representative works.

**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. (Formerly numbered Drama 432.)

**533A-533B. Theory and Styles in Acting and Directing (3-3)**

Prerequisite: Drama 231.

Acting and directing problems in theory and style related to the production of plays from great periods in theatre history, with attention to characterization, dramatic values, creative directing and production approaches. Semester I: Shakespearean tragedy and history, melodrama, and farce. Semester II: Greek tragedy, Shakespearean comedy.

**540. Styles in Scenic Design (3) II**

Prerequisite: Drama 440.

History of scenic design and the application of contemporary styles to various types of dramatic production for stage, television and cinema.

**545A-545B. Stage Lighting (3-3) I, II**

Two lectures and three hours of laboratory.

Prerequisite: Drama 545A is prerequisite to 545B.

Light, color, lighting instruments, and control equipment, including the design and planning of lighting for plays.

**546. Computer Systems and Special Effects Techniques in Stage and Television Lighting (3)**

Two lectures and three hours of laboratory.

Prerequisite: Credit or concurrent registration in Drama 545B.

Functional study of computer systems in stage and television lighting with emphasis on realizing effective methods of using such systems in production.

**551. Costume, Movement, and Manners (3) I**

Prerequisite: Drama 250.

Interrelationship of period costumes and the movement and manners of the time; and their application on the stage.

**552. Costume History and Design for the Theatre (3) II**

Two lectures and three hours of laboratory.

Prerequisite: Drama 452.

A continuation of Drama 452 to include chronological study of clothing and theatrical dress from the Restoration period to 1930, with practical applications in terms of contemporary costume design for the theatre.

**554. Costume Construction Techniques (3)**

Two lecture-demonstrations and three hours of laboratory.

Prerequisite: Drama 250.

Period pattern drafting, draping, cutting, construction. Wig, millinery, armor, mask, accessory construction. Costume paint and dye techniques.



**555. Musical Theatre Dance Repertory (2) I**

Four hours of activity.

Prerequisite: Drama 350.

Musical theatre dance repertory styles and forms for the actor-singer-dancer-director as they pertain to arranged composition of a musical theatre production.

**559. Musical Theatre Stage Direction (3) II**

One lecture and four hours of activity.

Prerequisite: Drama 459.

Experience and group evaluation in performance and direction of musical theatre scenes; attendance at musical theatre performances and other selected musical presentations. Problems confronting a musical theatre stage director.

**560. Rendering for Theatrical Designer (1) I, II**

Prerequisites: Drama 250, 440.

Development of skills necessary for theatrical designer to complete successful set and costume renderings. Techniques, media, and portfolio presentation. Maximum credit three units.

**596. Selected Topics in Drama (1-3) I, II**

Prerequisite: Twelve units in drama.

A specialized study of selected topics from the areas of drama. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**Economics****In the College of Arts and Letters****Faculty**

Emeritus: Anderson, Chadwick, McClintic, Turner

Chair: Barckley

Professors: Babilot, Barckley, Clement, Flagg, Gifford, Jencks, Kartman, Leasure,

Madhavan, Nam, Neuner, Popp, Poroy, Sebold, Venieris

Associate Professors: Boddy, Frantz, Green, Grossbard-Shechtman, Hageman, Hambleton,

Stewart, Thayer

Assistant Professors: Seidman, Villaflor, Vogt

Lecturers: Leuë-Roney, Ruppert

**Offered by the Department**

Master of Arts degree in economics.

Major in economics with the A.B. degree in liberal arts and sciences.

Minor in economics.

**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 A.B. 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.

**Preparation for the Major.** Economics 101 and 102 and 201; one course from Mathematics 121, 140, 141 or 150; and Mathematics 107 or another computer-related course. (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. Six units of upper division credit in related fields may be counted toward the major if prior approval of the department's undergraduate adviser is obtained. The 24 units must include Economics 320, 321, and 347 or 541, 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, 332, 338, 360, 365, 380, 420, 421, 422, 453, 464, 474, 502, 505, 520, 555, 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, 380, 401, 422, 452, 453, 454, 458, 474, 475, 477, 482, 484, 490, 502, 555, and 592.

**Pre-Law:** Students interested in preparing for law school are strongly recommended to take courses from among Economics 370, 380, 401, 490 and 505. Also recommended are Economics 330, 332, 453, 454, 474, 477, 482, and 555.



**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, 332, 336, 338, 562; Human Resources: Economics 365, 380, 482, 483, 484, 489; International Economics: Economics 336, 360, 365, 464, 465, 483, 561, 562, 565, 592; Public Issues: Economics 370, 401, 420, 422, 452, 453, 454, 458, 474, 477, 484, 489, 490, 502, 555.

Students considering graduate school should consult an adviser.

## Economics

### For the Single Subject Teaching Credential in Social Science

Economics is an area of concentration for the Social Science Major, a program leading to a secondary education credential in Social Science. The requirements are those established for the Social Science Credential, as shown in this section of the catalog under Social Science.

## Economics Minor

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, 347 or 541, 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.

### 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

Prerequisites: Satisfactory completion of the Writing Competency and Mathematics Competency requirements. Proof of completion of prerequisites required.

An introduction to principles of economic analysis, economic institutions, and issues of public policy. In this semester the emphasis is upon macroanalysis including national income analysis, money and banking, business cycles, and economic stabilization.

#### 102. Principles of Economics (3) I, II

Prerequisites: Satisfactory completion of the Writing Competency and Mathematics Competency requirements. Proof of completion of prerequisites required.

An introduction to principles of economic analysis, economic institutions, and issues of public policy. In this semester the emphasis is upon the direction of production, the allocation of resources, and the distribution of income, through the price system (microanalysis); and international economics.

#### 201. Statistical Methods (3) I, II

Prerequisite: Qualification on the Mathematics Placement Examination. Proof of completion of prerequisite required.

Introduction to descriptive statistics, statistical inference, regression and correlation. Students with credit or concurrent registration in another statistics course will be awarded a total of four units for the two (or more) courses.

#### 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. Honors Course (1-3)

Refer to Honors Program.

#### 307. Mathematical Economics (3) II

Prerequisites: Economics 101, 102, and Mathematics 121 or 141 or 150.

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

Prerequisite: Economics 101, or Economics 100 with approval of department.

Economic theory with special reference to national income analysis and the theory of investment.

#### 321. Intermediate Economic Theory (3) I, II

Prerequisite: Economics 102 or Economics 100 with approval of department.

Economic theory with special reference to the theory of the firm and the industry; value and distribution.

#### 330. Comparative Economic Systems (3)

Prerequisite: Economics 100 or 101 or 102.

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.

#### 332. Capitalist Economy (3)

Prerequisite: Economics 100 or 101 or 102.

The relationship between the dominant economic and political institutions of capitalist organization and the major social problems of modern capitalism.

#### 336. Economic History of Emerging Nations (3)

Prerequisite: Economics 100 or 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)

Prerequisites: Economics 100 or 101, and 102.

American economic development and national legislation. Studies of agriculture, industry, the labor force, and national output. (Formerly numbered Economics 338B.)

#### 347. Research Design and Method (3)

Prerequisites: Economics 101, 102 and 201. Recommended: Economics 320 and 321 and a computer related course such as Mathematics 107.

Instruction in the practical application of econometric techniques of economic research to range of problems encountered in economics. Independent research project.

#### 360. International Economic Problems (3)

Prerequisites: Economics 101 and 102. Not open to students with credit in Economics 561.

International problems, economic communities, organizations, and other selected topics.

#### 365. Economics of Underdeveloped Areas (3)

Prerequisite: Economics 102.

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: Economics 100 or 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: Economics 100 or 101 or 102.

Labor organizations and their policies, wages, strikes, unemployment, social insurance, child labor, labor legislation, plans for industrial peace, and other labor problems.

**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) I**

Prerequisites: Economics 320 and 321; Economics 307 or Mathematics 142.

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) II**

Prerequisites: Economics 321; Economics 307 or Mathematics 142.

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.

**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)**

Prerequisite: Economics 100 or 101 or 102.

Economic development, institutions, and problems of Latin America.

**465. Economic Problems of South and East Asia (3)**

Prerequisite: Economics 100 or 101 or 102.

Economic development, institutions, and problems of China, India and Pakistan, Japan, and Southeast Asia.

**474. Economic Concentration and Monopoly Power (3)**

Prerequisites: Economics 101 and 102.

The implications of economic concentration and monopoly. The evaluation of mergers, consolidations and other forms of monopoly power in terms of social and economic goals. Attempts to control monopoly power by antitrust laws, by policies regarding competitive practices and by other means.

**475. Industry Studies (3)**

Prerequisites: Economics 101 and 102.

Evaluation of the structure, conduct and performance of selected industries in terms of social and economic goals.

**477. Public Utilities (3)**

Prerequisites: Economics 101 and 102.

Economics and regulation of utility enterprises. Growth, pricing, demand and cost behavior, financing, regulatory principles and techniques. Public power and other current policy issues.

**482. Collective Bargaining (3)**

Prerequisites: Economics 101 and 102.

Structures of labor relations; management and union problems; public policy and collective bargaining; simulation of collective bargaining experiences.

**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.

**484. Economics of Health and Education (3)**

Prerequisite: Economics 100 or 101 or 102.

Production and distribution of health, education, and training. Issues of equity and financing. Benefits and losses from schooling and illness. Health and educational investments related to aging.

**489. Population and Economic Growth (3)**

Prerequisite: Economics 100 or 101 or 102.

Interrelationship between the components of population change (fertility, mortality, and migration) and economic growth in developed and underdeveloped areas.

**490. Money and Banking (3) I, II**

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 in 499 limited to six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

**502. Public Economics (3)**

Prerequisite: Economics 321 or 401.

General equilibrium. Externalities of consumption and production, their impact on allocative efficiency. Theory of social wants and public goods supply. Theoretical treatment of individual and community preference ordering and decision making. Proposals for improving the allocation of resources.



**505. Welfare Economics (3)**

Prerequisites: Economics 102 and 321.

Theories of individual and social well-being; economic and ethical bases of optimum welfare arrangements; individual values and social decision making; tests of improvement; interdependence and externalities; public and private sectors; properties of social welfare functions.

**520. Advanced Economic Theory (3)**

Prerequisite: Economics 320.

Recent contributions to the advanced theory of the firm, consumer demand, employment and growth.

**541. Econometrics (3)**

Prerequisite: Economics 201, and 307 or Mathematics 142.

Measurement in economics. The construction and testing of simple economic hypotheses. Use of economic models involving multiple-regression analysis.

**555. Economic Analysis of Environmental Quality (3) II**

Prerequisites: Economics 321 and Mathematics 121 or 141 or 150.

Examination of materials balance, interface between economic and ecological systems, and comprehensive waste residuals management. Economic analysis of population growth and environmental degradation, preservation vs. development issues, global environmental problems and international law.

**561. International Trade Theory (3)**

Prerequisites: Economics 320 and 321.

The pure theory of international trade and commercial policy.

**562. International Economic Expansion and Dependence (3)**

Prerequisite: Economics 313 or 365 or 464.

Explores various theories of imperialism and dependence, the behavior of multinational corporations, and role of state from Marxian and other perspectives. Theories examined in terms of experience of specific countries (e.g., Mexico).

**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 six units.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**College of Education**

Member of the American Association of  
Colleges for Teacher Education

**Faculty**

Dean (Acting): Feinberg

Associate Dean: Chamley

Assistant Dean: Ramage

**Offered by the College of Education**

Doctor of Philosophy degree in education.

Master of Arts degree in education.

Master of Science degree in counseling.

Master of Science degree in rehabilitation counseling.

B.V.E. degree.

Teaching credentials in all areas.

Minor in Educational Technology.

Certificate in Bilingual (Spanish) Special Education.

Certificate in Instructional Technology.

Certificate for Language Development Specialist.

Certificate in Teaching the Emotionally Disturbed/Behaviorally Disordered.

**Teaching/Service Credentials**

The College of Education offers programs which lead to teaching, specialist, and services credentials. Students who desire to seek a credential should consult with departmental advisers in order to determine their status and needed requirements. Information on these credentials is available in the offices of the several departments of the College of Education and in the Credentials Office, College of Education.

The College of Education has obtained approval for programs leading to the following credentials:

**Approved Credential Programs**

- |                                                  |                                                                                                                                       |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 1. Multiple subjects credential .....            | Teach in any self-contained classroom, kindergarten through twelfth grade.                                                            |
| 2. Single subject credential .....               | Teach single subject area in grades kindergarten through twelve.                                                                      |
| 3. Community college instructor credential ..... | Teach in grades thirteen and fourteen, any course in an occupational or subject matter area which appears on the credential document. |

**School Service Authorized****Specialist Credentials**

Bilingual/CrossCultural

Reading Specialist

Special Education:

Communication Handicapped (Dept.  
of Communicative Disorders)

Physically Handicapped

Learning Handicapped

Severely Handicapped

Gifted

**Service Credentials**

Administrative Services

Clinical Rehabilitative Services (Dept. of

Communicative Disorders)

Pupil Personnel

School Psychology

Health—School Nurse (School of Nursing)

**Admission to Teacher Education****Application for Admission**

Students who plan to enroll in a credential program must make application for admission to that program through the appropriate department. Both the Multiple Subjects Credential and the Single Subject Credential are to be completed through the School of Teacher Education.



**LOWER DIVISION COURSE IN EDUCATION****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 IN EDUCATION****(Intended for Undergraduates)****397. Problems in Education (Credit to be arranged) Extension 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.

**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.

**GRADUATE COURSES IN EDUCATION****Refer to the Graduate Bulletin.****Counselor Education****Faculty**

Emeritus: Malcolm, Manjos

Chair: Thompson

Professors: Bruce, Carnevale, Chamley, Cummins, Feinberg, Hawley, Miller, Ramage,

Senour

Associate Professors: Cook, Howard, Thompson

Assistant Professors: Cochran, Ingraham, Robinson

**Offered by the Department**

Master of Science degree in counseling.

Pupil Personnel Services Credential.

School Psychology Credential.

**UPPER DIVISION COURSES IN COUNSELOR EDUCATION  
(Intended for Undergraduates)****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.

**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.

**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 IN COUNSELOR EDUCATION  
(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 requirements.

**585B. Dynamics of Adjustment Behavior (3)**

Prerequisite: Upper division course in abnormal psychology.

Philosophies and dynamics of adjustment behavior, patterns and types of abnormal behavior, and treatment modalities. Fulfills MFCC licensure requirement.

**596. Selected Studies (1-3)**

Prerequisite: Consent of instructor.

A series of lecture and discussion sessions centering on current problems in counseling and guidance. Designed to serve the needs of any person desiring to keep informed of developments in this area. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable on a master's degree. (Formerly numbered and entitled Counselor Education 506, Guidance Conference.)

**GRADUATE COURSES IN COUNSELOR EDUCATION  
Refer to the Graduate Bulletin.**



## Development, Administration and Technology

### Faculty

Emeritus: McAllister

Chair: Harrison

### Community College/Vocational Education

Associate Professor: Behm

### Educational Administration

Professors: Latta, Merino

Associate Professors: Crowner, Youngs-Bilicki

### Educational Technology

Professors: Anthony, Harrison, Rossett

Associate Professors: Dodge, Saba

Assistant Professor: Allen

Lecturer: Mathison

### Rehabilitation Counseling

Professors: Jones, McFarlane

Associate Professor: Jacobs

### Offered by the Department

Master of Arts degree in education.

Concentration in community college curriculum and instruction.

Concentration in educational administration and supervision.

Concentration in educational technology.

Master of Science degree in rehabilitation counseling.

Bachelor of Vocational Education degree.

Administrative Services credential.

Community College Instructor credential.

Minor in educational technology.

Certificate in instructional technology.

## Bachelor of Vocational Education Degree

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 Higher Education 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 Higher Education Programs Coordinator for assistance and application forms.) ..... 40 units maximum

3. The individual must take the professional occupational teacher education courses required for the **Community College Credential** (Title 5). To receive credit toward the B.V.E. degree, these courses must be taken from an institution that will grant credit for the courses toward a bachelor's degree – DAT 380, 381, 382, and 565. .... 6–12 units
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, etc.
6. The individual must see an adviser in the area of his major to arrange his program for completion of course work. 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

## The Community College Instructor Credential

### Specific Requirements

1. An associate degree in which the student can establish four years of occupational experience in a subject matter area plus 12 units in designated courses on the community college.
2. A baccalaureate degree in which the student can establish two years of occupational experience and a major or minor in a subject matter area related to this occupational experience plus six units in designated courses on the community college.
3. A master's degree in a subject matter area designated in Title 5, Section 5, #52210 (subjects commonly taught at a community college).

### Baccalaureate Degree Candidates

The following courses meet the requirements of Title 5, Section 5225 (Community College Instructor Credential): Development, Administration and Technology 380, 381, 382, and 565. Students may also enroll if they presently hold a partial California credential in an occupational area. Early consultation with the Higher Education Programs Coordinator is recommended.

## Educational Technology Minor

The minor in educational technology consists of a minimum of 15 units, 12 of which must be upper division selected from Development, Administration and Technology 540, 541, 542, 544, 553, 571, 590, 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.

## Instructional Technology Certificate

To receive a Certificate in Instructional Technology, candidates, in addition to meeting all admissions requirements, must complete the following 12 units of course work:

Development, Administration and Technology 540, 544, 571; plus three units from Development, Administration and Technology 541, 553, or 596.

### LOWER DIVISION COURSE IN DEVELOPMENT, ADMINISTRATION AND TECHNOLOGY

#### 201. Use of the Library (2) I, II

Resources and facilities of San Diego State University Library including interpretation and use of its principal information retrieval mechanisms.



**General****UPPER DIVISION COURSES IN  
DEVELOPMENT, ADMINISTRATION AND TECHNOLOGY  
(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. (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.)

**UPPER DIVISION COURSES IN  
DEVELOPMENT, ADMINISTRATION AND TECHNOLOGY  
(Also Acceptable for Advanced Degrees)****596. Topics in Development, Administration and Technology (1-3)**

Selected problems in educational development, administration and technology. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units. See Class Schedule for specific content. (Formerly numbered Education 596 and Educational Technology and Librarianship 596.)

**Community College/Vocational Education****UPPER DIVISION COURSES IN  
DEVELOPMENT, ADMINISTRATION AND TECHNOLOGY  
(Intended for Undergraduates)****380. Principles of Adult and Vocational Education (3) I, II, S**

Principles, practices, scope, and functions of 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: Development, Administration and Technology 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 COURSES IN  
DEVELOPMENT, ADMINISTRATION AND TECHNOLOGY  
(Also Acceptable for Advanced Degrees)****565. Occupational Student (3) S**

Prerequisite: Development, Administration and Technology 380 or 381.

The learning process and individual differences; behavioral characteristics of youth, race, and ethnic relations in the schools. (Formerly numbered Education 565.)

**568. Human Relations and Counseling in Adult Education (1-3)**

Prerequisite: Possession of a valid teaching credential.

Principles, procedures, and issues appropriate to human relations and counseling in adult education. (Formerly numbered Education 568.)

**Educational Technology****UPPER DIVISION COURSES IN  
DEVELOPMENT, ADMINISTRATION AND TECHNOLOGY  
(Intended for Undergraduates)****400. Technology and Lifelong Learning (3) I, II**

Communication models and uses of technology as they impact on the many teaching-learning situations. Examination of role of educator as human communicator, technologist, and social change agent. (Formerly numbered Educational Technology and Librarianship 400.)

**404. Instructional Media, Equipment and Production (1) I, II Cr/NC**

Two hours of activity.

Basic audiovisual equipment operation, production of inexpensive instructional materials, and application of learning theory to the utilization of instructional materials. (Formerly numbered Educational Technology and Librarianship 404.)

**UPPER DIVISION COURSES IN  
DEVELOPMENT, ADMINISTRATION AND TECHNOLOGY  
(Also Acceptable for Advanced Degrees)****532. Design and Production of Instructional Materials (3) I, II**

Nine hours of laboratory.

Planning, preparing and using instructional materials with a wide variety of learners. Transparencies, lettering aids, color slides, audio cassettes, simulations, and portable video. (Formerly numbered Educational Technology and Librarianship 532.)

**540. Instructional Technology (3) I, II, S**

Six hours of activity.

Role of instructional systems development in education and training. Issues in instructional technology, self-instructional programs, competency-based instruction, new technologies of instruction and training. (Formerly numbered Educational Technology and Librarianship 540.)

**541. Media Production (3) I, II**

Nine hours of laboratory.

Prerequisite recommended: Development, Administration and Technology 404.

Planning and production of media for instruction and training. Cost estimation and control, facilities design, legal requirements, production practices and personnel, storyboarding and scripting. (Formerly numbered Educational Technology and Librarianship 541.)

**542. Advanced Production Techniques (3)**

Nine hours of laboratory.

Prerequisite recommended: Development, Administration and Technology 541.

Application of communication principles, skills, and techniques pertaining to the design and production of light and heat sensitive instructional materials to problems of educational communication and instructional development. (Formerly numbered Educational Technology and Librarianship 542.)

**544. Instructional Design (3) I, II**

Six hours of activity.

Prerequisite: Development, Administration and 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. (Formerly numbered Educational Technology and Librarianship 544.)

**553. Workshop in Educational Television (3) I, S**

Nine hours of laboratory.

The procedures and theories of television production as it pertains to closed circuit and instructional use of television. The selection and utilization of program content and the method of presenting material through the television medium will be discussed and demonstrated. Not open to students with credit in Telecommunications and Film 320. (Formerly numbered Educational Technology and Librarianship 553.)



**571. Introduction to Computers in Education (3) I**

One lecture and six hours of laboratory.

Prerequisite required for preservice students, recommended for inservice students: Information Systems 180 or Mathematics 107 or Engineering 120.

Introduction to uses of computers in education and training. History, present and future hardware and software, social impact, costs, interface between instruction and software development, and survey of computer applications in education and training. (Formerly numbered Educational Technology and Librarianship 571.)

**590. Computer Solutions to Instructional Problems (3) I, II**

Prerequisites: Development, Administration and Technology 571; admission to a credential program or a teaching credential or experience in teaching.

Using the computer, especially the microcomputer, as an instructional tool. Programming techniques and instructional design. (Formerly numbered Education 590.)

### GRADUATE COURSES IN DEVELOPMENT, ADMINISTRATION AND TECHNOLOGY

Refer to the Graduate Bulletin.

## Policy Studies in Language and Cross-Cultural Education

**Faculty**

Chair: Rodriguez

Professor: Ochoa

Associate Professors: Espinosa, Kuhlman, Pacheco, Rodriguez

**Offered by the Department**

Master of Arts degree in education.

Bilingual/Cross-Cultural Specialist credential.

Multiple Subjects with Bilingual Emphasis credential.

Single Subject with Bilingual Emphasis credential.

Language Development Specialist certificate.

## Multiple Subjects with Bilingual Emphasis Credential

The Multiple Subjects 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 Spanish language proficiency and cultural awareness tests.

**Standards for Admission**

- 1. C-BEST.** Students must take the California Basic Educational Skills Test for admission to the Multiple Subjects with Bilingual Emphasis credential program. Applicants for any credential, permit, certificate, supplementary authorization, or the renewal of an emergency credential must **pass** this examination as required by the Commission on Teacher Credentialing.
- 2. Major.** The Liberal Studies Major, Options 2 and 3, may be selected in preparation for the teaching credential. Students who have academic majors other than Liberal Studies are required to pass the National Teacher Examination commission-approved examination. Information may be obtained through the Test Office (LE-560) or through advisers in the Policy Studies in Language and Cross-Cultural Education Department (PLC), ED-154.
- 3. Prerequisite Courses.** Courses are required for admission:
 

Health Science 101 or 320	3 units
Mathematics 210A*, 210B*	6 units
Music 102	3 units
Physical Education 241	2 units

\* With approval of the mathematics adviser, any of the following pairs of mathematics courses may be substituted for Mathematics 210A, 210B: Mathematics 121, 122; 150, 151; 310A, 310B.

- 4. Grade Point Average.** A 2.50 GPA on the last 60 units is required for admission. A 2.50 GPA must be maintained throughout the credential program.
- 5. Experience.** Applicants must provide evidence of a minimum of 45 hours of experience with children 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.
- 6. Health Clearance.** Tuberculin clearance is required for student teaching authorization.
- 7. 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.
- 8. 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-154, telephone 265-5155.



9. **Language and Culture.** Applicants must pass Spanish language and cultural awareness tests.
10. **Application.** Applicants should complete application procedures the semester prior to beginning the credential program.

### Credential Requirements

1. A bachelor's degree (or higher) with any major other than education.
2. Completion of a fifth year of study (31 units of upper division or graduate units).
3. 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.)
4. Passage of subject matter examination(s) (NTE-Core Battery) or waiver thereof through Liberal Studies major.
5. Pass Spanish language and cultural awareness tests.
6. Knowledge of methods of teaching reading.
7. Knowledge of U.S. Constitution.
8. Knowledge of health education in California.
9. Course work/fieldwork and/or other to satisfy PL 94-142 "Mainstreaming."

### New Students Who Seek to Complete a Credential

Teachers with a preliminary credential who are working toward a clear credential may have a program designed to fit their background. Evaluation of college credit completed to date and arrangements for programming should be made through the Department of Policy Studies in Language and Cross-Cultural Education in the College of Education.

### 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
<b>First Semester</b>		
PLC 323 Psychological Foundations of Education and Bilingual Students .....		3
PLC 360 Student Teaching Seminar for Bilingual Elementary Students .....		1
PLC 460 Student Teaching for Bilingual Elementary Students .....		6
DAT 404 Instructional Media .....		1
TE 301 Multicultural Seminar .....		1
TE 411 Reading Methods .....		3
<b>Second Semester</b>		
PLC 360 Student Teaching Seminar for Bilingual Elementary Students .....		2
PLC 410 Teaching Mathematics to Bilingual Elementary Students .....		2
PLC 411 Teaching Social Studies to Bilingual Elementary Students .....		2
PLC 412 Teaching Science to Bilingual Elementary Students .....		2
PLC 431 Skills in Teaching Reading to Bilingual Elementary Students .....		2
PLC 460 Student Teaching for Bilingual Elementary Students .....		6

## Single Subject with Bilingual Emphasis Credential

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.

### Standards for Admission

1. **C-BEST.** Students must take the California Basic Educational Skills Test for admission to the Single Subject with Bilingual Emphasis credential program. Applicants for the credential must *pass* this examination as required by the Commission on Teacher Credentialing.
2. **Major.** Students must have a major in an acceptable Single Subject Area or pass the National Teacher Examination commission-approved examination. Information may be obtained through the Test Office (LE-560) or through advisers in the Policy Studies in Language and Cross-Cultural Education (PLC) Department, ED-154.
3. **Prerequisite Course.** PLC 400: "The Secondary School and Bilingual Education."
4. **Grade Point Average.** A 2.75 GPA overall and 3.00 GPA in the upper division major are required for admission. A 2.50 GPA must be maintained throughout the credential program.
5. **Experience.** Applicants must provide evidence of a minimum of 45 hours of experience with children 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.
6. **Health Clearance.** Tuberculin clearance is required for student teaching authorization.
7. **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.
8. **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-154, telephone 265-5155.
9. **Language and Culture.** All candidates must pass Spanish language and cultural awareness tests.
10. **Application.** Applicants should complete application procedures the semester prior to beginning the credential program.

### Credential Requirements

1. A bachelor's degree (or higher) 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. The required courses are Policy Studies in Language and Cross-Cultural Education 400, 403, 423, 433 (except for majors in art, music, and physical education; reading requirement may also be satisfied by completion of the Reading section of the NTE test), 454, 463, 464; Development, Administration and Technology 404; and a course to satisfy PL 94-142 "Mainstreaming."
3. Passage of subject matter examination(s) (NTE Test) or waiver thereof through completion of approved credential major in one of the areas designated in the School of Teacher Education Single Subject Teaching Credential catalog section with written recommendation from the departmental Ryan adviser.
4. Knowledge of U.S. Constitution, as demonstrated by successful completion of approved course or examination (see section of this catalog on "Graduation Requirements").
5. Successful completion of Health Science 321.

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 postbaccalaureate credit as explained in the section of this catalog on "General Regulations."



### New Students Who Seek to Complete a Credential

Teachers with a preliminary credential who are working toward a clear credential may have a program designed to fit their background. Evaluation of college credit completed to date and arrangements for programming should be made through the Department of Policy Studies in Language and Cross-Cultural Education in the College of Education.

Program	Units
<b>Prerequisite</b>	
PLC 400 The Secondary School and Bilingual Education .....	3
<b>First Semester</b>	
PLC 454 Humanistic and Social Aspects of Teaching in the Bilingual Classroom ...	4
PLC 423 Behavioral and Psychological Aspects of Teaching in the Bilingual Classroom .....	4
PLC 463 Student Teaching for Bilingual Secondary Students I .....	3-4
PLC 515 Bilingual Teaching Strategies .....	3
<b>Second Semester</b>	
PLC 464 Student Teaching for Bilingual Secondary Students II .....	9-12
PLC 403 Bilingual Student Teaching Seminar .....	3
PLC 433 Skills in Teaching Reading to Bilingual Secondary Students .....	3

### Language Development Specialist Certificate

The Language Development Specialist Certificate provides an interdisciplinary approach in linguistics and multicultural education to train teachers in theory and application of English as a second language methodologies for linguistically diverse students in grades K-12.

Prerequisites for admission:

1. Valid California teaching credential.
2. Six units of an appropriate foreign language.

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).

\* Prerequisites waived for students in this program.

### UPPER DIVISION COURSES IN POLICY STUDIES IN LANGUAGE AND CROSS-CULTURAL EDUCATION (Intended for Undergraduates)

#### 323. Psychological Foundations of Education and Bilingual Students (3) I, II

Two lectures and two hours of activity.

Prerequisite: Admission to Multiple Subjects with Bilingual Emphasis credential program.

Major theories of learning and cognition as applied to bilingual students and their relation to child development, first and second language acquisition, and approaches to teaching in bilingual classroom. Taught in Spanish and English.

#### 360. Student Teaching Seminar for Bilingual Elementary Students (1-4) I, II Cr/NC

Prerequisites: Policy Studies in Language and Cross-Cultural Education 323 and admission to Multiple Subjects with Bilingual Emphasis credential program.

Bilingual instructional practices, classroom management, curricula discipline, micro-teaching in Spanish and English, legal liability, and daily problems encountered in the bilingual classroom. Taught in English and Spanish. Maximum credit four units.

#### 400. The Secondary School and Bilingual Education (3) I, 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.

#### 403. Bilingual Student Teacher Seminar (3) I, II Cr/NC

Two lectures and two hours of activity.

Prerequisites: Policy Studies in Language and Cross-Cultural Education 423, 454, and concurrent registration in Policy Studies in Language and Cross-Cultural Education 464.

#### 410. Teaching Mathematics to Bilingual Elementary Students (3) I, II

Two lectures and two hours of activity.

Prerequisite: Admission to Multiple Subjects with Bilingual Emphasis credential program.

Underlying learning theories for teaching mathematical concepts, computation, and problem solving skills to bilingual students. Taught in Spanish.

#### 411. Teaching Social Studies to Bilingual Elementary Students (2) I, II

One lecture and two hours of activity.

Prerequisite: Admission to Multiple Subjects with Bilingual Emphasis credential program.

Conceptual approaches for teaching bilingual social studies curriculum, incorporating sociocultural characteristics of multicultural community, social concepts, and community social issues. Taught in Spanish.

#### 412. Teaching Science to Bilingual Elementary Students (2) I, II

One lecture and two hours of activity.

Prerequisite: Natural Science 412A or 412B or 412C.

Strategies for development of process skills and concept acquisition. Methodology for teaching activity-oriented science class in English and Spanish. Taught in Spanish.

#### 423. Behavioral and Psychological Aspects of Teaching in the Bilingual Classroom (4) I, II

Prerequisites: Policy Studies in Language and Cross-Cultural Education 400; concurrent registration in Policy Studies in Language and Cross-Cultural Education 454 and 463; admission to the Single Subject Bilingual Emphasis program.

Bilingual learning theory as it affects adolescent growth, individualized instruction, classroom management and discipline, and methods of measuring and evaluating achievement. Taught in Spanish and English.

#### 431. Skills in Teaching Reading to Bilingual Elementary Students (3) I, II

Two lectures and two hours of activity.

Prerequisite: Admission to Multiple Subjects with Bilingual Emphasis credential program.

Teaching reading in Spanish, including methods, strategies, assessment, materials, and techniques of transition for implementing reading programs in the bilingual classroom. Taught in Spanish.

#### 433. Skills in Teaching Reading to Bilingual Secondary Students (3) I, II

Prerequisite: Upper division standing.

Methods of teaching and diagnosing reading skills in Spanish and English, including ESL methods and individualized instruction. Transition skills. Taught in Spanish.

#### 454. Humanistic and Social Aspects of Teaching in the Bilingual Classroom (4) I, II

Prerequisite: Policy Studies in Language and Cross-Cultural Education 400; concurrent registration in Policy Studies in Language and Cross-Cultural Education 423 and 463; admission to the Single Subject Bilingual Emphasis program.

Interaction between school and society, including equity issues, values, sociocultural variables, achievement of Spanish/English bilingual students; models for appropriate curricula. Taught in Spanish and English.

#### 460. Student Teaching for Bilingual Elementary Students (6-6) I, II Cr/NC

Prerequisite: Admission to Multiple Subjects with Bilingual Emphasis credential program.

Student must provide own transportation to student teaching site.

Field experience at two grade levels in a multicultural setting and a bilingual elementary classroom; student teacher assumes responsibility for planning and instruction for specified time to comply with State requirements. Maximum credit twelve units.

#### 463. Student Teaching for Bilingual Secondary Students I (3-4) I, II Cr/NC

Prerequisites: Policy Studies in Language and Cross-Cultural Education 400; concurrent registration in Policy Studies in Language and Cross-Cultural Education 423 and 454; admission to the Single Subject Bilingual Emphasis program. Students must provide own transportation to student teaching site.

On-site, part-time experience to implement bilingual teacher competencies introduced in Policy Studies in Language and Cross-Cultural Education 423, 454, and 515.



**464. Student Teaching for Bilingual Secondary Students II (9-12) II Cr/NC**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 423 and 463; concurrent registration in Policy Studies in Language and Cross-Cultural Education 403. Students must provide own transportation to student teaching site.

On-site, full-day experience in State approved bilingual and nonbilingual classes to implement teacher competencies as developed in the total professional sequence. Maximum credit twelve units.

**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 Multicultural Education 499.)

**UPPER DIVISION COURSES IN  
POLICY STUDIES IN LANGUAGE AND CROSS-CULTURAL EDUCATION  
(Also Acceptable for Advanced Degrees)**

**515. Bilingual Teaching Strategies (3)**

Prerequisite: Teaching experience or enrollment in the bilingual emphasis credential program.

Legal and historical developments leading to bilingual teaching in the United States. Interactive and individualized techniques appropriate for bilingual students. Language assessment methods for grouping and evaluating bilingual students. Fieldwork required. Taught in Spanish. (Formerly numbered Secondary Education 515.)

**551. Introduction to Multicultural Education (3)**

Overview of cultural pluralism in education, industry, business, other institutions and society at large. (Formerly numbered Multicultural Education 551.)

**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. (Formerly numbered Multicultural Education 552.)

**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. (Formerly numbered Education 553 and Multicultural Education 553.)

**554. Cultural Foundations of Education (3)**

How cultural foundations affect learning patterns and students' responses in instructional settings; domestic life, kinship, legal, sociocultural systems and other factors affecting socialization patterns and therefore learning styles. (Formerly numbered Multicultural Education 554.)

**575. Computer Applications in the Bilingual Classroom (3)**

Prerequisite: Development, Administration and Technology 571.

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 six units applicable to a master's degree.

**GRADUATE COURSES IN  
POLICY STUDIES IN LANGUAGE AND CROSS-CULTURAL EDUCATION  
Refer to the Graduate Bulletin.**

## Special Education

**Faculty**

Emeritus: Singer, Trimmer

Chair: Cegelka

Professors: Cegelka, Doorlag, Forbing, Lewis, Lynch, McClard

Associate Professors: Archer, Brady

Assistant Professor: Pumpian

**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.

### Bilingual (Spanish) Special Education Certificate

This certificate program provides specialized preparation for teachers of learning handicapped children whose primary language is Spanish.

Prerequisites for admission include the following:

1. Completion of, or admission to, the departmental program for the Specialist Credential in Special Education (Learning Handicapped). Will satisfy prerequisites for Special Education 510C and 511C.
2. Special Education 505F.
3. Spanish language proficiency at the S-3 (FSI 3) level.
4. Knowledge of the target culture and bilingual teaching strategies. Will satisfy prerequisites for Policy Studies in Language and Cross-Cultural Education 602. Proficiency may be demonstrated by passing the "Test of Culture and Teaching" used by the College of Education bilingual emphasis programs or Policy Studies in Language and Cross-Cultural Education 603.

Certificate program requirements include the following: Policy Studies in Language and Cross-Cultural Education 553, 602, Special Education 510C, 511C, and demonstration of competence in teaching learning handicapped students whose primary language is Spanish.

A grade point average of 3.0 must be obtained in the four courses. Contact the Department of Special Education for further information.

### Teaching the Emotionally Disturbed/ Behaviorally Disordered Certificate

This certificate provides specialized preparation for teachers of children with severe emotional disturbance who have been labeled as severely emotionally disturbed/behaviorally disordered in the school setting, including those children labeled as seriously emotionally disturbed.

Prerequisites to admission to the certificate program include the following:

1. Completion of, or admission to, the departmental program for the Specialist Credential in Special Education (Severely Handicapped).
2. A graduate GPA of 3.0.
3. Special Education 600 (adviser appointed sections).
4. Interview with program faculty.

Program requirements for the Certificate in Teaching the Emotionally Disturbed/Behaviorally Disordered include the following: Special Education 510A, 512E, 514A, 514B, 771 (2 units, adviser approved section), and demonstrated competence in teaching emotionally disturbed/behaviorally disordered students.

A grade point average of 3.0 is required for certificate course work. Contact the Department of Special Education for further information.



**UPPER DIVISION COURSES IN SPECIAL EDUCATION**  
(Intended for Undergraduates)

**471. Fieldwork in Special Education (3) I, II Cr/NC**

One lecture and four hours of field work.

Prerequisite: Credit or concurrent registration in Special Education 500.

Supervised observation and participation in classroom and related school activities for exceptional students. Course work includes discussion, analysis and reports of observation.

**475. Impact of Exceptionality on Society (3) I**

Prerequisite: Anthropology 101, Psychology 101, or Sociology 101.

Range of human experience of exceptional individuals, interrelationship between societal institutions and needs of gifted and disabled people, historical response to these needs, and contemporary issues.

**480. Directed Internship: Special Education (1-4) I, II Cr/NC**

Application to take course should be made during the preceding semester.

Maximum credit eight units upon approval of adviser.

Extensive daily teaching in public schools of exceptional individuals in one of four areas:

- |                                |                                  |
|--------------------------------|----------------------------------|
| <b>A.</b> Learning Handicapped | <b>C.</b> Physically Handicapped |
| <b>B.</b> Severely Handicapped | <b>D.</b> Gifted                 |

**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 IN SPECIAL EDUCATION**  
(Also Acceptable for Advanced Degrees)

**500. Exceptional Individuals (3) I, II, S**

Three lectures/fieldwork.

Principles, procedures and techniques in identifying and programming for exceptional students. Historical, philosophical and legal background which affect current special education practices.

**501. Special Education Procedures and Interpersonal Processes (3) I, II, S**

Prerequisite: Credit or concurrent registration in Special Education 500.

Introduction to procedures, legal requirements, and interpersonal processes in the identification, prescription, teaching and evaluation of instructional programs for handicapped students.

**505. Characteristics and Education of Exceptional Individuals (3)**

Prerequisite: Credit or concurrent registration in Special Education 471, 500, 501; and Family Studies and Consumer Sciences 570 for 505H.

Review of research, educational programs, curriculum approaches and characteristics of individuals in the area of exceptionality. Historical, philosophical, developmental, sociological, psychological, behavioral and environmental perspectives of the exceptionality.

May be taken in each of the areas of exceptionality:

- |                                  |                                                |
|----------------------------------|------------------------------------------------|
| <b>A.</b> Learning Handicapped   | <b>F.</b> Multicultural Learning Handicapped   |
| <b>B.</b> Severely Handicapped   | <b>G.</b> Gifted                               |
| <b>C.</b> Physically Handicapped | <b>H.</b> Handicapped Infants and Preschoolers |
| <b>E.</b> Emotionally Disturbed  |                                                |

**506. Law and Special Education (2)**

Prerequisites: Special Education 471, 500, 501.

Laws, litigation, and the legislative process affecting special education of handicapped students. Knowledge of legal rights and due process for students and teachers. Current issues and trends in special education law.

**507. Adaptive Equipment for the Severe Physically Handicapped (3)**

Prerequisite: Credit or concurrent registration in Special Education 505C.

Use and simple maintenance of wheelchairs, prone-standers, positioning equipment and other devices used in classrooms for the severe physically handicapped. Purchase, design, construction and modification of school equipment for use by the physically handicapped. Study of legal requirements and liability.

**510. Assessment and Evaluation of Exceptional Individuals (3) I, II**

Prerequisites: Special Education 501 and 505 in area of specialization; concurrent registration in Special Education 480.

Tests and procedures for assessing, evaluating and monitoring progress of exceptional individuals to meet their physical, intellectual, social, and emotional needs. Problems in the psychoeducational diagnosis and appraisal. Utilization of assessment procedures for the educational and rehabilitation program.

May be taken in each of the areas of specialization.

- |                                |                                              |
|--------------------------------|----------------------------------------------|
| <b>A.</b> Learning Handicapped | <b>C.</b> Multicultural Learning Handicapped |
| <b>B.</b> Severely Handicapped |                                              |

**511. Curriculum and Instruction for Exceptional Individuals (3) I, II**

Prerequisites: Special Education 501, 505 in area of specialization, 510 in area of specialization; concurrent registration in Special Education 480.

Utilization of data for determining general and specific objectives to meet the needs unique to exceptional individuals. Developing and selecting materials and procedures for the achievement of these objectives. Establishing procedures for monitoring and evaluating pupil progress.

May be taken in each of the areas of specialization.

- |                                |                                              |
|--------------------------------|----------------------------------------------|
| <b>A.</b> Learning Handicapped | <b>C.</b> Multicultural Learning Handicapped |
| <b>B.</b> Severely Handicapped | <b>D.</b> Gifted                             |

**512. Personal Adjustment of the Exceptional Individual (3) I, II**

Prerequisites: Special Education 501 and 505 in area of specialization.

Overlay of intellectual, emotional and physical problems which influence the success or failure patterns of individuals with exceptional needs. Strategies used to facilitate the adjustment of the exceptional individual to his environment including home, school and work.

May be taken in each of the areas of specialization:

- |                                |                                  |
|--------------------------------|----------------------------------|
| <b>A.</b> Learning Handicapped | <b>C.</b> Physically Handicapped |
| <b>B.</b> Severely Handicapped | <b>E.</b> Emotionally Disturbed  |

**513. Dynamics of Behavior Change and the Exceptional Individual (3) I, II**

Prerequisite: Special Education 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.

May be taken in each of the areas of specialization:

- |                                |
|--------------------------------|
| <b>A.</b> Learning Handicapped |
| <b>B.</b> Severely Handicapped |

**514. Curriculum and Instruction for the Learning Handicapped (2)**

Prerequisites: Special Education 505A, 510A.

Utilization of data for determining general and specific objectives to meet the needs of learning handicapped students. Developing and selecting materials and procedures for the achievement of these objectives. Establishing procedures for monitoring and evaluating pupil progress.

Must be taken in each of these areas:

- |                                           |
|-------------------------------------------|
| <b>A.</b> Elementary Learning Handicapped |
| <b>B.</b> Secondary Learning Handicapped  |



**515. Assessment and Programming for Handicapped Infants and Preschoolers (4) II**

Prerequisites: Special Education 501, 505H, and Family Studies and Consumer Sciences 570.

Tests, techniques, and procedures for assessing handicapped infants and preschoolers. Developing, implementing, monitoring, and evaluating educational programs in home-based and center-based programs. Communicating assessment and program objectives and data to parents and other professionals.

**523. Multihandicapped/Blind and Early Intervention (3)**

Prerequisites: Special Education 471, 500, 501; concurrent registration in Special Education 480; consent of instructor and admission to visually handicapped program.

Curricula, teaching methods, and assessment procedures for the multihandicapped populations. Materials for low-functioning visually handicapped students of all ages. Early intervention, counseling, activities for stimulation.

**596. Selected Topics in Special Education (1-4) I, II**

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 six units applicable on a master's degree.

**GRADUATE COURSES IN SPECIAL EDUCATION**

Refer to the Graduate Bulletin.

**Teacher Education****Faculty**

Emeritus: Altamura, Anderson, Bacon, Baker, Birch, Blanc, Bradley, Briggs, Brydegaard, Campbell, Crum, Elliott, Fishburn, Fisher, Friedrich, Fulkerson, Gjerde, Groff, Hammack, Hill, Huls, Hunter, Kinder, Klann, LaPray, LuPone, Madden, Meek, Nardelli, Person, Petteys, Platz, Prouty, Rodney, Schrupp, Servey, Smith, H., Stough, Strand, Tossas, White, Yarborough

Chair (Acting): Murphy

Professors: Ackerly, Becker, Becklund, Bee, Berg, Burnside, Charles, Cornejo, Curry, Duckworth, Erickson, Fearn, Flood, Gast, Gates, Gega, Goodson, Gray, Inskip, Kendall, Lapp, McCabe, McCoy, Moreno, Murphy, Nagel, Pehrson, Retson, Riggs, Rixman, Ross, R., Rowland, Shaw, Smith, R., Stautland, Steckbauer, Strom, Treadway, Wilding, Yesselman

Associate Professors: Botkin, Clark, Ford, Fox, Kaatz, Lujan, Malian, Mooers, Morris, Park, Reel, Ross, P., Santa Cruz

Assistant Professors: Belker, Thompson

**Offered by the School**

Master of Arts degree in education.

Multiple subjects credential.

Reading specialist credential.

Single subject teaching credential.

Certificate in Children's Literature.

**Multiple Subjects Credential (Elementary Education)****Standards for Admission**

- 1. C-BEST.** Students must take the California Basic Educational Skills Test for admission to the Multiple Subjects Credential program. Applicants for any credential, permit, certificate, supplementary authorization, or the renewal of an emergency credential must *pass* this examination as required by the Commission on Teacher Credentialing.
- 2. Major.** The Liberal Studies Major, Options 2 and 3, 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 examination. Information may be obtained through the Test Office (LE-560) or through advisers in Education.
- 3. Prerequisite Courses.** These courses are required for admission with a scholastic grade point average of 2.0 (grade of C on a 5-point scale) or better:
 

Health Science 101, "Health and Lifestyle," or	3 units
Health Science 320, "Health Education for Elementary Teachers"	6 units
Mathematics 210A*, 210B*, "Structure and Concepts of Elementary Mathematics"	3 units
Music 102, "Basic Musicianship for Non-Music Majors"	2 units
Physical Education 241, "Physical Education of Children"	

\* With approval of the mathematics adviser, any of the following pairs of mathematics courses may be substituted for Mathematics 210A, 210B: Mathematics 121, 122; 150, 151; 310A, 310B.

- 4. Grade Point Average.** A 2.50 GPA on the last 60 units is required for admission. A 2.50 GPA must be maintained throughout the credential program.
- 5. Experience.** Applicants must provide evidence of a minimum of 45 hours of experience with children 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.
- 6. Health Clearance.** Tuberculin clearance is required for student teaching authorization.
- 7. 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.



8. **Credential Advising Appointment.** Each applicant must meet with a faculty adviser to plan an appropriate program.
9. **Application.** Applicants must complete application procedures the semester prior to beginning the credential program.
10. **Student Teaching Program Selection.** Application for a student teaching block assignment must be filed during the semester prior to beginning student teaching.

#### New Students Who Seek to Complete a Credential

Teachers with a preliminary credential who are working toward a clear credential may have a program designed to fit their background. Evaluation of college credit completed to date, and arrangements for programming should be made through the College of Education (Room CL-100), 265-5964.

#### 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.

### Multiple Subjects Teaching Credential

#### Multiple Subjects (Elementary) — Clear Credential

Persons interested in teaching in the elementary school will typically pursue the Multiple Subjects Credential which authorizes the holder to teach in any self-contained classroom, classrooms in which one teacher is responsible for all the subjects commonly taught in the elementary schools. Attainment of this credential requires:

1. A bachelor's degree (or higher) with any major other than education.
2. Completion of a fifth year of study (30 units of upper division or graduate units).
3. Completion of an approved program of professional education (see School of Teacher Education for further information about the approved programs).
4. Passage of subject matter examination(s) NTE-Commons or waiver thereof through Liberal Studies major.
5. Knowledge of methods of teaching reading.
6. Knowledge of U.S. Constitution.
7. Knowledge of health education in California.
8. Course work/fieldwork and/or other to satisfy PL 94142 - "Mainstreaming."

#### Multiple Subjects (Elementary) — Preliminary Credential

An applicant may be granted a preliminary teaching credential if the applicant has met the requirements listed above in items 1, 3, 4 and 5. Thus, a person whose program allows him to meet these requirements would be eligible for a preliminary credential at the same time he finishes his four-year college program. During the next five years, however, such persons must complete the remaining requirements in order to become eligible for the "clear" credential.

### Description of Interdepartmental Major for Elementary Teaching

#### Liberal Studies Major

##### With the A.B. Degree in Applied Arts and Sciences and in Liberal Arts and Sciences

**Option 1.** This program is available to all students but is not acceptable for the Multiple Subjects credential. Information regarding this option is presented in the Liberal Studies section of this catalog.

#### Option 2 and Option 3. Liberal Studies with the A.B. 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 Options 2 or 3.

The Liberal Studies Major Options 2 and 3 meet all the requirements for the multiple subjects/diversified major as specified for the Multiple Subjects Credential.

Refer to the section of the catalog on Liberal Studies for an outline of the requirements for this major.

Students planning to enter elementary education must consult and secure program approval from an adviser in the School of Teacher Education. The following course work is required for acceptance into the education program and may be included in the Liberal Studies Major unless otherwise noted:

Mathematics 210A, 210B  
Health Science 101 or 320  
Music 102  
Physical Education 241

Other students who wish to take this major must consult the Dean of the Division of Undergraduate Studies to secure program approval.

General advising for Liberal Studies Option 2 is available at the University Advising Center.

### Single Subject Credential (Secondary Education)

#### Standards for Admission

##### C-BEST Examination

After February 1, 1983, anyone applying to the Commission on Teacher Credentialing for the initial issuance of any credential, permit or certificate, supplementary authorization, or the renewal of an emergency credential is required to have taken and passed the California Basic Educational Skills Test.

##### Admission to the Single Subject Credential Program

Admission to the Single Subject Credential program is accomplished in three stages:

1. **Prerequisite Course** (Teacher Education 453: "The Secondary School.")  
This is an introductory course which serves as an orientation to careers in secondary education. During this course students will participate in fieldwork assignments, will learn and demonstrate initial teacher professional competencies, and will complete admission requirements for the Single Subject Credential program. This class is open to *all* students and may be taken at any time within the individual's undergraduate or graduate preparation as long as it is taken and completed prior to enrollment in the first block of professional courses.  
**Accelerated Program:** Applicants with regular classroom experience of one year or more and minimum 3.50 grade point averages will be considered by the Admissions Committee for accelerated or experimental programs which allow Teacher Education 453 or a substitute course to be waived.  
Applications must be submitted by October 31 for spring semester and March 31 for fall semester.
2. **Admission to Student Teaching I** (Teacher Education 423, 454, 463, and preferably 433—except majors in Art, Music and P.E.—and Development, Administration and Technology 404).

These courses in Stage I comprise the first block of professional education courses and include an initial student teaching experience. Student must provide own transportation. Formal application for admission to these courses will be made at meetings held in the Teacher Education 453 classes, but in any case, the following must be on file in ED-100H office at least one month before the end of the semester preceding enrollment in Student Teaching I. Check deadline dates in ED-153.



- Completed application.
- Transcripts of all college work verifying an acceptable grade point average of 2.75 overall and 3.00 in the upper division major. Unofficial student copies of transcripts are acceptable. Those whose GPA's do not meet these requirements are encouraged to submit a petition to the Admissions Committee.
- Favorable recommendations from the adviser in the major department or verification from another California teacher training institution that the approved teaching major has been satisfactorily completed at that institution.
- Evidence of a negative result on a tuberculosis test (these tests are valid for four years and must be in effect during the time that the credential candidate is enrolled in the professional education sequence).
- Evidence of having taken C-BEST.
- Student teaching preference cards and request forms.
- Certificate of Clearance. The State of California requires that persons admitted to credential programs possess a valid Certificate of Clearance. Forms are available in the Teacher Education Department office.

Priority for admission is based upon the date of clearance for these requirements.

### 3. Admission to Student Teaching II (Teacher Education 403, 464).

These courses include a full-time daytime student teaching experience. Application must be made at least one month before the end of the semester prior to anticipated enrollment. Normally, this is done while the student is enrolled in Teacher Education 423, 454, 463.

Admission is based upon:

- Satisfactory completion of Teacher Education 423, 454, 463, plus Development, Administration and Technology 404, and preferably Teacher Education 433 (except for Music, Art and P.E. majors).
- Application for enrollment in Teacher Education 464 through submission of completed student teaching forms to the Student Teaching Office in ED-153. Enrollment in Teacher Education 403 must be concurrent with enrollment in Teacher Education 464.
- Student must successfully complete course work to clear U.S. Constitution requirement or successfully pass U.S. Constitution examination.
- Student must successfully complete Health Science 321 (2 units).

**NOTE 1:** DELAYED START OF STUDENT TEACHING will require filing of a request for Leave of Absence with the School of Teacher Education office (Room ED-153, 265-6118).

**NOTE 2:** As of July 1, 1979, information on the mainstreaming of students is a state requirement for the clear credential. This requirement can be met during the regular course sequence.

### New Students Who Seek to Complete a Credential

Teachers with preliminary credentials who are working toward full certification may have programs designed to fit their background. Evaluation of college credit completed to date, and arrangements for programming should be made through the Credential Office of the College of Education, Room CL-100, 265-5964.

### 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, 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.

## Single Subject Teaching Credential

### Single Subject (Secondary) — Preliminary

Persons interested in teaching in the secondary school will pursue the single subject credential which authorizes the holder to teach K-12 in only the following subjects:

#### ACCEPTABLE SINGLE SUBJECT AREAS

Single Subject Credential Area	Major	Single Subject Credential Area	Major
Art	Art	Health Science	Health Science
Business	Accounting	History	History
	Finance	Home Economics	Home Economics
	Information Systems	Industrial Arts	Industrial Arts
	Management	Life Sciences	Biology
	Marketing	Mathematics	Mathematics
English	Comparative Literature	Music	Music
	Drama	Physical Education	Physical Education
	English	Physical Sciences	Chemistry
	Journalism		Physical Science
	Linguistics		
	Speech Communication	Social Science	Social Science
Foreign Languages	Classics		
	French		
	German		
	Russian		
	Spanish		

Attainment of this credential requires:

- A bachelor's degree (or higher) with one of the approved single subject majors listed above. Credentials can be granted only in the above single subject credential areas.
- Completion of an approved program of professional education. The required courses are Teacher Education 423, 433, 453, 454 (except for majors in Music, Art, and Physical Education. The reading requirement may also be satisfied by completion of the Reading section of the N.T.E. test.), 403, 463, 464, and Development, Administration and Technology 404.
- Passage of subject matter examination(s) (N.T.E. Test) or waiver thereof through completion of approved credential major in one of the areas listed above, with written recommendation from the departmental Ryan adviser.
- Knowledge of U.S. Constitution, as demonstrated by successful completion of approved course or examination (see the section of this catalog on "Graduation Requirements").
- Successful completion of Health Science 321.

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 postbaccalaureate credit as explained in the section of this catalog on "General Regulations."

### Single Subject (Secondary) — Clear

An applicant may be granted a CLEAR teaching credential if all of the requirements listed above have been met and the student has completed a fifth year of study (30 units of upper division or graduate level courses after completion of the baccalaureate degree).

**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."

## Reading Specialist Credential

San Diego State University offers a program leading to a Reading Specialist Credential. This credential authorizes the holder to function as a reading specialist in grades K through 12.



For information concerning this credential, the student is referred to the Reading Center, Room NE-88.

### Requirements for Admission

1. A valid California basic teaching credential applicable within the range of grades kindergarten to 12.
2. Admission and planning interviews with a program adviser.
3. An approved basic course in methods and materials for teaching reading.

### Program

	Units
TE 536 Reading Diagnosis .....	3
TE 636 Advanced Diagnosis in Reading, .....	3
to be taken concurrently with ED 638B, Interpersonal/	
Interdisciplinary Communication Skills .....	1
TE 637 Reading Clinic (Must be taken concurrently with ED 638A.) .....	3
ED 690 Procedures of Investigation and Report .....	3
TE 630 Seminar in Reading in Elementary Education, <i>or</i> .....	
TE 633 Seminar in Secondary School Reading .....	3
TE 638 Topics in Reading Education. Three required categories: .....	2
638A Linguistic/Cultural Difference and Reading.	
638B Interpersonal/Interdisciplinary Communication Skills.	
638C Children/Young Adult Literature; Oral and Creative	
Responses to Reading.	
TE 736 Field Experience as the Reading Specialist .....	4
Electives .....	8

### Additional Requirements

1. A minimum of one year of full-time teaching experience (or the equivalent) within the range of grades kindergarten to 12.
2. Satisfactory completion of a comprehensive examination covering the program course work.
3. Satisfactory completion of the Graduate Record Examination.

A master's degree is not a requirement for this credential; however, courses in the program described above may be acceptable also for the Master of Arts in Education degree with a concentration in Reading Education. The eight units of electives for this credential must be selected with the approval of a reading program adviser. Education 795A and 795B may be taken as elective units for the credential, as may up to two additional units of Teacher Education 638, Topics in Reading Education.

### 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.

**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:** Education 496\*; Development, Administration and Technology 596; Teacher Education 530, 531, 532.

**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.

### General

#### UPPER DIVISION COURSES IN TEACHER EDUCATION (Intended for Undergraduates)

##### 356. Education and the American Society (3)

Analysis of conflicting value patterns, both institutional and noninstitutional, of education. Educational controversies, community educational agencies, equal rights, the international scene and futurism and progress. (Formerly numbered Education 301.)

##### 357. Introduction to History and Philosophy of Education (2) I, II

Historical backgrounds and underlying philosophies upon which the public school system has been established. Meaning of education, educational aims and values, and democracy and education. (Formerly numbered Education 383.)

##### 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 Elementary Education 496 and Secondary 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 Elementary Education 499 and Secondary Education 499.)

#### UPPER DIVISION COURSES IN TEACHER EDUCATION (Also Acceptable for Advanced Degrees)

##### 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 classroom setting. (Formerly numbered Elementary Education 532.)

##### 526. Teaching the Special Child in the Regular Classroom (2)

Prerequisite: Teaching credential or admission to multiple subjects credential program. Knowledge, skills, and instructional programs for teaching handicapped students in the regular classroom. Meets the mainstreaming requirements for the California Multiple Subjects Credential (clear). Not open to students with credit in Special Education 550, Teaching the Special Child in the Regular Classroom. Fieldwork required. (Formerly numbered Elementary Education 550.)

##### 545. Classroom Measurement and Evaluation (3) Irregular

The use of intelligence and achievement tests in the diagnosis and improvement of learning; construction of objective examinations; problems of evaluation in education; the elements of statistical techniques. (Formerly numbered Elementary Education 562.)

##### 546. Quantitative Methods in Educational Research (3) I, II

Basic tests of statistical significance with special reference to the interpretation of educational data. (Formerly numbered Secondary Education 564.)

##### 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 with the consultation of the University staff and the San Diego County Curriculum staff. 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 applicable to a master's degree. (Formerly numbered Elementary Education 596 and Secondary Education 596.)

\* Specified sections.



## Elementary Education

### LOWER DIVISION COURSE IN TEACHER EDUCATION

#### 290. Careers in Elementary Education (3) I, II

Six hours of activity, fieldwork required.

Prerequisite: Satisfactory completion of 12 hours of university course work.

Exploring elementary education as a profession, to include review of preparation requirements, patterns of classroom and school organization, and the role of the elementary educator in various instructional environments. Observation and participation in schools and school related settings. (Formerly numbered Elementary Education 200.)

### UPPER DIVISION COURSES IN TEACHER EDUCATION

(Intended for Undergraduates)

#### 300. Classroom Management Skills (1) I, II

Two hours of activity.

Prerequisite: Provisional or complete admission to multiple subjects credential program.

Skills in interpreting the legal aspects of education, identifying various kinds of school and classroom organization, and using instructional media and verbal stimuli to facilitate learning. (Formerly numbered Elementary Education 313.)

#### 301. Skills in Curriculum Organization (2) I, II

Four hours of activity.

Prerequisite: Admission to multiple subjects credential program.

Skills in planning, following and evaluating long-range instruction in the various school subjects. (Formerly numbered Elementary Education 317.)

#### 320. Child-Study Skills (2) I, II

Four hours of activity.

Prerequisites: Psychology 101 and provisional or complete admission to multiple subjects credential program.

Skills in observing and interpreting the behavior of elementary school children as influenced by physical, emotional, social, and intellectual growth. (Formerly numbered Elementary Education 311.)

#### 321. Skills in Applying Instructional Principles (2) I, II

Four hours of activity.

Prerequisite: Admission to multiple subjects credential program.

Skills in using the principles of instruction related to readiness, motivation, efficiency of learning and transfer of learning to organize an effective learning environment for children. (Formerly numbered Elementary Education 315.)

#### 322. Skills in Teaching Critical Thinking (2) I

Four hours of activity.

Prerequisite: Admission to multiple subjects credential program.

Skills in developing instructional strategies to guide children in concept development, inquiry, exploration of creativity, and learning in the affective domain. (Formerly numbered Elementary Education 316.)

#### 323. Psychological Foundations of Education (1-3) I, II, S

Two hours of activity per unit.

Prerequisites: Psychology 101 and admission to multiple subjects credential program.

Implementing the learning process through interactive skills, using instructional principles to facilitate learning and changes in behavior and techniques used in assessing instruction and pupil growth. (Formerly numbered Elementary Education 361.)

#### 350. Community-Study Skills (2) I, II

Four hours of activity.

Prerequisite: Provisional or complete admission to multiple subjects credential program.

Skills in observing and interpreting professional values and the diversity of social, cultural, economic and educational values within elementary school communities. (Formerly numbered Elementary Education 312.)

#### 360. Basic Student Teaching Seminar (1-2) I, II Cr/NC

Prerequisites: Admission to multiple subjects credential program and concurrent registration in Teacher Education 460.

Discussion of immediate problems in student teaching with emphasis on children's growth and development. (Formerly numbered Elementary Education 301.)

#### 361. Advanced Student Teaching Seminar (1-2) I, II Cr/NC

Prerequisites: Satisfactory completion of Teacher Education 360, 460; and concurrent registration in Teacher Education 461.

Discussion of immediate problems in student teaching with emphasis on the influence of philosophical, social and cultural factors on learning. (Formerly numbered Elementary Education 303.)

#### 362. Fieldwork in Community Service in Education (2) I, II

One lecture and six hours of supervised fieldwork.

Working on a tutorial basis with children and youth. Maximum credit four units. (Formerly numbered Elementary Education 308.)

#### 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. (Formerly numbered Elementary Education 432.)

#### 410A. Teaching Mathematics in the Elementary School (1-2) I, II

Two hours of activity per unit.

Prerequisite: Admission to multiple subjects credential program or possession of a teaching credential.

Instructional methods for the development of children's conceptual understanding, computational, and problem-solving skills in mathematics, including use and development of materials and programs. (Formerly numbered Elementary Education 413.)

#### 410B. Teaching Social Studies in the Elementary School (2) I, II

Four hours of activity.

Prerequisite: Admission to multiple subjects credential program or possession of a teaching credential.

Developing curriculum, principles and materials of instruction, including instructional media and participation in elementary social studies education. (Formerly numbered Elementary Education 414.)

#### 410C. Teaching Science in the Elementary School (2) I, II

Four hours of activity.

Prerequisite: Admission to multiple subjects credential program or possession of a teaching credential.

Developing curriculum, principles and materials of instruction, including instructional media and participation in elementary science education. (Formerly numbered Elementary Education 415.)

#### 410D. Teaching Art in the Elementary School (1-2) I, II

Two hours of activity per unit.

Prerequisite: Admission to multiple subjects credential program or possession of a teaching credential.

Developing curriculum, principles, and materials of instruction, including instructional media and participation in elementary art education. (Formerly numbered Elementary Education 416.)

#### 410E. Teaching Music in the Elementary School (1-2) I, II

Two hours of activity per unit.

Prerequisite: Admission to multiple subjects credential program or possession of a teaching credential.

Developing curriculum, principles and materials of instruction, including instructional media and participation in elementary music education. (Formerly numbered Elementary Education 417.)



**410F. Teaching Science and Social Studies in the Elementary School (1-3) I, II**

Two hours of activity per unit.

Prerequisite: Admission to multiple subjects credential program or possession of a teaching credential.

Developing and using instructional programs to facilitate growth in critical thinking and using informational resources to learn and apply concepts and generalizations from the various sciences and social sciences. (Formerly numbered Elementary Education 418.)

**411. Adapting Arts and Crafts to Individual Needs (3) I, II**

One and one-half hours of lecture and three hours of activity.

Prerequisite: Admission to multiple subjects credential program or possession of a teaching credential.

Adapting arts and crafts instruction for individuals with physical, sensory, cognitive needs. Emphasis on visual arts for enhancement of growth and development. Discussion, demonstration, practice of broad range of techniques, materials, strategies. (Formerly numbered Elementary Education 436.)

**460. Basic Student Teaching in Elementary Schools (1-12) I, II Cr/NC**

Prerequisites: Admission to multiple subjects credential program and concurrent registration in Teacher Education 360.

Day-to-day teaching experiences including selected instructional activities for which a teacher in a classroom is normally responsible. (Formerly numbered Elementary Education 401.)

**461. Advanced Student Teaching in Elementary Schools (1-12) I, II Cr/NC**

Prerequisites: Satisfactory completion of Teacher Education 360, 460, and concurrent registration in Teacher Education 361.

Teaching experiences including all the instructional activities for which a teacher in a classroom is normally responsible. (Formerly numbered Elementary Education 403.)

**UPPER DIVISION COURSES IN TEACHER EDUCATION**

(Also Acceptable for Advanced Degrees)

**510. Social Studies Unit Construction in Elementary Education (3)**

Prerequisite: Teacher Education 410B.

Selecting and organizing content, analyzing materials, and developing instructional units in elementary social studies for classroom use. (Formerly numbered Elementary Education 514.)

**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. (Formerly numbered Elementary Education 523.)

**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. (Formerly numbered Elementary Education 526.)

**520. Seminar in Child Development (3)**

Prerequisite: One course in child development.

Patterns in human development, especially in children ages eight and younger. Interpreting child development to differentiated staff, paraprofessionals, parents and community members. Planning for continuous progress. Reporting progress to parents. (Formerly numbered Elementary Education 571.)

**Secondary Education****UPPER DIVISION COURSES IN TEACHER EDUCATION**

(Intended for Undergraduates)

**403. Secondary School Student Teaching Seminar (1 or 3) I, II Cr/NC**

Prerequisites: Teacher Education 423, 433, 453, 454, 463. To be taken concurrently with Teacher Education 464.

To plan and organize instruction in relation to all competencies acquired and to be implemented in an on-site, full-time student teaching assignment. May be repeated with new content. Maximum credit three units. (Formerly numbered Secondary Education 407.)

**414. Methods and Materials of Instruction: Major (2) Irregular**

One lecture and three hours of laboratory.

Professional courses in specific teaching fields usually taken concurrently with directed teaching. Each course emphasizes the application of best practices with reference to each subject area named. (Formerly numbered Secondary Education 414.)

A. Methods in English

B. Methods in Social Science (Formerly numbered Secondary Education 414D.)

**423. Behavioral and Psychological Aspects of Teaching (4) I, II**

Prerequisites: Teacher Education 453 and admission to single subject credential program. To be taken concurrently with Teacher Education 454 and 463.

Teacher competencies as they relate to learning theories, adolescent growth, self-assessment, measurement and evaluation. (Formerly numbered Secondary Education 402.)

**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. (Formerly numbered Secondary Education 400.)

**454. Humanistic and Social Aspects of Teaching (4) I, II**

Prerequisites: Teacher Education 453 and admission to single subject credential program. To be taken concurrently with Teacher Education 423 and 463.

Teacher competencies as they relate to values, awareness, self-concept, rights and responsibilities. (Formerly numbered Secondary Education 401.)

**463. Secondary School Student Teaching I (1-6) I, II Cr/NC/SP**

Prerequisites: Teacher Education 453 and admission to single subject credential program. To be taken concurrently with Teacher Education 423 and 454. Teacher Education 433 is highly recommended to be taken at this time (not required for majors in art, music and physical education). Student must provide own transportation to student teaching site.

On-site, part-time experience to implement teacher competencies developed in Teacher Education 423 and 454. Maximum credit six units. (Formerly numbered Secondary Education 405.)

**464. Secondary School Student Teaching II (1-12) I, II Cr/NC/SP**

Prerequisites: Teacher Education 423, 433, 453, 454 (except majors in art, music and physical education), 463, and Development, Administration and Technology 404. To be taken concurrently with Teacher Education 403. Student must provide own transportation to student teaching site.

On-site, full-day experience to implement teacher competencies as developed from the total professional sequence. Maximum credit twelve units. (Formerly numbered Secondary Education 406.)

**Reading and Language Arts****UPPER DIVISION COURSES IN TEACHER EDUCATION**

(Intended for Undergraduates)

**396W. Advanced Writing Skills in Education (3)**

Writing to improve communication in educational and related subjects, including reports, proposals, and articles. 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. (Formerly numbered Elementary Education 396W.)



**430A. Teaching Reading in the Elementary School (1-3) I, II**

Two hours of activity per unit.

Prerequisite: Admission to multiple subjects credential program or possession of a teaching credential.

The nature of reading as a human behavior, the various approaches, materials, and techniques used in teaching reading. (Formerly numbered Elementary Education 411.)

**430B. Teaching Language Arts in the Elementary School (1-2) I, II**

Two hours of activity per unit.

Prerequisite: Admission to multiple subjects credential program or possession of a teaching credential.

Selecting, designing and evaluating appropriate learning experiences to assure children's growth in language arts. (Formerly numbered Elementary Education 412.)

**431. Skills in Teaching Reading (2) I, II**

Four hours of activity.

Prerequisite: Admission to multiple subjects credential program or possession of a teaching credential.

Skills in teaching beginning reading, word analysis, comprehension, literary interpretation and independent investigation. (Formerly numbered Elementary Education 421.)

**432. Skills in Teaching Remedial Reading (1) I, II**

Two hours of activity.

Prerequisites: Admission to multiple subjects credential program and Teacher Education 431.

Skills in diagnosing and remediating children's reading difficulties. (Formerly numbered Elementary Education 431.)

**433. Teaching of Reading in the Secondary School (3) I, II**

Teacher competencies as they relate to the teaching of reading/writing and diagnosing needs in the content areas. (Formerly numbered Secondary Education 403.)

**UPPER DIVISION COURSES IN TEACHER EDUCATION**

(Also Acceptable for Advanced Degrees)

**530. Children's Literature in Elementary Education (3) I, II**

A survey of children's literature; the selection and use of material in the elementary classroom. (Formerly numbered Elementary Education 512.)

**531. Storytelling (3)**

Prerequisites: Basic language arts course, children's literature.

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. (Formerly numbered Elementary Education 522.)

**532. Children's Literature on Film (3)**

Six hours of activity.

Current and classic children's literature as expressed on film. Selection criteria, sources, and identification of guidance and film-related activities. (Formerly numbered Educational Technology and Librarianship 578.)

**536. Reading Diagnosis (3)**

Prerequisites: Valid teaching credential and consent of instructor.

Formal and informal diagnosis of reading difficulties and the exploration of remedial techniques. (Formerly numbered Education 511.)

**GRADUATE COURSES IN TEACHER EDUCATION**

Refer to the Graduate Bulletin

**College of Engineering**

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

**Faculty**

Dean: Craig

Associate Dean: Hussain

Assistant Dean: Stratton

**Offered by the College of Engineering**

Master of Science degree in aerospace, civil, electrical and mechanical engineering.

Major in aerospace engineering with the B.S. degree.

Major in civil engineering with the B.S. degree.

Major in electrical engineering with the B.S. degree.

Major in mechanical engineering with the B.S. degree.

Minor in engineering.

**Undergraduate Program**

The objective of the engineering program at San Diego State University is to provide the intellectual and physical environment that will encourage students to develop their capacities toward a successful career in the profession of engineering. The graduates of this program are able to assume personal responsibility for the development and application of engineering knowledge. They are qualified to take the Engineer-in-Training examination as a first step to professional registration, to enter industry at the junior engineer level, or to continue their formal education at the graduate level. 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 course work emphasizing engineering fundamentals. Students then are able to utilize this knowledge of fundamentals in developing special knowledge in their area of specific interest.

The College of Engineering subscribes to the intent of the statements approved by the Engineering Liaison Committee of the State of California. Students transferring from California community colleges will be given junior level standing if they have successfully completed lower division course work in mathematics, chemistry, physics and engineering appropriate to their engineering major, presuming, upon transfer, that they have completed at least 50 percent of the graduation unit requirements in their major.

**Transfer Credit**

No credit will be given for upper division engineering course work 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 student's major department, credit will be given for the unaccredited work.

**Graduation Requirements**

1. A minimum of 133 semester units.
2. A minimum of 30 units in residence. Twenty-four of these shall be earned in upper division courses and shall include at least one-half of the major.
3. A scholastic grade point average of 2.0 (grade of C on a five-point scale) or better in (a) all units attempted, (b) all units in the major, and (c) all units attempted at this university.



4. At least 36 upper division units. (However, a typical program usually consists of at least 53 upper division units.)
5. Any student who does not wish to pursue the Bachelor of Science degree in aerospace, civil, electrical, or mechanical engineering must plan a course of study which must be approved by the Dean of the College of Engineering.
6. Satisfactory completion of competency tests in mathematics and writing, or completion of appropriate courses designated in lieu thereof.
7. Satisfaction of the upper division writing requirement.
8. All regulations established by the university.
9. American Institutions, to include competence in American history, institutions and ideals; U.S. Constitution; and California state and local government.
10. General Education requirements (see below).
11. Application for graduation.

### 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 six of the nine upper division units must be taken from Explorations; the remaining three 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). See the College of Engineering for a list of those approved courses. 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)
  - 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

At least three of the Explorations units must be from Social and Behavioral Sciences and three must be cross-cultural.

At least nine of the total General Education units must be at the upper division level and may include courses listed in Explorations as well as approved course substitutions taken after the student has attained junior class standing. See your adviser for listing.

### 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.

### LOWER DIVISION COURSES IN ENGINEERING

#### 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.

#### 150. Control of the Human Environment (3) I, II

Man's interaction with the land, water and air environment; environmental pollution; role of engineering in controlling man's environment.

#### 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.

#### 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.

### UPPER DIVISION COURSES IN ENGINEERING (Intended for Undergraduates)

#### 310. 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.

#### 410. Computer-Aided Design (3) II

Prerequisites: Engineering 120, 210, 310, and junior standing in engineering major.

Computer-aided design and drafting. Theory of computer graphics, approaches to graphing to develop complex figures. Animation techniques. Hidden line removal, interactive design, introduction to contemporary programs for automated design, drafting and numerical control programming.

#### 420. Intermediate Engineering Problem Analysis (3)

Prerequisite: Engineering 120.

Advanced use of Fortran and other computer programming languages for engineering problem analysis.

#### 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 Engineering 496, 499 and 596 applicable to a bachelor's degree.



### UPPER DIVISION COURSES IN ENGINEERING (Also Acceptable for Advanced Degrees)

#### 510. Methods of Analysis (3) I, II

Prerequisite: Engineering 310 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 Mathematics 107, and Engineering 310.

Digital solution of classes of engineering problems. Application of numerical methods with consideration of limitations imposed by computer and programming language characteristics.

### GRADUATE COURSES IN ENGINEERING Refer to the Graduate Bulletin.

UPPER DIVISION COURSES IN ENGINEERING  
(Also Acceptable for Advanced Degrees)

510. Methods of Analysis (3) I, II  
Prerequisite: Engineering 310 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 Mathematics 107, and Engineering 310.  
Digital solution of classes of engineering problems. Application of numerical methods with consideration of limitations imposed by computer and programming language characteristics.

GRADUATE COURSES IN ENGINEERING  
Refer to the Graduate Bulletin.

## Aerospace Engineering and Engineering Mechanics

### Faculty

Emeritus: Shutts

Chair (Acting): Hussain

Professors: Conly, Dharmarajan, Krishnamoorthy, McGhie, Narang, Pierucci, Wang

Associate Professor: Moses

Assistant Professor: Nosseir

Lecturers: Faulkner, Srivastava

### Offered by the Department

Master of Science degree in aerospace engineering.

Major in aerospace engineering with the B.S. degree.

## Aerospace Engineering Major

### With the B.S. Degree

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 AE 303, or passing the University Writing Examination, or completing one of the approved writing courses with a grade of C (2.0) or better.

The requirements for the major in aerospace engineering are described as follows:

Freshman Year			
	Units		Units
<b>Fall Semester</b>		<b>Spring Semester</b>	
Chem. 200, General .....	5	Phys. 195, Principles .....	3
Math. 150, Single Variable Calc. ....	5	Math. 151, Calc. and Anal. Geom. .	4
General Education .....	6	ME 190, Engr. Drawing .....	2
AE 123, The Aerospace Engineer ..	1	ME 260, Engr. Materials .....	3
		General Education .....	6
	17		18
Sophomore Year			
	Units		Units
<b>Fall Semester</b>		<b>Spring Semester</b>	
Math. 252, Multivariable Calc. ....	4	Phys. 197, Principles .....	3
EM 200, Statics .....	3	EE 203, Prin. of Elec. Engr. ....	3
General Education .....	6	EM 220, Dynamics .....	3
Phys. 196, Principles .....	3	Engr. 310, Methods of Anal. ....	3
		General Education .....	3
	16	Engr. 120, Engr. Prob. Anal. ....	2
			17
Junior Year			
	Units		Units
<b>Fall Semester</b>		<b>Spring Semester</b>	
ME 350, Thermodynamics .....	3	Engr. 510, Methods of Anal. ....	3
AE 301, Low Speed Aerodyn. ....	3	AE 302, High Speed Aerodyn. ....	3
CE 301, Intro. to Solid Mech. ....	3	AE 303, Exp. Aerodynamics .....	2
CE 302, Solid Mechanics Lab. ....	1	AE 310A, Aero. Struc. Anal. I ....	3
EM 340, Fluid Mechanics .....	3	AE 320, Aero. 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 310B, Aero. Struc. Anal. II .....	3
AE 403, Senior Project .....	3
AE 430, Aircraft Propulsion .....	3
AE 440, Aircraft Stab. & Control .....	3
AE 460A, Aerosp. Engr. Applic. ....	2
American Institutions .....	3
	17

**Spring Semester — According to Specialization**

Aerodynamics	Units	Aerospace Structures	Units
AE 460B, Aerosp. Engr. Applic. ....	3	AE 460B, Aerosp. Engr. Applic. ....	3
AE 480, Aeroelast. & Acoustics ....	2	AE 480, Aeroelast. & Acoustics ....	2
American Institutions .....	3	American Institutions .....	3
<i>Choose any two courses:</i>			
EM 540, Intern. Fluid Mechanics ...	3	EM 521, Adv. Mech. Deform. Med. .	3
AE 501, Comp. Fluid Mechanics ....	3	AE 501, Comp. Fluid Mechanics ....	3
AE 510, Matrix Meth. Aero. Struc. ..	3	AE 510, Matrix Meth. Aero. Struc. ..	3
AE 530, Rocket & Space Propuls. ..	3	AE 540, Arcrft. Stab. & Control II ...	3
	14		14

Propulsion & Flight Mechanics	Units
AE 460B, Aerosp. Engr. Applic. ....	3
AE 480, Aeroelast. & Acoustics ....	2
American Institutions .....	3

*Choose any two courses:*

AE 520, Int. Aero. Flight Mech. ....	3
AE 530, Rocket & Space Propuls. ....	3
AE 540, Arcrft. Stab. & Cntrl. II .....	3
EM 521, Adv. Mech. Deform. Med. ....	3
	14

Other electives may be substituted with permission of the adviser and department chair.

**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) I**

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) II**

Prerequisites: Aerospace Engineering 301 and Mechanical Engineering 350.  
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) II**

One lecture and three hours of laboratory.

Prerequisites: Credit or concurrent registration in Aerospace Engineering 301.

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.

**310A-310B. Aerospace Structural Analysis (3-3) I, II**

Prerequisite: Civil Engineering 301. Aerospace Engineering 310A is prerequisite to 310B.

Methods of structural analysis including both the static and dynamic aspects of problems encountered in the flight of aerospace vehicles.

**320. Aerospace Flight Mechanics (3) II**

Prerequisites: Engineering Mechanics 220, and Engineering 310.

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) I, II**

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.

**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 (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 310A.

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) II**

Prerequisites: Aerospace Engineering 302 and 310B.

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**

Prerequisites: Minimum grade point average of 2.0 in engineering or approval of the Academic and Ethical Standards Committee of the College of Engineering.

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)****501. Computational Fluid Mechanics (3) II**

Prerequisites: Engineering 120 and Engineering Mechanics 340.

Finite difference methods of solution to fluid dynamics equations of the potential flow, boundary layer theory and the Navier-Stokes formulation. Study of the convergence and stability of the difference equations.



**510. Matrix Methods in Aerospace Structures (3)**

Prerequisite: Aerospace Engineering 310B.

Static and dynamic analysis of aerospace structures utilizing matrix methods.

**520. Intermediate Aerospace Flight Mechanics (3) I**

Prerequisite: Aerospace Engineering 320.

A continuation of Aerospace Engineering 320 to include orbit determination techniques, general and special perturbations, artificial satellites, rocket dynamics and transfer orbits, earth-moon trajectories, and interplanetary trajectories.

**530. Rocket and Space Propulsion (3) II**

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) II**

Prerequisite: Aerospace Engineering 440.

Dynamic stability and control of rigid aircraft; general equations of unsteady motion, stability derivations, perturbed state thrust forces and moment, special problems in dynamic stability and response.

**Engineering Mechanics****LOWER DIVISION COURSES****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 minimum grade of C.

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 310.

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**

Prerequisites: Minimum grade point average of 2.0 in engineering or approval of the Academic and Ethical Standards Committee of the College of Engineering.

Modern developments in engineering mechanics. See Class Schedule for specific content. Maximum credit six units for any combination of Engineering Mechanics 496, 499 and 596.

**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)****521. Advanced Mechanics of Deformable Media (3) II**

Prerequisites: Aerospace Engineering 310B and Engineering 510.

Application of advanced topics in mechanics of deformable media to the design of aerospace structural components. Theory of failure, curved beams, beams on elastic foundation, thick-walled cylinders. Fracture mechanics and optimization of structures.

**540. Intermediate Fluid Mechanics (3)**

Prerequisites: Credit or concurrent registration in Engineering Mechanics 340, and Engineering 510.

Kinematics of fluid motion. Conservation of mass, momentum, and energy. Ideal and viscous flows and applications. Boundary layer approximations.

**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 six units for any combination of Engineering Mechanics 496, 499 and 596.

**GRADUATE COURSES IN AEROSPACE ENGINEERING AND  
ENGINEERING MECHANICS****Refer to the Graduate Bulletin.**



## Civil Engineering

### Faculty

Emeritus: Capp, Quiett, Stone  
 Chair: Chou  
 Professors: Chang, H., Chou, Johnson, Noorany, Ponce, Stratton  
 Associate Professors: Banks, Dezfulian, Fragaszy, Sharabi, Supernak, Westermo

### Offered by the Department

Master of Science degree in civil engineering.  
 Major in civil engineering with the B.S. degree.

### Civil Engineering Major

#### With the B.S. Degree

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.

The requirements for the major in civil engineering are described as follows:

Freshman Year			
Fall Semester	Units	Spring Semester	Units
Chem. 200, General .....	5	Phys. 195, Principles .....	3
Math. 150, Single Variable Calc. ....	5	Math. 151, Calc. and Anal. Geom. ....	4
ME 190, Engr. Drawing .....	2	Engr. 140, Engr. Meas. Anal. ....	2
General Education .....	3	Engr. 120, Engr. Prob. Anal. ....	2
	15	General Education .....	6
			17

Sophomore Year			
Fall Semester	Units	Spring Semester	Units
Phys. 196, Principles .....	3	Phys. 197, Principles .....	3
Math. 252, Multivariable Calc. ....	4	EM 220, Dynamics .....	3
EM 200, Statics .....	3	EE 203, Prin. of Elec. Engr. ....	3
ME 260, Engr. Materials .....	3	CE 218, Surveying .....	3
General Education .....	3	General Education .....	3
	16		15

Junior Year			
Fall Semester	Units	Spring Semester	Units
CE 301, Intro. to Solid Mech. ....	3	EM 340, Fluid Mechanics .....	3
CE 302, Solid Mech. Lab .....	1	EM 341, Fluid Mech. Lab .....	1
Engr. 310, Meth. of Anal. ....	3	CE 321, Structural Anal I .....	4
ME 352, Thermo. & Heat Trans. ....	3	CE 355, Environ. Studies .....	2
General Education .....	6	Geol. 253, Geology for Engrs. ....	2
	16	General Education .....	6
			18

Senior Year			
Fall Semester	Units	Spring Semester	Units
CE 444, Applied Hydraulics .....	3	CE 421, Reinforc Concrete Des .....	3
CE 462, Soil Mechanics .....	3	# Professional Electives .....	12
CE 463, Soil Mech. Lab .....	1	American Institutions .....	3
CE 481, Transportation Engr. ....	3		
# Professional Electives .....	5		
American Institutions .....	3		
	18		18

# Approved as part of the student's master plan.

### LOWER DIVISION COURSE IN CIVIL ENGINEERING

#### 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.

### UPPER DIVISION COURSES IN CIVIL ENGINEERING

(Intended for Undergraduates)

#### 301. Introduction to Solid Mechanics (3) I, II

Prerequisites: Engineering Mechanics 220 and credit or concurrent registration in Engineering 310.

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) 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 a 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) I, II**

Prerequisite: Civil Engineering 444 with a minimum grade of C.

Precipitation, streamflow, frequency analysis, hydrologic routing, urban and small watershed hydrology, hydrologic design.

**462. Soil Mechanics (3) I, II**

Prerequisites: Geological Sciences 253, Civil Engineering 301 with a 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 planning, economics, and administration; geometric design; traffic engineering; subgrade structure; bituminous and portland-cement concrete pavements.

**492. Construction Project Planning (2) I, II**

Prerequisites: Civil Engineering 321 and 481; credit or concurrent registration in Engineering 430.

Analysis of complex engineering and industrial systems using critical path methods; planning and control parameters; network analysis including optimization of deterministic and stochastic models; resource allocation; scheduling; student 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 IN CIVIL ENGINEERING**

(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) II**

Prerequisite: Civil Engineering 321 with a minimum grade of C.

Mechanical behavior of structural steel. Design of steel beams, girders, columns and members subjected to combined stresses. Design of various types of connections of steel structures; plate girders, continuous beams and rigid frames.

**530. Open Channel Hydraulics (3) I, II**

Prerequisite: Civil Engineering 444 with minimum grade of C.

Open channel flow theory, analysis and problems, including studies of critical flow, uniform flow, gradually varied and rapidly varied flow—all as applied to the design of channels, spillways, energy dissipators, and gravity pipelines.

**540. Coastal and Ocean Engineering (3) I**

Prerequisites: Civil Engineering 321, 444, and 462 with minimum grade of C.

Types, design features and methods of construction of coastal facilities and offshore structures including harbors, underwater fills, offshore platforms and oil storage reservoirs.

**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 six units for any combination of Civil Engineering 496, 499 and 596.

**GRADUATE COURSES IN CIVIL ENGINEERING**

Refer to the Graduate Bulletin.



## Electrical Engineering

### Faculty

Emeritus: Brown, Chan, Learned, Mann, Skaar, Walling

Chair: Lin, M.

Professors: Abut, Chang, Harris, f., Harris, J., Iosupovici, Lee, Lin, M., Lodge, Marino,

Massey, Stuart

Associate Professors: Lin, C., Nunez, Panos, Suto, Szeto, Thyagarajan

Assistant Professor: Betancourt

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.

## Electrical Engineering Major

### With the B.S. Degree

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 nine units of EE design (EE 373, 420, 450, 470, 475, 520, 521, 530, 534, 540, 554, 555, 570, 571, 580 and 581); at least three units of basic engineering (CE 301, EM 340, and ME 350/352); and at least one unit of EE laboratory. *The student's choice of electives is subject to the approval of his/her faculty adviser and the department chair. The student must file an approved Master Plan during the first semester of his/her junior year.*

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing courses in English or Information Systems 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 .....	3
Math. 150, Single Variable Calc. ....	5	Math. 151, Calc. and Anal. Geom. .	4
Engr. 120, Engr. Prob. Anal. I .....	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 Calc. ....	4	Phys. 197, 197L, Principles .....	4
EM 202, Mech. for Elec. Engrs. ....	3	EE 210, Elec. Network Anal. I .....	3
Phys. 196, 196L, Principles .....	4	EE 270, Digital Systems .....	3
General Education .....	6	ME 260, Engr. Materials .....	3
	17	General Education .....	3
			16

Junior Year			
Fall Semester	Units	Spring Semester	Units
EE 380, 380L, Elec. Energy Conv ..	4	EE 410, Signals and Systems .....	3
EE 310, Elec. Network Anal. II .....	3	EE 340, Elect. & Mag. Fields .....	3
EE 330, 330L, Fund. Electron. ....	4	EE 430, 430L, Electronics .....	4
EE 371, Computer Organization .....	3	Professional Elective .....	3
Engr. 310, Meth. of Analysis, or		General Education .....	3
Math. 340A, Meth. of Applied Math ..	3		
	17		16

Senior Year			
Fall Semester	Units	Spring Semester	Units
Professional Electives .....	12	Professional Electives .....	13
General Education .....	3	American Institutions .....	3
American Institutions .....	3		
	18		16

### LOWER DIVISION COURSES IN ELECTRICAL ENGINEERING

#### 203. Principles of Electrical Engineering (3) I, II

Prerequisites: Physics 196 and Mathematics 151.

Direct current circuit analysis, d-c meters, alternating current analysis, phasor diagrams, single-phase and three-phase power, diodes and semiconductors, transistors and integrated circuits. Not acceptable for electrical engineering major. (Formerly numbered Electrical Engineering 210.)

#### 210. Electrical Network Analysis I (3) I, II

Prerequisites: Physics 196 and Mathematics 151.

Circuit analysis by reduction methods, source transformations, loop and nodal analyses, OPAMP model for networks, transient analysis, alternating current circuits, impedance, power and phasor diagrams.

#### 270. Digital Systems (3) I, II

Prerequisite: Mathematics 151.

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 IN ELECTRICAL ENGINEERING

(Intended for Undergraduates)

#### 303. Electronics, Instrumentation, and Electrical Energy Conversion (3) I, II

Prerequisite: Electrical Engineering 203.

Theory and application of electron tubes, 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 students in electrical engineering major.

#### 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, transistors, electron tubes, and thyristors, in typical electronic circuits. Analysis and design of rectifiers and filters, and elementary amplifiers. Emphasis on their utilization in engineering equipment and systems.



**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, silicon controlled rectifiers, tubes, transistors, and amplifiers.

**340. Electric and Magnetic Fields (3) I, II**

Prerequisites: Engineering 310 and Engineering Mechanics 202.

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 electric and magnetic fields; Maxwell's equations.

**371. Computer Organization (3) I, II**

Prerequisites: Engineering 120 and Electrical Engineering 270.

Computer organization and assembly language programming. Programming and operation of one or more small computers, including input/output programming.

**373. Computer Design (3) I**

Prerequisites: Electrical Engineering 270 and credit or concurrent registration in 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**

Prerequisite: Electrical Engineering 210.

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: Credit or concurrent registration in Electrical Engineering 380.

Experimental study of DC, single and polyphase AC circuits, transformers, and machines.

**403. Biomedical Instrumentation (3) I**

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.

**420L. Control Systems Components Laboratory (1) II**

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Electrical Engineering 420.

Experimental determination of transfer functions for control system components.

**430. Analysis and Design of Electronic Circuits (3) I, II**

Prerequisites: Electrical Engineering 310, 330 and Engineering 310 or Mathematics 340A.

A unified treatment of vacuum-tube and transistor voltage and power amplifiers utilizing graphical methods and equivalent circuits; feedback theory and tuned amplifiers.

**430L. Electronic Circuits Laboratory (1) I, II**

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Electrical Engineering 430.

Vacuum-tube and transistor dynamic characteristics; single stage and multistage amplifier circuits including feedback and tuned amplifiers.

**434. Electronic Materials and Devices (3) I**

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) I**

Prerequisites: Electrical Engineering 310, 340 and Engineering 310 or Mathematics 340A.

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, credit or concurrent registration in Electrical Engineering 430.

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.

**475. Microprocessors (3) II**

Prerequisite: Electrical Engineering 371.

Microprocessors and microprocessor support devices. Design of microprocessor-based systems, hardware and software. Not open to students with credit in Electrical Engineering 575.

**475L. Microprocessor Laboratory (1) II**

Three hours of laboratory.

Prerequisites: Electrical Engineering 470, 470L, and credit or concurrent registration in Electrical Engineering 475.

Design, documentation, assembly, circuit checkout, programming, and software validation of a microprocessor-based system.

**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 IN ELECTRICAL ENGINEERING (Also Acceptable for Advanced Degrees)

**503. Computer Hardware Organization (3)**

Prerequisites: Engineering 120 or Mathematics 107, at least junior standing; some knowledge of assembly language preferred.

Computer hardware organization and design, including combinational and sequential networks, using integrated circuits. Not open to E.E. majors.

**520. Feedback Control Systems (3) I**

Prerequisite: Electrical Engineering 410; 420 recommended.

Analysis of regulatory systems including servomechanisms by the Laplace transform method. System performance and stability; Nyquist, Bode, and root-locus diagrams; elementary synthesis techniques. Practical components and examples of typical designs.

**521. Advanced Feedback Control Systems (3) II**

Prerequisite: Electrical Engineering 520.

A continuation of Electrical Engineering 520 to include feedback compensation, advanced compensation techniques, signal flow theory, state-variable techniques, introduction to nonlinear and sampled-data control systems.

**530. Transistor Circuit Analysis (3) I, II**

Prerequisite: Electrical Engineering 430.

Analysis and design of transistor voltage and power amplifier circuits by use of duality and matrix methods. Feedback amplifiers, audio amplifiers, video amplifiers, power supplies and oscillators; transient analysis and noise considerations.



**534. Solid-State Devices (3) I**

Prerequisite: Electrical Engineering 430.

Conduction theory of solids. Characteristics of tunnel, backward, breakdown, multilayer and varactor diodes; silicon controlled rectifiers and switches, unijunction transistors, hot electron devices. Lasers and laser applications.

**540. Microwave Communications (3) II**

Prerequisite: Electrical Engineering 340; Engineering 510 recommended.

Applications of Maxwell's equations to wave propagation; skin effect, circuit impedance elements; vector potential, and other time-varying electrical phenomena; waveguides and resonators, strip line circuits, electromagnetic radiation.

**540L. Microwave Measurements Laboratory (1) II**

Three hours of laboratory.

Prerequisites: Credit or concurrent registration in Electrical Engineering 430L and 540.

Experimental study of microwave generation including klystrons, Gunn and IMPATT oscillators. TWT and microwave transistor amplifiers. Microwave modulation and detection. Microwave transmission and antennas.

**546. Optical Fiber Communications Systems (3) II**

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) II**

Prerequisite: Engineering 310 or Mathematics 340A.

Random signals, correlation functions, power spectral densities, the Gaussian process, narrow band processes. Applications to communication systems.

**554. Communication Principles and Circuits (3) I, II**

Prerequisite: Electrical Engineering 430.

Signal transmission in linear networks; modulators and detectors; wide-band and narrow-band amplifiers; oscillators; AM, FM, and phase modulation; transient response of amplifiers.

**554L. Communication Circuits Laboratory (1) I**

Three hours of laboratory.

Prerequisite: Electrical Engineering 430L.

Regulated power supply systems; oscillator, modulator, detector, and switching circuits; superheterodyne receivers and television circuitry.

**555. Modulation Theory (3) I**

Prerequisite: Electrical Engineering 410.

Theory and performance characteristics of modulation and demodulation; spectral characteristics and noise performance of carrier systems: amplitude, frequency and phase, pulse coded, and compound modulation.

**556. Digital Signal Processing (3) I, II**

Prerequisite: Electrical Engineering 410 or Physics 516A or Mathematics 340B.

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**

Prerequisite: Electrical Engineering 410 or Physics 516A or Mathematics 340B.

Two-dimensional analysis of signals and systems in areas of signal representation, enhancement and restoration, processing of images, radar signals and other two-dimensional information. Experiments in image processing.

**558. Digital Communication Systems (3) II**

Prerequisite: Engineering 310.

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) II**

Prerequisite: Electrical Engineering 470.

Digital applications of linear devices, the digital/analog interface, and ultra high speed logic devices.

**571. Synchronous Sequential Circuits (3) I**

Prerequisite: Electrical Engineering 373.

Systematic design of high speed synchronous sequential circuits, using standard logic elements and microprogrammable bit slice modules.

**575. Microprocessors (3) I, II**

Prerequisites: Electrical Engineering 373 and 470.

Microprocessor organization and operation. Comparative analysis of commercially available microprocessors. Circuit design and programming of microprocessor-based computing and controller systems. Not open to students with credit in Electrical Engineering 475.

**576. Microprocessor Systems Development (3) I**

Prerequisite: Electrical Engineering 475.

Design of microprocessor-based systems using modern development systems. Hardware and software development. Assembly language and PASCAL. Testing by emulation and real-time analysis.

**580. Modern Power Systems I (3) I**

Prerequisites: Engineering 310, Electrical Engineering 310 and 380.

Modern power system elements; calculation of load flow, fault currents, and system stability.

**581. Modern Power Systems II (3) II**

Prerequisite: Electrical Engineering 580.

Transient response of modern power system elements; positive, negative and zero sequence impedance; subharmonic effects.

**596. Advanced Electrical Engineering Topics (1-3) I, II**

Prerequisite: Consent of instructor.

Modern developments in electrical engineering. See Class Schedule for specific content. Maximum credit six units for any combination of 496, 499 and 596.

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**GRADUATE COURSES IN ELECTRICAL ENGINEERING**

Refer to the Graduate Bulletin.

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## Mechanical Engineering

### Faculty

Emeritus: Bauer, Bilterman, Morgan, Rao, M., Stone  
 Chair: Bedore  
 Professors: Bedore, Craig, Fitz, Hussain, Mansfield, Murphy, Ohnysty, Pinto, Rao, S.  
 Associate Professor: Pierce  
 Assistant Professors: Guven, Thompson  
 Lecturers: Broniarek, Hoyt, Weber

### Offered by the Department

Master of Science degree in mechanical engineering.  
 Major in mechanical engineering with the B.S. degree.

## Mechanical Engineering Major

### With the B.S. Degree

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 first semester of their junior year.*

**Upper Division Writing Requirement.** Passing the departmental screening examination, a part of Mechanical Engineering 310, or passing the University Writing Examination or English 304W with a grade of C (2.0) or better.

The requirements for the major in mechanical engineering are described as follows:

Freshman Year			
Fall Semester	Units	Spring Semester	Units
Chem. 200, General Chemistry .....	5	* Chem. 202, Chem. for Engrs. ....	3
Math. 150, Single Variable Calc. ....	5	Math. 151, Calc. and Anal. Geom. .	4
Engr. 120, Engr. Prob. Anal. ....	2	ME 195, Graphics & Processes ....	3
General Education .....	3	Phys. 195, Principles .....	3
		General Education .....	3
	15		16

Sophomore Year			
Fall Semester	Units	Spring Semester	Units
Math. 252, Multivariable Calc. ....	4	Phys. 197, Principles .....	3
EM 200, Statics .....	3	EE 210, Prin. of Elec. Engr. ....	3
ME 260, Engr. Materials .....	3	EM 220, Dynamics .....	3
Phys. 196, Principles .....	3	Engr. 310, Methods of Analysis ....	3
General Education .....	3	General Education .....	6
	16		18

Junior Year			
Fall Semester	Units	Spring Semester	Units
CE 301, Intro. to Solid Mech. ....	3	EE 303, Electronics, Instrum. and	
ME 310, Engr. Design Intro. ....	3	Elect. Energy Conv. ....	3
ME 340, Materials and Processes ..	3	EM 340, Fluid Mechanics .....	3
ME 350, Thermodynamics .....	3	ME 314, Engr. Des.: Mech. Comp. .	3
ME 390, Engr. Sys. Lab. Intro. ....	2	ME 395, Engr. Sys. Lab. Applic. ....	2
General Education .....	3	ME 450, Engr. Thermodynamics ....	3
		General Education .....	3
	17		17

Senior Year			
Fall Semester	Units	Spring Semester	Units
ME 470, Heat Transfer .....	3	ME 490B, Engr. Des.: Project .....	2
ME 490A, Engr. Des.: Project .....	2	# Professional Electives .....	6
ME 510, Adv. Machine Design .....	3	General Education .....	6
ME 512, Sim. of Engr. Sys. ....	3	American Institutions .....	3
# Professional Electives .....	3		
American Institutions .....	3		
	17		17

\* Chemistry 201, General, may be taken as equivalent to Chemistry 202.

# Approved as part of student's master plan by the department chair.

## LOWER DIVISION COURSES IN MECHANICAL ENGINEERING

### 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.

Graphic communication for engineers. Presentation and interpretation of engineering drawings using instruments and freehand sketches. Manufacturing processes and their influence on design decisions. (Formerly numbered Mechanical Engineering 191.)

### 260. Engineering Materials (3) I, II

Prerequisite: Chemistry 200.

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. (Formerly numbered Engineering Mechanics 260.)

## UPPER DIVISION COURSES IN MECHANICAL ENGINEERING

(Intended for Undergraduates)

### 310. Engineering Design: Introduction (3) I, II

Two lectures and three hours of guided design activities.

Prerequisites: Mechanical Engineering majors—English 100 or Linguistics 100 with a grade of C or better, Engineering 120, Mechanical Engineering 195, and Engineering Mechanics 220; non-Mechanical Engineering majors—English 100 with a grade of C or better.

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, S

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

Prerequisite: Mathematics 152 and Engineering Mechanics 202 or 220.

Development of the basic laws of thermodynamics and their application to engineering systems.

### 352. Thermodynamics and Heat Transfer (3) I, II

Prerequisite: Mathematics 152 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 310, all with a grade of C or better. Credit or concurrent registration in Civil Engineering 301 and Mechanical Engineering 350.

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.

Prerequisite: Mechanical Engineering 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 310, Engineering Mechanics 340, and Mechanical Engineering 350.

Heat transfer by conduction, convection, radiation, and combinations thereof.

**480. Internal Combustion Engines (3) II**

Prerequisite: Mechanical Engineering 450.

Analysis of idealized and real internal combustion engine cycles; combustion problems; performance of reciprocating and rotary types of internal combustion engines. Principles of reaction motors.

**490A-490B. Engineering Design: Senior Projects (2-2) I, II**

Six hours of guided design activities.

Prerequisites for 490A: Mechanical Engineering 314, 350, 395, credit or concurrent registration in Mechanical Engineering 470 and Mechanical Engineering 512.

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 IN MECHANICAL ENGINEERING**

(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, 350 and 395.

Analysis and design of engineering systems using modern analog and digital computers. Simulation of dynamic systems. Application to problems in mechanics, heat transfer, thermodynamics, and control systems.

**514. Experimental Stress Analysis (3)**

Prerequisite: Mechanical Engineering 314.

Advanced study of resistance of materials, failure theories and experimental stress analysis. Methods will include photoelasticity, brittle lacquers, strain gages, grid methods, and analogs for determining static and dynamic stress distributions. Laboratory demonstrations.

**516. Engineering Design: Mechanisms (3)**

Prerequisite: Mechanical Engineering 512.

Design of linkages, cams, and gears wherein displacement, velocity and acceleration are paramount considerations.

**520. Introduction to Mechanical Vibrations (3)**

Prerequisites: Mechanical Engineering 512 and Civil Engineering 301.

Analysis of mechanical vibration; single- and multi-degree of freedom systems; free and forced vibrations; vibration isolation; vibration absorbers. Theory of vibration measuring instruments.

**521. Vibration, Shock and Noise Measurements (3)**

Prerequisites: Mechanical Engineering 512 and Civil Engineering 301.

Experimental problems utilizing vibration excitation equipment, recording systems, transducers, sound analysis systems and analog computers.

**530. Automatic Control Systems (3)**

Prerequisites: Engineering 510 and credit or concurrent registration in Mechanical Engineering 512.

Analysis of the dynamic characteristics of control components and systems. Stability and response of closed loop systems. Design of control systems.

**540. Nonmetallic Materials (3)**

Two lectures and three hours of laboratory.

Prerequisite: Mechanical Engineering 340.

Fundamentals of plastics, reinforced plastics, and ceramics. Analysis of effect of physical properties upon selection of a material for use in design.

**542. Production Engineering (3)**

Prerequisites: Mechanical Engineering 340 and Engineering 310.

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 310.

Theory and techniques of metal cutting, forming, non-cutting metal removal, computer controlled machining.

**546. Computer Aided Manufacturing (3)**

Prerequisites: Mechanical Engineering 195, 340 and Engineering 120, 310.

Computer controlled manufacturing and assembly techniques and devices. Data bases and special languages.

**580. Elements of Energy Conversion (3)**

Prerequisite: Mechanical Engineering 350.

Principles of physics and chemistry applied to the analysis of a broad spectrum of energy conversion devices from an engineering point of view.

**582. Thermal Environmental Engineering (3)**

Prerequisite: Mechanical Engineering 470.

Psychrometrics. Mass transfer. Two-phase flow. Heat transfer. Thermoelectric refrigeration. Change of phase.



**584A-584B. Principles of Chemical Engineering (3-3)**

(Same course as Chemistry 500A-500B.)

Prerequisite: Credit or concurrent registration in Mechanical Engineering 350 or Chemistry 310A or 410A.

Industrial stoichiometry; fluid flow and heat transfer as applied to unit operations such as evaporation, distillation, extraction, filtration, gas-phase mass transfer, drying, and others. Problems, reports, and field trips.

**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.

**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 six units for any combination of Mechanical Engineering 496, 499 and 596.

**GRADUATE COURSES IN MECHANICAL ENGINEERING**

Refer to the Graduate Bulletin.

**English****In the College of Arts and Letters****Faculty**

Emeritus: Adams, J., Burnett, Chater, Gross, Gulick, Haskell, Ingham, Kennedy, Marchand, O'Reilly, Perkins, Phillips, Redding, M., Sanderlin, Sandstrom, Shouse, Sullivan, Theobald, Tunberg

Chair: Adams, E.

Professors: Adams, E., Baker, Benson, Borkat, Brashers, Bumpus, Davis, Dickinson, Farber, Foster, Gellens, Gervais, Henig, Hinkle, Jaffe, Keller, McCaffery, McLeod, D., Monteverde, Moramarco, Nelson, Neumeyer, Rogers, Rother, Santangelo, Savvas, Sheres, Shojai, Stiehl, Tozer, Vanderbilt, Wall, Widmer

Associate Professors: Brown, Butler, Covino, Griswold, Kohler, Nichols, Redding, R., Taylor

Assistant Professors: Aninger, Boe, Hicks, Kehler, Little, Wheeler, Zeiger

Lecturer: McLeod, S.

**Offered by the Department of English and Comparative Literature**

Master of Arts degree in English.

Major in English with the A.B. degree in liberal arts and sciences.

Teaching major in English for the single subject teaching credential.

Minor in English.

Certificate in children's literature.

Certificate in technical and scientific writing.

Certificate in creative writing (advanced).

Courses in comparative literature. (Refer to this section of the catalog under Comparative Literature.)

**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 A.B. 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 English and comparative literature courses can apply to the degree.

A minor is not required with this major.

**Preparation for the Major.** English 100, 260A, 260B (unless replaced by 560A-560B), and six units selected from English 200, 220, 250A, 250B, 280, 281, 296, Comparative Literature 200, 210, 270A, 270B. (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 582W, with a grade of C (2.0) or better.**Major.** A minimum of 27 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, three units in American Literature (English 526, 527, 528, as well as courses listed in the American Literature area of study), and three units in writing (English 500W, 508W, 580, 581W, 582W, 589).

Students who have not taken 260A as part of the preparation for the major must take 560A. Students who have not taken 260B must take 560B. The same course may be used to satisfy requirements under both (b) and (c), except that 560A or 560B may not be used to satisfy requirement (c) without special permission from the Department Chair. No more than 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, 542A, 542B, 544A, 544B, 545, and 546.

**American Literature:** English 521, 522, 523, 524 and 525.

**Modern Literature:** English 524, 525, 544A, 544B, 545, 546, and Comparative Literature 445, 514, and 526.

**Literary Types, Theory, and Criticism:** English 501, 507, 508W, 527, 570, 571, 572, 573, and Comparative Literature 560, 561, 562, 563, 580, and 581.

**Creative Writing:** English 570, 571, 572, 573, 579, 580, 581W, 582W, and 589.

**Expository Writing:** English 304W, 306W, 500W, 508W, 509, 582W.

**NOTE:** In addition to the courses listed above, appropriate sections of English 496, 499, 526, 527, 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.

**English Major****For the Single Subject Teaching Credential**

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

The requirements for the Secondary Credential in English are as follows:

- I. A major in English, comparative literature, or linguistics for the A.B. degree.
- II. **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."
- III. **Upper Division Writing Requirement.** English 500W, 508W, 581W, or 582W, with a grade of C (2.0) or better.
- IV. 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 15 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, 544A, 544B, Comparative Literature 514.
  - b. Appropriate: English 545, 546, Comparative Literature 440, 445, 526.
  - c. The following courses are also applicable when the topic deals with the Twentieth Century: English 496, 526, 528, 549, Comparative Literature 490, 550, 577.
4. **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, 495, 561, 595.

b. Appropriate: English 572, Comparative Literature 560, 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, 550.

**B. Courses in Writing** (total 12 units).

**NOTE:** Must include at least one upper division expository writing course – either English 306W, 500W, 508W, or 582W.

- a. Particularly appropriate: English 280, 306W, 500W, 580, 581W.
- b. Appropriate: English 100, 200, 281, 508W, 509, 582W, 589.
- c. Writing courses taken in other departments may apply towards this requirement if approved by the departmental adviser (English).

**C. Courses in Linguistics** (total 9 units).

- a. Particularly appropriate: Linguistics 410 (History of English), 420 (Modern English) or 520 (Structure of English), 450 (Introduction to Teaching English as a Second Language), 524 (American Dialectology).
- b. Appropriate: Linguistics 101 (Introductory Linguistics), 550 (Theory and Practice of English as a Second Language), 551 (Sociolinguistics), 552 (Psycholinguistics), Comparative Literature 581 (Literary Uses of Languages).

**D. Speech** (total 3 units).

- a. Particularly appropriate: Speech Communication 103 (Oral Communication), 105 (Intro. to Speech Communication), 111A (Fund. of Interpretation).
- b. Appropriate: Speech Communication 391 (Group Communication).

**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 304W, 305W or 500W.
3. A course in folk or popular literature: English 301, 306A, 405, 491, 492, 501, Comparative Literature 470, or approved sections of other special topics courses.
4. A course in contemporary literature: English 525, 544B, 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, 572, 573, 579, Comparative Literature 560, 561, 562, 563.
3. A course in literature and other arts: English 493, Comparative Literature 495, 595, or approved sections of special topics courses.
4. A course in creative writing or appropriate special topics: English 580, 581W, 582W, or approved sections of special topics courses.



**Business disciplines**, one course from each group:

1. A course in expository writing: English 304W, 305W or 500W.
2. A course in Shakespeare, literature and psychology, or popular literature: English 301, 302, 491, 492, 493, 494, 533.
3. A course in American literature: English 521, 522, 523, 524, 525, approved sections of 526 or 528.
4. A course in British fiction: English 540A, 540B, 544A, 544B, 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, 572, 573, 579, Comparative Literature 560, 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, 513, 514.
4. A second course in literary history or a course in literature and other disciplines, English 493, Comparative Literature 495, 595, or approved sections of special topics courses.

**Science disciplines**, one course from each group:

1. A course in technical writing: English 304W.
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, 306W, 491, 492, 493, 494, 501, 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, 513, 514.

**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.

**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.

**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:** Education 496\*; Educational Technology and Librarianship 578, 596; Elementary Education 512, 522.

**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 course work to improve writing proficiency.

**Required Courses:** (9 units)

English 304W, Technical Writing  
English 500W, Advanced Composition  
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 course work in writing. Those with nontechnical or nonscientific backgrounds should concentrate on either a technical or scientific specialty. English 496, Internship in Technical Writing, is recommended for all students. A maximum of six units of transfer credit may be applied to the program. (12 units.)

**LOWER DIVISION COURSES****100. College Composition (3)**

*International students are advised to take Linguistics 100.*

Prerequisites: Completion of English Placement Test and Writing Competency requirements. (See Graduation Requirements, I: Competency Requirements, section of this catalog.) **PROOF OF COMPLETION OF COMPETENCY PREREQUISITE REQUIRED.** Student to bring to first class meeting evidence of **one** of the following: Test score of 44+ on SAT/TSWE or 18+ on ACT or 7 essay and 150+ total on EPT or proof of having passed the final examination in Academic Skills 110 or credit for Academic Skills 150.

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 Afro-American Studies 120 or higher numbered composition or creative writing course or Linguistics 100 or Mexican-American Studies 111B.

**125. Developmental Writing Workshop (1)**

Two hours of lecture and activity (writing), one hour of preparation (homework).

Prerequisite: Satisfaction of Writing Competency requirement.

A workshop in clear, effective writing. Intensive in-class writing with individual assistance from instructors and tutors. Includes review of grammar, punctuation, and mechanics. Open to students of all levels who wish to improve their writing skills. Credit earned in this course not applicable to a bachelor's degree or General Education.

**200. Intermediate Composition (3) I, II**

*International students are advised to take Linguistics 200.*

Prerequisites: Completion of English Placement Test and Writing Competency requirements and satisfactory completion of Afro-American Studies 120 or English 100 or Linguistics 100 or Mexican-American Studies 111B. **PROOF OF COMPLETION OF COURSE AND COMPETENCY PREREQUISITES REQUIRED.** Student to bring evidence (grade slip or copy of student record) to first class meeting.

Further practice in expository writing, with emphasis on mastery of style and organization, and problems of research. Not open to students with credit in Linguistics 200.

**220. Introduction to Literature (3) I, II**

An inquiry into the basic nature of literature. What prompts humankind 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 the 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)**

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**

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: Completion of English Placement Test and Writing Competency requirements and satisfactory completion of Afro-American Studies 120 or English 100 or Linguistics 100 or Mexican-American Studies 111B. PROOF OF COMPLETION OF COURSE AND COMPETENCY PREREQUISITES REQUIRED. Student to bring evidence (grade slip or copy of student record) to first class meeting.

Introduction to theory and practice of creative writing in the major genres, with emphasis on basic concepts and techniques.

**281. Creative Writing: Selected Genres (3)**

Prerequisite: English 280.

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.

## Comparative Literature

(See this section of catalog under Comparative Literature.)

## UPPER DIVISION COURSES

(Intended for Undergraduates)

**301. The Psychological Novel (3)**

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)**

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.

**304W. Technical Writing (3)**

Prerequisite: English 200.

Expository and report writing on technical subjects dealt with in such professions as industry, science, and government. Primarily for students in engineering, nursing, the sciences, and such preprofessional areas as law and medicine. Long and short forms including reports, proposals, manuals, and journal articles. 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.

**305W. Writing Proficiency (3)**

*International students are advised to take Linguistics 305W.*

Prerequisite: Satisfactory completion of the Writing Competency requirement, the General Education writing requirement, or advanced placement.

Advanced expository writing intended for students not majoring in English or comparative literature. While the course emphasizes style and the development of ideas, students are expected to review grammar, usage, punctuation, and the like, and to pass a mastery test on these topics. This test is required for course credit. 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. See Class Schedule for specific content. It is strongly recommended that course be taken at beginning of junior year so that students can apply writing proficiency in upper division courses.

**306A-306W. Children's Literature and Advanced Composition (3-3) I, II**

Prerequisite: English 200. English 306A and 306W must be taken concurrently.

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 Options 2 and 3, but also open to students with other 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.

**405. The Bible as Literature (3) I, II**

(Same course as Comparative Literature 405.)

Prose and poetry of the King James version. (Formerly numbered English 505.)

**490. Workshop in Alternative Publishing (3)**

History and analysis of various aspects of alternative publishing as an avenue of creative expression for literary artists. Practice in applying creative writing and literary critical criteria to a small, noncommercial publication, such as a literary magazine or small book.

**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.

**492. Studies in Popular Literature (3)**

Study of individual works or types of literature outside of traditional academic areas of interest that have demonstrated popular appeal, with emphasis on how such literature should be critically appreciated and what such literature reveals about the culture that consumes it. Topics include Detective Fiction, Science Fiction and Fantasy, Rogue 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)**

Representative works by twentieth century American authors such as Hemingway, Steinbeck, Faulkner, Fitzgerald, Bellow, Vonnegut, Heller, 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)

All 500-level courses — Strongly recommended: Six lower division units in courses in literature and/or creative writing.

**500W. Advanced Composition (3) I, II**

The theory and practice of expository writing, including the contributions of semantics, rhetoric, and logic. 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.

**501. Literature for Children (3)**

Critical analysis of literature intended for children. Study of texts and illustrations.

**504. Problems in Technical Communication (3) I, II**

Prerequisite: English 304W. Recommended: Graphics or drawing course.

Problems in technical writing, including graphics, printing, and reproduction of technical documents; types of technical communication, including reports, manuals, and proposals; manuscript editing and proofreading; audience analysis and readability; writing and recognition of clear technical prose.

**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)**

Theory and practice of literary criticism. Emphasis on the work of important critics and on development of student's own critical writing. 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.

**509. Introduction to the Teaching of Composition (3) I**

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.

**521. Early American Literature (3)**

Representative works by American writers from the period of America's founding until approximately 1800; likely to include works by Benjamin Franklin, Cotton Mather, Anne Bradstreet, Johnathan Edwards, others.

**522. American Literature, 1800 until 1860 (3)**

Representative works by American writers from 1800 until 1860; likely to include works by Hawthorne, Melville, Poe, Emerson, Thoreau, Whitman, others.

**523. American Literature, 1860 until 1920 (3)**

Representative works by American writers from 1860 until 1920; likely to include works by Twain, Henry James, Stephen Crane, Emily Dickinson, Carl Sandburg, Kate Chopin, others.

**524. American Literature, 1920 until 1950 (3)**

Representative works by American writers from 1920 until 1950; likely to include works by Hemingway, Faulkner, Fitzgerald, T.S. Eliot, Ezra Pound, Eugene O'Neill, Steinbeck, others.

**525. American Literature, 1950 until Present (3)**

American writers from 1950 until the present; likely to include works by Joseph Heller, Saul Bellow, Norman Mailer, Edward Albee, Kurt Vonnegut, Allen Ginsberg, Sylvia Plath, 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) I, II**

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.

**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.

**542A-542B. Nineteenth Century British Poetry (3-3)**

Semester I: The Romantic movement. Semester II: The Victorian period.

**544A-544B. Modern British Fiction (3-3)**

Semester I: English fiction from 1890 to World War II. Semester II: English fiction from 1939 to the present.

**545. Modern British Poetry (3)**

British poetry since 1900.

**546. Modern British Drama (3)**

British drama since 1890.

**549. Topics in English Literature (3) I, II**

The Works of Spenser, The Metaphysical School of Poetry, The English Satirists, Major Movements in Contemporary English Fiction, and the like. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

**560A-560B. A History of English Literature (3-3) I, II**

Survey of major English writers, with emphasis on reading of complete works. Semester I: From the beginning to the neoclassical period. Semester II: Begins with the Romantic writers. Especially appropriate for those students who have not satisfied the lower division survey requirements, for those who will teach English literature, and for those proceeding on to graduate study.

**570. Techniques of Poetry (3) I, II**

A study of the critical and theoretical literature of poetry, from the creative writer's viewpoint, together with reading and discussion of appropriate examples.

**571. Techniques of the Short Story (3) I, II**

A study of the critical and theoretical literature of the short story from the creative writer's viewpoint, together with reading and discussion of appropriate examples. (Formerly numbered English 571A.)



**572. Techniques of Drama (3)**

A study of the critical and theoretical literature of drama from the creative writer's viewpoint, together with reading and discussion of appropriate examples.

**573. Techniques of the Novel (3) I, II**

A study of the critical and theoretical literature of the novel from the creative writer's viewpoint, together with reading and discussion of appropriate examples. (Formerly numbered English 571B.)

**579. Topics in Techniques of Writing (3)**

A study of the critical and theoretical literature of literary technique or topic such as satire, science fiction, myth and fantasy, children's literature, the long poem, the literary anatomy, etc. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**580. The Writing of Poetry (3) I, II**

Prerequisite: English 280.

A writing workshop in poetry. May be repeated with new content. Maximum credit six units.

**581W. The Writing of Fiction (3) I, II**

Prerequisite: English 280.

A writing workshop in fiction. 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. May be repeated with new content. Maximum credit six units.

**582W. The Writing of Nonfiction (3)**

Prerequisite: English 280.

A writing workshop in nonfictional prose. 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. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**589. Senior Workshop in Creative Writing (3)**

An advanced workshop intended only for students who have an extensive background in creative writing. Different sections of the course may treat advanced poetry writing, advanced fiction writing, or other special topics. See Class Schedule for specific content.

**Comparative Literature**

(See this section of catalog under Comparative Literature.)

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**European Studies**

In the College of Arts and Letters

European Studies courses, the European Studies major with the A.B. in liberal arts and sciences, and the European Studies minor are offered and administered through the Humanities Committee, composed of faculty members from diverse departments. Professor Leon Rosenstein is director of the European Studies Program and adviser to European Studies majors. Refer to the "Humanities" listing.

**Family Studies and Consumer Sciences**

In the College of Professional Studies and Fine Arts

The undergraduate majors in child development, foods and nutrition, and home economics are accredited by the Council for Professional Development of the American Home Economics Association.

**Faculty**

Emeritus: Boggs, Cannon, Comin, Dorris, Martin, M., Milne, Somerville, Stout, Warmer  
Director (Acting): Spindler

Professors: Cooke, Deutsch, Fulcomer, Gunning, Hewes, Josephson

Associate Professors: Balkwell, Hawkins, Hoover-Plow, Koblinsky, Martin, K.J., Mikitka, Null,

Price, Ross, Spindler

Assistant Professors: Dickerson, Schupp

Lecturers: Avery, Gabriel, Harvey, Hill, Jarvenpa, Mello, Robasciotti, Whitney

**Offered by the School of Family Studies and Consumer Sciences**

Master of Science degree in home economics.

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 A.B. degree in applied arts and sciences.

Teaching major in home economics for the single subject teaching credential.

Minor in child development.

Minor in home economics.

**Child Development Major****With the B.S. 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.

The child development major is a professional field which merges theory with practical application. Many fields of study, including psychology, biology, home economics, sociology, and anthropology, contribute to this interdisciplinary major.

Graduates with a major in child development may work professionally in nursery schools and day care centers, in juvenile homes or in family support and health agencies. Some, after passing the National Teachers Examination, take courses leading to teaching credentials. Others use the human relationships emphasis as the basis for occupations in business and finance. Many go into graduate programs in law, social work, sociology, home economics, marriage and family counseling, or college teaching.

**Preparation for the Major.** Anthropology 102; Biology 100, 145; Family Studies and Consumer Sciences 107, 135, 151 or 240, 270, 271; Psychology 101, 260; Sociology 101, 201 or Psychology 270. (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 37 upper division units to include Family Studies and Consumer Sciences 335, 375, 375L (one unit), 422, and 478; Psychology 350; Sociology 440 or Psychology 340; and 18 units selected with the approval of the adviser, at least 12 and not more than 15 units of which must be in an area in which the student wishes to specialize. A master plan for each student must be filed with the Evaluations Office.

**Foods and Nutrition Major****With the B.S. 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.



This major is planned for students interested in qualifying professionally for diverse careers in the fields of dietetics, food service management, and food industries. Under faculty direction, students can select course sequences which best suit their career goals. Students can fulfill academic requirements for admission to dietetic internships and/or graduate schools which further qualify them for membership in the American Dietetic Association and registration as a dietitian.

Professional careers in dietetics include administrative, therapeutic, teaching, research, and public service positions in hospitals, schools, clinics, and other institutions. Graduates may also qualify for careers as food service managers in private and public organizations and institutions or as technical specialists within food companies, private or governmental agencies and laboratories, military service, and the mass media.

**Preparation for the Major.** Family Studies and Consumer Sciences 204, 205A, 205B, 240, 270; Accountancy 100 or 212; Biology 100, 100L, 210 (or 350); Chemistry 100 (or 200 and 201), 130 (or 230), 160 (except with 200 series); Economics 101, 201 (or Mathematics 250); Physics 107; Psychology 101; Sociology 101. (A three-unit computer related course, e.g., Mathematics 107, Information Systems 180, is needed if Family Studies and Consumer Sciences 507 is not selected in the major.) (52-60 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, 303, 404, 405, 406, 421 or 422; Biology 410; the remaining units selected with the approval of adviser from Family Studies and Consumer Sciences 308, 309, 407, 480, 482, 507, 508, 510; Accountancy 315; Biology 321; Chemistry 361A, 361B, 467 or 567; Health Science 470; and Management 350, 351 or 352 or Psychology 321.

## Home Economics Major

### With the A.B. 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.

The home economics major provides a background appropriate for a wide variety of professional careers. Graduates from the teaching credential program are employed in elementary, secondary, vocational, and adult education fields and in cooperative extension. Clothing, textile, and merchandising majors find positions in retail, marketing, textile research, and as consumer consultants. Graduates from the consumer services and housing sequence have competencies to enter the consumer affairs and family finance fields or use their management skills in working with the elderly, the handicapped, or the low-income. Graduates interested in housing professions find employment in business, educational and governmental organizations.

**Preparation for the Major.** Family Studies and Consumer Sciences 107, 135, 151, 219, 240, 245, 270; Art 157; Economics 100 or 101 or 102; Psychology 101; Sociology 101. (Family Studies and Consumer Sciences 115, 115L or competency examination, 217, 260; Biology 100, 100L; Chemistry 100, 130 required for clothing, textiles and merchandising; Accountancy 212 required for students in merchandising. Natural Science 110A, 110B; Biology 130; Economics 201 required for consumer services and housing.) (47-60 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 39 upper division units selected from one of the core professional sequences. A master plan for each student must be filed with the Evaluations Office.

### Core Professional Sequences.

**Clothing, Textiles and Merchandising:** Family Studies and Consumer Sciences 319, 383, 422, 519, 520, 522; plus 21 units selected with approval of adviser from Family Studies and Consumer Sciences 314, 361, 362, 414, 415, 440, 462, 482, 541, 546. Students in merchandising complete Management 350; Marketing 370, 372, and 373 or Journalism 460 as part of the 21 units. Minor option: Related minor with consent of adviser.

**Consumer Services and Housing:** Family Studies and Consumer Sciences 343, 383, 422, 440, 451, 541, 546, 553. General option: 15 units selected from Family Studies and Consumer

Sciences 344, 345, 446, 482, 545; Art 453; Finance 437; Geography 354; Marketing 370; Physics 301; Public Administration 320; Sociology 424. (The prerequisites for Art 453 and Geography 354 have been waived.) Minor option: Related minor with consent of adviser.

## Home Economics Major

### For the Single Subject Teaching Credential

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

The major may be used by students in teacher education as an undergraduate major for the A.B. degree in applied arts and sciences.

**Preparation for the Major.** Family Studies and Consumer Sciences 115, 115L, 135, 151, 204, 205A-205B, 219, 240, 245, 270; Art 157; Biology 100, 100L; Chemistry 100, 130; Economics 100, 101, or 102; Psychology 101; Sociology 101. (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 in Family Studies and Consumer Sciences to include 314, 335, 375, 376A (prerequisite 271 waived), 383, 422, 440, 451, 481, 483, 541, 584.

## 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 twelve units selected from Family Studies and Consumer Sciences 375, 375L, 476, 477, 478, 570\*, 576, 579; Psychology 432\*.

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.

\* 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 21 units in family studies and consumer sciences, 12 units of which must be in upper division courses. The 18 to 21 units must be selected from one of the following areas:

**Foods and Nutrition:** Family Studies and Consumer Sciences 204\*, 205A\*, 205B, and 12 units selected from 301\*, 302\*, 303, 404, 405, 406, 480, 507, 508, 510 (and/or 596 if appropriate).

**Consumer Services:** Family Studies and Consumer Sciences 240, 350, and 12 units selected from Family Studies and Consumer Sciences 343\*, 440, 541, 545\* (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, 375, 376A, 436\*, 440\*, 478, 536\*, 570 (and/or 596 if appropriate).

**Clothing, Textiles and Fashion Merchandising:** Family Studies and Consumer Sciences 217, 219, 260, 361, 462, 520\* (and/or 596 if appropriate).

**Housing:** Family Studies and Consumer Sciences 245\*, 319\*, 343\*, 345, 446, 545, 546 (and/or 596 if appropriate).

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.

\* Indicates course with prerequisites not included in requirements listed above.

## LOWER DIVISION COURSES

### 107. Nutrition Today (3) I, II

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.

### 115. Principles of Apparel Construction (2) I, II

Comparative analysis of construction quality, basic theories, techniques, and procedures for apparel construction. Laboratory optional upon passing competency examination.



**115L. Apparel Construction Laboratory (1) I, II**

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Family Studies and Consumer Sciences 115.

Laboratory course in apparel construction techniques. Maximum credit two units.

**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) I, II**

Value systems and application of principles of decision making to individual, professional and family management in changing socioeconomic environments.

**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.

Nutrition as applied to the stages of the normal life cycle.

**205A. Foods I (3) I, II**

One hour lecture and six hours of laboratory.

Prerequisites: Chemistry 100 and 130. Proof of completion of prerequisites required.

Introduction to composition, properties and quality attributes of foods, methods of preparation, consumer evaluation, and basic sanitation are stressed.

**205B. Foods II (3) I, II**

One hour lecture and six hours of laboratory.

Prerequisites: Family Studies and Consumer Sciences 205A and credit or concurrent registration in Family Studies and Consumer Sciences 204. Proof of completion of prerequisites required.

Food legislation, additives, preservation, meal management and international/cultural foods are emphasized.

**217. Fundamentals of Clothing and Human Behavior (3) I, II**

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) I, II**

Consumer decision-making processes and behavior patterns in the consumption of clothing and textiles. Social, political, economic, and technological factors affecting consumption patterns.

**240. Family Income Management (3) I, II**

Financial problems involved in the effective management of the family resources.

**245. Fundamentals of Housing and Interiors (3) I, II**

Two lectures and three hours of laboratory.

Architectural, functional and aesthetic factors of housing and interiors as related to family needs.

**260. Fashion Merchandise Analysis (3) I, II**

Prerequisite: Family Studies and Consumer Sciences 217.

Introduction to the fashion industry: manufacturing, wholesaling, and retailing of apparel products and household textiles. (Formerly numbered Family Studies and Consumer Sciences 360.)

**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 or Psychology 330.

Physical, social, emotional, and intellectual development of the young child with applications for guidance. Observing, recording individual and group behavior of children.

**275. Materials for Nursery School (2)**

Four hours of activity.

Prerequisite: Family Studies and Consumer Sciences 270.

Selection and evaluation of basic instructional modes and practices appropriate for young children; direct experiences with various media and techniques.

**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 I, II**

Two hours of fieldwork per week as arranged, plus orientation and evaluation.

Prerequisites: Family Studies and Consumer Sciences 270 and permission of director 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**

Two lectures and three hours of laboratory.

Prerequisites: Family Studies and Consumer Sciences 205B, Biology 210, Physics 107.

Proof of completion of prerequisites required.

The structure and physical, chemical and functional properties, and quality attributes of foods; food processing and processed induced changes and interactions of food components; regulatory agencies and laws; group project studies; data interpretation.

**302. Advanced Nutrition (5)**

Three lectures and six hours of laboratory.

Prerequisites: Family Studies and Consumer Sciences 204, Biology 410, and one course in

biochemistry. Proof of completion of prerequisites required.

Integration of cellular, physiological, and biochemical relationships with human nutrient requirements. Application and evaluation of techniques used to assess nutritional status, including basic methods, experimental animal and human studies.

**303. Quantity Food Production (3)**

Two lectures and three hours of laboratory.

Prerequisite: Family Studies and Consumer Sciences 205B.

Application and evaluation of techniques and equipment utilized in food service operations for quality and financial control, production, distribution and service of food.

**308. Purchasing for Restaurants (2)**

Identification and description of food, supplies, equipment and furnishings. Provides methods, criteria for recognizing quality and for evaluating, specifying, purchasing and inspecting these materials for restaurant use.

**309. Eating Disorders and Weight Control (2) I Cr/NC**

Prerequisite: Upper division standing in foods and nutrition or other majors with consent of instructor.

Obesity and other eating disorders. Reviewing 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.



**314. Principles of Apparel Design (3) I**

One lecture and six hours of laboratory.

Prerequisites: Family Studies and Consumer Sciences 115; 115L or competency examination. Proof of completion of prerequisites required.

Development of techniques in fabric manipulation. Problem-solving strategies in apparel design utilizing fabric draping and master pattern blocks. (Formerly numbered Family Studies and Consumer Sciences 518.)

**319. Textiles (3) I**

One lecture and six hours of laboratory.

Prerequisites: Family Studies and Consumer Sciences 219; Chemistry 100, 130. Proof of completion of prerequisites required.

Fiber, yarn, and fabric construction and finishes as they relate to selection and care of textiles. (Formerly numbered Family Studies and Consumer Sciences 119.)

**335. Interaction in Families (3) I, II**

Prerequisite: Family Studies and Consumer Sciences 135.

Marriage adjustment and family interaction throughout the life cycle.

**343. Home Energy Issues (3)**

Two lectures and three hours of laboratory.

Prerequisite: Natural Science 110A.

Current energy issues and alternatives. Laboratory experience to acquaint students with current research findings. Selection, use, and care of equipment with concern for scarcity of resources.

**344. Introduction to Family Housing (3) I**

Prerequisites: Psychology 101 and Sociology 101.

Fundamental housing concepts, criteria affecting choice of housing, demographic forces related to demand for housing. National housing dilemma, housing for special needs and elderly, housing alternatives for sheltering of individuals and families.

**345. Housing and Interiors: Historical Influences (3) I**

Prerequisite recommended: History 105.

Historical influences of structures, interiors and furnishings as they express cultural needs and values. Critical appraisal of aesthetic and functional qualities of historical and contemporary housing environments.

**350. Family Resource Management (3)**

Efficient management of the home, family cooperation, establishment of goals, and productive use of money, time, and energy for a variety of family lifestyles. Not open to home economics majors, or to students with credit in Family Studies and Consumer Sciences 451.

**361. Fashion Merchandising Field Experience (3) I, II**

One lecture and six hours of laboratory.

Prerequisites: Family Studies and Consumer Sciences 260 and consent of program adviser.

Practical application of classroom theory and executive development techniques.

**362. Fashion Merchandise Budget and Planning (3) I**

Prerequisite: Family Studies and Consumer Sciences 361.

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.

**370. Research, Assessment, and Evaluation of Children and Families (3) I**

Prerequisites: Family Studies and Consumer Sciences 270 and 271.

Research methods in child and family development.

**371. Human Development: Middle Childhood and Adolescence (3) I**

Prerequisite: Family Studies and Consumer Sciences 270.

Child development between the ages of 8 and 18, emphasizing work by Erikson, Piaget, Money, Douvan, and Adelson.

**375. Child Development Program (3) I, II**

Prerequisites: Family Studies and Consumer Sciences 271; concurrent registration in Family Studies and Consumer Sciences 376A for one unit only.

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 (1-7) I, II**

Three hours of laboratory for each unit of credit.

Prerequisites: Family Studies and Consumer Sciences 271; 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 seven units. (Formerly numbered Family Studies and Consumer Sciences 375L.)

**376B. Laboratory Experiences in the Child Study Center: Toddlers (1-4) I, II**

Three hours of laboratory for each unit of credit.

Prerequisites: Family Studies and Consumer Sciences 271; 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 toddlers, ages 20 to 30 months, in a mainstreamed setting. Planning developmentally appropriate activities and administering a program for young children and their families. Maximum credit four units. (Formerly numbered Family Studies and Consumer Sciences 375L.)

**376C. Laboratory Experiences in the Child Study Center: Infants (1-3) I, II**

Three hours of laboratory for each unit of credit.

Prerequisites: Family Studies and Consumer Sciences 270 and/or 271.

Directed experiences with infants from birth to 15 months of age. Developmental characteristics and firsthand experience with details of program planning and implementation for infants. (Formerly numbered Family Studies and Consumer Sciences 375L.)

**383. Consumer Information Systems (3) I, II**

Prerequisites: Twelve upper division units 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) I, II**

One lecture and six hours of laboratory.

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.

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**

Three lectures and three hours of laboratory.

Prerequisite: Family Studies and Consumer Sciences 302. Proof of completion of prerequisite required.

Dietary management of pathological and debilitating diseases.

**407. Supervised Field Experience in Nutrition Counseling and Education (3) I, II Cr/NC**

Two lectures and three hours of laboratory.

Prerequisites: Family Studies and Consumer Sciences 302, consent of instructor, and a B average or better in the major field. Proof of completion of prerequisites required.

Training in general counseling techniques for nutritional assessment. Supervised field experience with various community based nutrition programs.



**414. Advanced Apparel Design (3) II**

One lecture and six hours of laboratory.

Prerequisite: Family Studies and Consumer Sciences 314.

Creation of original designs utilizing fabric draping and master pattern blocks. (Formerly numbered Family Studies and Consumer Sciences 521.)

**415. Creative Approach to Functional Clothing (3)**

One lecture and six hours of laboratory.

Prerequisite: Family Studies and Consumer Sciences 414.

Clothing as it affects the physical and psychological well-being of the individual. Functional aspects of clothing. Problem-solving approach to meet clothing needs of disabled persons and persons in special occupations. (Formerly numbered Family Studies and Consumer Sciences 315.)

**421. Professional Issues: Foods and Nutrition (1) I, II**

Prerequisites: Six upper division units in family studies and consumer sciences.

Philosophical base 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 422.

**422. Contemporary Issues in Family Studies and Consumer Sciences (3) I, II**

Prerequisite: Six upper division units in family studies and consumer sciences.

Analysis of current and emerging forces and issues having impact on individuals and families served by professionals and programs related to family studies and consumer sciences.

**430. Parent-Child Interaction (3) I**

Prerequisite: Completion of Foundations section B (Social and Behavioral Sciences) of General Education.

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) I, II**

Prerequisites: Psychology 101, Sociology 101.

Analysis of individual and family needs and the social institutions and agencies which satisfy these needs. Emphasis on relevant social issues. Includes eight to ten hours of field trips to community agencies.

**437. Violence in Families (3)**

Prerequisite: Family Studies and Consumer Sciences 335.

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.

**439. Field Experience in Family Studies (3)**

One lecture and nine hours of fieldwork.

Prerequisites: All required courses for the Child Development Major and Family Studies and Consumer Sciences 436.

Field experience in family support agencies under joint supervision of agency staff and course instructor; participation in agency staff meetings, individual conferences and class meetings.

**440. Family Financial Strategies (3) I, II**

Prerequisite: Family Studies and Consumer Sciences 240.

Financial problems and practices of families with regard to various socioeconomic levels. Family financial counseling techniques. Relationship of the family to economic and political systems.

**446. Housing and Interiors: Contemporary Design (3) II**

Two lectures and three hours of laboratory.

Prerequisite: Family Studies and Consumer Sciences 245.

Influence of contemporary designers on structure, interiors and furnishings used in planning the total housing environment.

**451. Family Management Theory and Analysis (4)**

Three lectures and two hours of laboratory.

Prerequisites: Family Studies and Consumer Sciences 151 and 240.

Home management related to cultural and socioeconomic needs of families. Systems management theory as it relates to family life cycle, changing roles, and varied family forms. Practical application and field experience.

**462. Fashion Merchandising Seminar (3) II**

Prerequisite: Family Studies and Consumer Sciences 260.

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.

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.

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 or Psychology 330.

An investigation of philosophy, issues, and current trends in working with parents.

**480. Demonstration Techniques (3) I, II**

One lecture and six hours of laboratory.

Prerequisite: Six units in family studies and consumer sciences. Recommended: Development, Administration and Technology 404 and Speech Communication 204.

Organizing materials and developing techniques used for demonstrations and presentations in business, promotional and educational settings. Preparation of scripts, photographic styling, television productions, and professional demonstrations.

**481. Materials and Techniques for Teaching Home Economics (3) II**

Two lectures and three hours of laboratory.

Prerequisite: Twelve upper division units in Family Studies and Consumer Sciences.

Selection, use, and evaluation of instructional materials, teaching strategies and laboratory procedures for home economics education and vocational student organizations. Application and development of individualized instructional products, demonstration materials, and other instructional aids.

**482. Educational Practices and Instructional Resources (3) I, II**

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.

**483. Program Development in Home Economics (4) I**

Three lectures and two hours of activity.

Prerequisite: Twelve upper division units in family studies and consumer sciences.

Development and design, instructional procedures and evaluation strategies for consumer-home economics programs.

**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)

**507. Processing Food and Nutrition Data (3)**

One lecture and six hours of laboratory.

Prerequisites: Family Studies and Consumer Sciences 302 and 303.

Application of computer logic to food service management, diet planning and analysis.

**508. Advanced Food Systems Management (3)**

Prerequisite: Family Studies and Consumer Sciences 404.

Analysis of current topics in food systems management. Application of management principles in individual special projects.

**510. Nutrition and Community Health (3)**

Two lectures and three hours of laboratory.

Prerequisite: Family Studies and Consumer Sciences 302.

Exploration of nutrition problems in the community with consideration of current and potential means of resolving them.

**519. Textile Analysis and Testing (3) II**

One lecture and six hours of laboratory.

Prerequisite: Family Studies and Consumer Sciences 319.

Analysis based on physical tests for differences due to variation in fiber, yarn, and fabric structure and finishes. Suitability of various characteristics for specified end uses.

**520. Clothing and Human Behavior (3) II**

Prerequisites: Family Studies and Consumer Sciences 217, Psychology 101 and Sociology 101. Proof of completion of prerequisites required.

Concepts and theories of human behavior as they apply to clothing usage. Significance of impressions of individuals that result from their attire in the dynamics of social interaction of contemporary Western societies.

**522. Clothing and Textiles: Historical Influences (3) I**

Historical overview of clothing and textiles with emphasis on important socioeconomic and cultural influences.

**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.

**539. Family Relationships in Literature (3)**

Insights through creative literature into the variations in relationships between the sexes and between generations in various cultures and subcultures. Fiction viewed as social documents which reveal changing expectations and ways of coping with stress.

**541. Consumer Interest (3) II**

Prerequisite: Family Studies and Consumer Sciences 240 or 440.

Analysis of consumer legislation, consumer information and consumer protection programs.

**545. Family Housing (3) II**

Two lectures and three hours of laboratory.

Prerequisite: Family Studies and Consumer Sciences 245.

Advanced housing problems at various stages of the family life cycle and the different socioeconomic levels.

**546. Environmental Factors of Housing (3) I**

Prerequisite: Family Studies and Consumer Sciences 245.

Problems of developing effective housing for families in various cultural situations. Investigation of sociopsychological, economic and legislative factors of housing.

**553. Supervised Field Work in Home Management (3)**

One lecture and six hours of laboratory.

Prerequisites: Family Studies and Consumer Sciences 271, 451, 536.

Management and social problems as they relate to the home and family. Supervised field work with various community agencies and selected families.

**570. Human Development: Infant/Toddler (2) I, II**

Prerequisites: Family Studies and Consumer Sciences 270 or Psychology 330; Psychology 260. Biology 350 recommended.

Physiological, psychological, social and cultural development of the human organism from birth through three years of age.

**570L. Human Development: Infant/Toddler Laboratory (1) I, II**

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Family Studies and Consumer Sciences 570.

Directed observation and laboratory demonstration with infants and toddlers.

**576. Supervised Experiences with Young Children (3) I, II**

One lecture and nine hours of field work.

Prerequisite: Nine units in child development.

Directed experiences in various community settings. Emphasis on application of child development principles in working with young children. May be repeated with new content. Maximum credit six units.

**577. Advanced Administration of Child Development Programs (3) II**

Prerequisite: Family Studies and Consumer Sciences 477.

Problems of organization in conducting programs for young children; interrelationships of staff; personnel practices; communication with teaching staff, parents, and community; records and reports.

**579. Advanced Child Study (3)**

Prerequisite: Nine units in child development courses.

Physical, social, and psychological factors which determine the direction of child behavior. Readings and interpretations of scientific literature which contribute to an understanding of theories of human development.

**584. Occupational Home Economics Programs (3) II**

Prerequisite: Twelve upper division units in family studies and consumer sciences.

Vocational education legislation; development and administration of occupational and career programs in all areas of home economics.

**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. Maximum credit nine units. No more than six units may be applied toward either the bachelor's or master's degree. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

## GRADUATE COURSES

Refer to the Graduate Bulletin.



## French

### In the College of Arts and Letters

#### Faculty

Emeritus: Ghilbert, Messier  
 Chair: Branan  
 Professors: Branan, Glasgow, Jackson, Nelson  
 Associate Professors: Cox, Palmer, Schorr  
 Assistant Professor: Benkov

#### Offered by the Department of French and Italian Languages and Literatures

Master of Arts degree in French.  
 Major in French with the A.B. 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 A.B. 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."

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, 200B, 200C, 200D. (22 units.) Recommended: History 105, 106.

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through course work 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 431, and nine units of upper division courses in the language.

#### French Major

##### For the Single Subject Teaching Credential in Foreign Languages

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

This major may be used by students in teacher education as an undergraduate major for the A.B. degree in liberal arts and sciences. A minor in another field approved by the departmental adviser in French is required for the degree.

**Preparation for the Major.** French 100A, 100B, 200A, 200B, 200C, 200D. (22 units.)

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through course work 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, 431, 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.

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.

#### 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.

#### Foreign Language Requirement for the A.B. 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 the equivalent level of achievement. The usual sequence of course work is French 100A, 100B and 200A or 200B or 200C or 200D. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

#### 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, 200, 301, or 302 are taken concurrently or out of sequence. However, French 200A-200B-200C-200D may be taken in any order.

##### 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. (Numbered French 101 in academic years 1982-83 and 1983-84.)

##### 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. (Numbered French 102 in academic years 1982-83 and 1983-84.)

##### 200A. French Grammar (3) I, II

Prerequisite: French 100B or three years of high school French.  
 Majors and minors should enroll concurrently in either French 200B, 200C, or 200D. Not open to students with credit in French 202.

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.  
 Majors and minors should enroll concurrently in either French 200A, 200C, or 200D. 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 100B or three years of high school French.  
 Majors and minors should enroll concurrently in either French 200A, 200B, or 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 100B or three years of high school French.  
 Majors and minors should enroll concurrently in either French 200A, 200B, or 200C. Not open to students with credit in French 212.  
 Analysis of grammar and use of modern French through study of cultural materials, for proficiency in oral communication.

**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**

Prerequisite: Twelve units of 200-level French.  
 Advanced grammar and stylistics, intensive writing practice.

**302. Advanced Grammar and Composition (3) I, II**

Prerequisite: French 301.  
 Advanced grammar and stylistics, intensive writing practice

**305A. Survey of French Literature (3) I**

Prerequisite: Twelve units of 200-level French.  
 Important movements, authors, and works in French literature from the Middle Ages to the Enlightenment.

**305B. Survey of French Literature (3) II**

Prerequisite: Twelve units of 200-level French.  
 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**

Prerequisite: Twelve units of 200-level French.  
 French culture from the earliest times to the Enlightenment, with emphasis on the people, their social and political institutions, their arts and letters. Not open to students with credit in Humanities 310.

**422. French Civilization (3) II**

Prerequisite: Twelve units of 200-level French.  
 French culture from the Enlightenment to the present. Continuation of French 421. Not open to students with credit in Humanities 311.

**431. Applied French Linguistics (3)**

Prerequisite: Twelve units of 200-level French.  
 Phonemics, morphemics, syntax and semantics of present day French.

**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)**

Prerequisite: French 302.  
 Major seventeenth-century dramatists with emphasis on Corneille, Moliere and Racine.

**531. Eighteenth Century French Literature (3)**

Prerequisite: French 302.  
 Major eighteenth-century writers of fiction, with emphasis on Voltaire, Diderot and Rousseau.

**541. Nineteenth Century French Novel (3)**

Prerequisite: French 302.  
 Major novelists of the nineteenth century.

**543. Modern French Theatre (3)**

Prerequisite: French 302.  
 Major dramatists of modern France.

**545. Modern French Poetry (3)**

Prerequisite: French 302.  
 Representative French poets of the modern era.

**551. Twentieth Century French Novel (3)**

Prerequisite: French 302.  
 Major novelists of twentieth-century France.

**561. Methods in Teaching French as a Second Language (3)**

Prerequisite: French 431.  
 Teaching of French as a second language; contemporary theory and methods. Not open to students with credit or concurrent enrollment in Spanish 561.

**596. Topics in French Studies (1-4)**

Prerequisite: French 302.  
 Topics in French language, literature 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. See Class Schedule for specific content.

**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 course work.

### General Courses

#### LOWER DIVISION COURSES

##### 105. Living in the Information Society (3) I, II

For further information contact the Department of Telecommunications and Film.

The media, information and the citizen of postindustrial society. Producers and consumers in an information-centered world. Issues including critical analysis of media messages, personal privacy, and implications for society and government. (Formerly numbered University Studies 105.)

##### 200. Selected Activities (1-3) Cr/NC

Prerequisites: Twelve units of college credit and a minimum grade point average of 2.0.

Supervised experience in college or community activities.

Students interested in enrolling in General Studies 200 should contact the Division of Undergraduate Studies (AD-223) for information. Applications must be submitted to the Division prior to the end of the first week of classes. These courses may not be used to satisfy course requirements for the major or minor. No combination of General Studies 200 and 400 in excess of six units may be counted for credit toward a bachelor's degree. (Formerly numbered University Studies 200.)

##### 220. Observation Practicum in Multidisciplinary Assessment/Remediation (1) I, II Cr/NC

One hour per week plus twelve hours of observation.

Observation of assessment/remediation procedures under the supervision of faculty representing the multidisciplinary strands (Social Work, Communicative Disorders, Nursing, Reading and Learning, Psychology) of SDSU Clinical Training Center. (Formerly numbered University Studies 220.)

##### 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. (Formerly numbered University Studies 275.)

#### UPPER DIVISION COURSES

##### (Intended for Undergraduates)

##### 300. Honors Course (1-3)

Refer to Honors Program. (Formerly numbered University Studies 300.)

##### 310. Our Global Future: Values for Survival (3)

For further information contact Dr. Mary E. Clark in the Department of Biology.

Prerequisite: One course from each of the three areas of Foundations in General Education.

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 University Studies 210 and 250 and General Studies 210.)

##### 400. Selected Activities (1-3) Cr/NC

Prerequisite: A minimum grade point average of 2.0.

Supervised experience in college and/or community activities.

Students interested in enrolling in General Studies 400 should contact the Division of Undergraduate Studies (AD-223) for information. Applications must be submitted to the Division prior to the end of the first week of classes. These courses may not be used to satisfy course requirements for the major or minor. No combination of General Studies 200 and 400 in excess of six units may be counted for credit toward a bachelor's degree. (Formerly numbered University Studies 400.)

### Human Services Courses

The College of Human Services sponsors General Studies courses 302 and 502. The purpose of these courses is to provide an opportunity for interdisciplinary study for students entering human service professions. Refer to the Class Schedule for specific content. (Formerly numbered University Studies 302 and University Studies 502 respectively.)

##### 302. Selected Topics in Human Services (1-3) Cr/NC

##### 502. Advanced Topics in Health and Human Services (1-3)

### Innovative Courses

General Studies courses (250, 350, 550) are interdisciplinary courses characterized by new methods of teaching and learning. These courses are proposed by faculty or by students acting through a faculty sponsor and may be offered up to four semesters. Questions about individual courses should be directed to the department or departments listed immediately after the General Studies number (250, 350, 550) in the Class Schedule; general inquiries about General Studies courses (250, 350, 550) as a whole should be directed to the chair of the University Curriculum Committee.

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. (Formerly numbered University Studies 250, University Studies 350, and University Studies 550 respectively.)

##### 250. Innovative Approaches to Teaching and Learning (1-6)

##### 350. Innovative Approaches to Teaching and Learning (1-6)

##### 550. Innovative Approaches to Teaching and Learning (1-6)

### Liberal Arts Courses

The College of Arts and Letters sponsors General Studies courses 101 and 301 which are interdisciplinary courses. They fall into two main categories: (1) Lecture series on topics of current interest for which the humanities and social sciences bring insight; and (2) Workshops designed to give liberal arts students skills desirable for advancement in their major, but not normally offered by their departments.

Students interested in enrolling in General Studies 101 and 301 should contact the faculty adviser of the department(s) offering the course or the College of Arts and Letters Assistant Dean for further details. (Formerly numbered University Studies 101 and University Studies 301 respectively.)

##### 101. The Liberal Arts in Today's World (1-3) Cr/NC

##### 301. The Liberal Arts in Today's World (1-3) Cr/NC

\* General Studies courses offered as University Studies courses prior to academic year 1984-85.



## Geography

### In the College of Arts and Letters

#### Faculty

Emeritus: Colombo, Eidemiller, Kiewiet de Jonge, Richardson, Storm, Taylor  
 Chair: Griffin  
 Professors: Ford, Greenwood, Griffin, Johnson, Keen, O'Brien, Pryde, Quastler, Stutz, Wright, Yahr  
 Associate Professors: Blick, Fredrich, McArthur  
 Assistant Professors: Aguado, Stow  
 Lecturer: Jones

#### Offered by the Department

Master of Arts degree in geography.  
 Major in geography with the A.B. degree in liberal arts and sciences.  
 Minor in geography.  
 Certificate in cartography.

#### 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 A.B. 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."

Preparation for the major and the major consist of basic requirements in the lower and upper division for all students, plus additional requirements in one of the following areas of specialization: (a) General Geography, (b) Physical Geography, (c) Resource and Environmental Geography, (d) Transportation and Urban Geography, (e) Applied Geography.

#### Basic Requirements for All Students

**Preparation for the Major.** Geography 101, 101L, 102. (7 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 304W, 305W, 500W, 508W, 581W, or 582W, with a grade of C (2.0) or better.

**Major.** A minimum of 26 to 38 upper division units to include Geography 305 (two units), Geography 498A (1 unit), and either Geography 498B (2 units) or at least two additional units in geography other than the major requirements. Students wishing to take Geography 498B must have an overall GPA of 3.0 and/or the consent of the department.

**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, in addition, must have completed Geography 498B by the time of graduation and be recommended by the geography faculty.

In addition to the basic requirements, the student must complete the requirements in one of the following areas:

#### (a) General Geography

Students selecting this area must complete a minor in another department.

**Additional Preparation for the Major.** Geography 103.

**Major (continued).** Three units from each of the following groups: (a) Geography 320-339, 521-540; (b) 350-365, 554-559; (c) 370-371, 570-576; (d) 378, 401, 501-506; (e) 507-509; (f) 380-381; (g) 382, 488, 585-589. (26 units.)

#### (b) Physical Geography

Students selecting this area are not required to complete a minor in another department. Elective upper division course work in related disciplines is strongly recommended.

**Additional Preparation for the Major.** Geography 103, Mathematics 121 or higher numbered course; Chemistry 200; Physics 180A, 182A.

**Major (continued).** Fifteen units from Geography 378, 401, 501-509\*; six units from 382, 488, 581-589; and three units from each of the following groups: (a) 380-381; (b) 320-339, 521-540; (c) 350-371, 554-576. (35 units.)

#### (c) Resource and Environmental Geography

Students selecting this area are not required to complete a minor in another department.

**Additional Preparation for the Major.** Geography 103; Biology 100, 100L.

**Major (continued).** Geography 370 and 371; three units from each of the following groups: (a) 320-339, 521-540; (b) 350-365, 554-559; (c) 380-381; (d) 382, 488, 581-589. Nine units from 378, 570-576\*; six units from 401, 501-509. (38 units.)

#### (d) Transportation and Urban Geography

Students selecting this area are not required to complete a minor in another department.

**Additional Preparation for the Major.** Mathematics 107; Economics 102.

**Major (continued).** Geography 381, 585; twelve units from 353, 354, 358, 359, 554-570\*; six units from 378, 401, 501-509; and three units from each of the following groups: (a) 320-339, 521-540; (b) 370-371, 573-576. (35 units.)

#### (e) Applied Geography

Students selecting this area are not required to complete a minor in another department.

**Additional Preparation for the Major.** Mathematics 107; and a three-unit course in introductory statistics.

**Major (continued).** Eighteen units from Geography 380-382, 488, 495, 581-589; and three units from each of the following groups: (a) 320-339, 521-540; (b) 350-371, 554-576; (c) 378, 401, 501-506; (d) 507-509. (35 units.)

\* Geography 495 may be used to satisfy three units in this block where appropriate and approved by the department.

### Geography Minor

The minor in geography consists of a minimum of 18 units of geography to include Geography 101, 102 and one of the following areas:

**Physical:** nine units selected from Geography 378, 401 or 501-509, and three units selected from techniques courses Geography 380-382, 488, 581-589.

**Cultural:** six units from Geography 312, 350, 351, 356, 357, 360, 365, 555, and six units selected from regional courses Geography 320-339, 521-522.

**Urban/Transportation:** nine units selected from Geography 353-358, 554-559, and three units selected from either technique or regional courses Geography 320-339, 380-382, 488, 581-589.

**Conservation:** nine units selected from Geography 370, 371, 378, 570-576, and three units selected from technique courses Geography 380-382, 488, 581-589.

**Techniques:** nine units selected from Geography 380-382, 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.

### Cartography Certificate

The purpose of the program is to prepare students to carry out different types of mapping activities 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 21 units to include six units selected from Civil Engineering 218, Mathematics 107 and 137; and fifteen units selected from Geography 381\*, 382\*, 488\*, 495, 581, 582. Courses with relevant content may be substituted for the courses listed above with the approval of the certificate adviser.

\* Geography 101 is a prerequisite for this course.

#### LOWER DIVISION COURSES

##### 101. Introduction to Physical Geography (3) I, II

The nature of maps, weather and climates of the world; natural vegetation; land forms and their associated soils, with reference to their climatic relationships; the seas and their coasts. Related field observations.

##### 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. Introduction to Cultural Geography (3) I, II

Introduction to cultural geography, covering the elements of culture, such as technology, race, language, religion, political organization, methods of livelihood, settlement patterns and population, and the regional distribution of these elements over the earth. Occasional field trips may be arranged.

##### 103. Introduction to 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. Introduction to 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)

##### 305. Concepts and Trends in American Geography (2)

Prerequisites: Geography 101 and 102.

Major trends, concepts and methods of American geography. Introduction to basic geographic literature and information sources. Emphasis on newly evolving aspects of geography and the dynamic nature of the discipline.

##### 312. Culture Worlds (3) I, II

Prerequisites: Geography 101 and 102.

The evolution, distinguishing cultural characteristics, and physical features of major cultural regions of the world. Role humans have played in the alteration of natural landscape. (Formerly numbered Geography 312A-312B.)

##### 320. California (3) I, II

Prerequisite recommended: Geography 101 or 102.

Systematic and regional analysis of the topography, climate, natural vegetation, and their relationships with the past and present activities of man and his use of the land. Offered in summer with a 10-day tour. Maximum credit three units.

A. Lecture course (occasional field trips may be arranged)

B. Fieldwork course

##### 321. United States (3) I, II

Prerequisite recommended: Geography 101 or 102.

The natural regions of the United States, their formation and economic and historical development.

##### 322. Canada and Alaska (3) II

Prerequisite recommended: Geography 101 or 102.

The physical and historical bases of Canadian and Alaskan regionalism; the economic and strategic importance of these two areas.

##### 323. Middle America (3) I, II

Prerequisite 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. Maximum credit three units.

A. Lecture course (occasional field trips may be arranged)

B. Fieldwork course

##### 324. South America (3) I, II

Prerequisite recommended: Geography 101 or 102.

The physical regions and human geography of South America, including the history of colonization and the exploitation of resources.

##### 325. Geography of San Diego County (3) I, II

Prerequisite recommended: Geography 101 or 102.

Analysis of the physical and cultural geography of San Diego County. Topics covered will include landforms, climate, population, industry, transportation, and the effects of human activities on the natural environment. Maximum credit three units.

A. Lecture course (occasional field trips may be arranged)

B. Fieldwork course

##### 331. Monsoon Asia (3)

Prerequisite recommended: Geography 101 or 102.

Geographic basis for the political heritage, economics, and peoples of China, Japan, Indonesia, India, and other countries of Southern, Southeastern, and Eastern Asia.

##### 335. The Middle East and North Africa (3) I, II

Prerequisite recommended: Geography 101 or 102.

The geographic base for the political heritage, economies, religious institutions, and peoples of North Africa and the Middle East.

##### 336. Europe (3)

Prerequisite 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. Soviet Union (3)

Prerequisite recommended: Geography 101 or 102.

Natural resources, agricultural production, industrial growth, and transportation.

##### 339. Oceania (3)

Prerequisite recommended: Geography 101 or 102.

The physical geography, peoples, economies, and trade of Oceania, Australia, and New Zealand.

##### 350. Political Geography (3) I, II

Geography as it relates to the strength of nations and international relations.

##### 351. Economic Geography: Primary Production (3)

Prerequisite recommended: Geography 101 or 102.

The geography of agricultural production and the extractive industries in relation to world commerce. Occasional field trips may be arranged.

##### 353. Location of Economic Activity (3) I, II

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 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. Maximum credit three units.

A. Lecture course (occasional field trips may be arranged)

B. Fieldwork course



**356. Social Geography (3)**

Prerequisite: Geography 102.

Analysis of sociocultural distributions with emphasis on social regions, spatial behavior and cultural landscapes. Topics include landscape image and design, patterns of folk and ethnic culture and spatial diffusion processes.

**357. Historical Geography (3) I, II**

Prerequisite: Geography 101 or 102.

Transformation of the natural and cultural landscape with emphasis on the utilization and significance of resources. Exploration, migration, and settlement in relation to geographic phenomena.

**358. Transportation Geography (3) I, II**

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) I, II**

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.

**360. Geography of Tourism (3)**

Distribution and patterns of domestic and international tourism. Background, physical, cultural, and social characteristics, modes of travel, destinations, environmental and cultural impact, problems and future. Occasional field trips.

**365. Human Perception: Space and Place (3) I, II**

Human perception and spatial behavior in a broad range of physical and cultural settings designed to provide an understanding of key relationships between people and place.

**370. Conservation of Environmental Quality (3) I, II**

Prerequisite recommended: Geography 101 or 102.

Quality of man's habitat in a changing human and natural environment; water, air and soil pollution, urban crowding, disappearance of open space, and decreasing opportunities for outdoor recreation. Occasional field trips may be arranged.

**371. Conservation of Natural Resources (3) I, II**

Prerequisite recommended: Geography 101 or 102.

Nature and extent of mineral, soil, water, forest, and wildlife resources and their conservation, with particular emphasis on the United States against a general background of world resources. Conservation philosophies and practices and their geographic bases. Maximum credit six units.

A. Lecture course (occasional field trips may be arranged)

B. Fieldwork course

**378. Environmental Physiography (3) I, II**

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) I, II**

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.

**401. Physiography (3)**

Prerequisite: Geography 101.

Morphology and genetic interpretation of the relief features of the earth's surface.

**488. Remote Sensing of Environment (4)**

Three lectures and three hours of laboratory.

Prerequisites: Geography 101. Recommended: Physics 115 or 180A-180B.

Techniques for acquiring and interpreting remotely sensed data of environment. Electromagnetic radiation processes, aerial photographic systems, and human image interpretation of aerial and satellite imagery. Geographic analysis of selected terrestrial and graphic processes and resources. (Formerly numbered Geography 587.)

**495. Geographic Internship (3) I, II**

Prerequisite: Consent of instructor.

Students will be assigned to various government agencies and industries and will work under the joint supervision of agency heads and the course instructor. Maximum credit six units. Three units may be applied to major in geography.

**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 combined credit six units in 496A and 496B.

A. Lecture course (occasional field trips may be arranged)

B. Fieldwork course

**498A. Research Design (1) I, II**

Prerequisite: Credit or concurrent registration in Geography 305.

How to develop a research topic. Methods of defining research methods, testing hypotheses, surveying literature, assessing data sources, data reduction, and writing research proposals. (Formerly numbered Geography 498.)

**498B. Senior Thesis (2) I, II**

Prerequisite: Geography 498A; an overall GPA of 3.0 and consent of the department.

Individual research project and written thesis.

**499. Special Study (1-3) I, II**

Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

**501. Advanced Physiography (3)**

Prerequisite: Geography 401.

Climatic and structural physiography.

**504. Coastal and Submarine Physiography (3)**

Prerequisite: Geography 378 or 401.

Analysis of marine waves, of their modification in shallow waters, of coastal currents and tides. Interpretation of coastal and submarine relief in relation to environmental processes and their modification by man. Occasional field trips may be arranged.

**505. Geography of Soils (3) II**

Prerequisite: Geography 101.

The nature, properties and distribution of soils and their relationships to the influence of climates, landforms, and human activity. Occasional field trips may be arranged.

**506. Geography of Soils Laboratory (1)**

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Geography 505.

Theories of soil genesis, edaphology and structure related to empirical phenomena through laboratory experimentation and observation. Best suited to concurrent enrollment in Geography 505. Occasional field trips may be arranged.



**507. Geography of Natural Vegetation (3) I, II**

Prerequisite: Geography 101.

The natural vegetation associations of the world, their distribution, classification and development, including relationship to human activities. Maximum credit three units.

A. Lecture course (occasional field trips may be arranged)

B. Fieldwork course

**508. Physical Climatology (3) I**

Prerequisite: Geography 103.

Effects of latitude, altitude, mountains, ocean currents, wind systems, and various surfaces on the distribution of solar radiation, temperature, precipitation, and other climatic elements. Statistical reduction and interpretation of climatic data.

**509. Regional Climatology (3) II**

Prerequisite: Geography 103.

The causes of climatic types as they occur throughout the world. Principles of several climatic classifications.

**521. Urbanization and Modernization in Latin America (3)**

Prerequisite: Geography 102, 323 or 324.

Analysis of specific aspects of urbanization and modernization processes in Latin America. Emphasis on changing spatial relationships resulting from rapid urban growth and culture change. Occasional field trips.

**522. Historical Geography of Latin America (3) (Offered at IVC only)**

Prerequisite: Geography 102, 323 or 324.

Changes in the Latin American cultural landscape over time. The peopling, exploration, settlement and changing geographical patterns of all or a part of the region. Origin and diffusion studies will be stressed.

**540. Advanced Regional Geography (3)**

Prerequisite: At least one upper division course in the subject region.

Intensive study of a major country or subregion. May be repeated with different course content for a maximum of six units. See Class Schedule for specific content.

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

Prerequisite: Geography 354.

Worldwide trends in urbanization and cultural variations in those trends. Case studies of particular world cities from variety of culture areas such as London, Mexico City, Tokyo, Cairo, and New York, with focus on internal city structure.

**555. Historic Preservation and Urban Design (3)**

Prerequisite: Geography 102.

Processes of growth and change in cities. Techniques for preserving, renovating, rehabilitating, and recycling valued buildings and neighborhoods. International comparisons of preservation policies and practices and analyses of urban patterns resulting from them. American values and the concept of place.

**556. Location and Spatial Structure of Cities (3)**

Prerequisite: Geography 354 or three units of upper division course work in a related field.

Principles and characteristics of urban growth and settlement; the internal structure and functioning of urban centers; spatial models of urban land use; growth management, transportation problems, and sociopolitical urban problems. Occasional field trips may be arranged.

**558. Advanced Transportation Geography (3)**

Prerequisite: Geography 358 or 559.

Topics in the spatial analysis of transportation, e.g., spatial interaction patterns, diffusion process, models in spatial analysis. Occasional field trips may be arranged.

**559. Urban Transportation Geography (3)**

Prerequisite: Three units of upper division urban or transportation course work in geography or related field.

Urban transportation networks and their effects, past, present and future, on the economy and physical structure of the urban region. Occasional field trips may be arranged.

**570. Land Use Analysis (3) II**

Prerequisite: Geography 370.

Problems of maintaining environmental quality in the process of land conversion from rural to urban uses with emphasis on land capability and suitability studies. Occasional field trips may be arranged.

**571. Energy Resources and the Environment (3) I, II**

Prerequisite: Geography 371. Recommended: Physics 107 or 301.

Location and distribution of conventional and renewable energy resources, their environmental effects, and policy questions regarding future development and use of energy resources.

**573. Geography as Human Ecology (3)**

Prerequisite: Geography 370.

Human ecology related to resource geography. Occasional field trips may be arranged.

**574. Water Resources (3) II**

Prerequisite: Geography 370 or 371.

Occurrence and utilization of water resources and the problems of water resource development. Occasional field trips may be arranged.

**575. Geography of Recreational Land Use (3) I, II**

Prerequisite: Geography 101 or 102.

Importance of location and environment in the use, management, and quality of recreation areas. Maximum credit three units.

A. Lecture course (occasional field trips may be arranged)

B. Fieldwork course

**576. Geography of Marine Resources (3)**

Prerequisite: Geography 101 or 102.

Economic geography of use of marine biotic and mineral resources. Occasional field trips may be arranged.

**581. Advanced Cartography (3)**

Two lectures and three hours of laboratory.

Prerequisite: A three-unit course on mapping.

Advanced laboratory instruction and practice in cartographic techniques.

**582. Automated Cartography (3)**

Two lectures and three hours of laboratory.

Prerequisite: Three units from Geography 380, 381, 382, 488, 585, or 589, or from graphics or computer programming.

Computerized methods in presenting for comprehension spatially variable information of a quantitative nature; examination of existing automated mapping systems.

**585. Quantitative Methods in Geographic Research (3) I, II**

Prerequisite: Mathematics 250 or equivalent course in statistical methods.

Quantitative methods in geographic research, including computer solutions.

**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. Visible and infrared scanners, microwave radiometers and radar systems. Geographic analysis of selected terrestrial and oceanographic processes.

**589. Field Geography (3)**

Two lectures and three hours of laboratory.

Prerequisites: Senior or graduate standing and the completion of at least 12 units in geography, including Geography 101 and 102, and consent of instructor.

Data acquisition techniques. Field use of topographic maps. Geocoding systems, automated land use, land cover and land capability mapping. Directed field work.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.



## Geological Sciences

### In the College of Sciences

#### Faculty

Emeritus: Brooks, McEuen, Roberts, Thomas, Threet  
 Chair: Abbott  
 Professors: Abbott, Berry, Bertine, Dorman, Gastil, Jiracek, Kern, Krummenacher, Miller, Peterson, Walawender  
 Associate Professors: Frost, Girty, Huntley, Marshall, Ptacek  
 Assistant Professor: Rockwell  
 Lecturer: Terry

#### 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.

## Geological Sciences Major

### With the B.S. 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." Refer to department for listing of General Education requirements. Geological sciences majors must take all upper division courses listed for the major under Basic Requirements for All Students and the major continued option selected for letter grades only. These upper division courses may not be taken for credit/no credit.

Preparation for the major and the major consist of basic requirements in the lower and upper division for all students plus the requirements in one of the following options: (a) Geology, (b) Engineering Geology, (c) Geochemistry, (d) Geophysics, (e) Marine Geology, (f) Paleontology.

#### Basic Requirements for All Students

**Preparation for the Major.** Geological Sciences 100 and 101, 105, 221, 224; Biology 100 or 110; and Chemistry 200 and 201. (28 units.) Recommended: 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 36-40 upper division units in approved courses to include Geological Sciences 305, 308, 498A-498B or 498A-498C, 508. (14 units.) Geological Sciences 508 is an optional course in the geophysics and marine geology degree options.

#### Options

In addition to the basic requirements, the student must complete the requirements in one of the following options:

##### (a) Geology

**Additional Preparation for the Major.** Geological Sciences 230; Mathematics 150 and 250; Physics 180A-180B and 182A-182B, or Physics 195, 195L, 196, 196L, 197, 197L. (19-23 units.) Recommended: Chemistry 310A-310B or 410A-410B; Mathematics 107, 151, 252; Physics 195, 195L, 196, 196L, 197, 197L.

**Major (continued).** Geological Sciences 506, 507, 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. (22 units.)

##### (b) Engineering Geology

**Additional Preparation for the Major.** Geological Sciences 230; Engineering Mechanics 200; Engineering 140; Mathematics 150, 151, 252; Physics 195, 196, 197. (30 units.) Recommended: Civil Engineering 218; Physics 195L, 196L, 197L.

**Major (continued).** Geological Sciences 314, 526, 550, 551, and one of the following: Geological Sciences 505, 510, 530, 548 or Civil Engineering 465; Civil Engineering 301, 462, 463. (22 units.)

Because of the preparation in mathematics, physics, and geology called for in this emphasis, the College of Engineering will not require of majors in this option the prerequisites specified for Civil Engineering 301, 444, and 462. 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.

##### (c) Geochemistry

**Additional Preparation for the Major.** Chemistry 230 or 231, and 251; Mathematics 150, 151, 252; Physics 195, 196, 197, 197L. (32 units.) Recommended: Mathematics 107, Physics 195L, 196L.

**Major (continued).** Geological Sciences 530; Chemistry 410A-410B; either Geological Sciences 506 and 526, or Geological Sciences 524 and 525; seven units of electives approved by the departmental adviser. (22 units.)

##### (d) Geophysics

**Additional Preparation for the Major.** Geological Sciences 230; Mathematics 107, 150, 151, 252; Physics 195, 196, 196L, 197. (29 units.) Recommended: Physics 195L, 197L.

**Major (continued).** Geological Sciences 510, 512, and an additional nine units selected from 507, 520, 521, 526, 530, 540, 551; Mathematics 340A-340B or Engineering 310 and 510; Physics 311, 350A and an additional three units selected from Physics 400A, 542, Electrical Engineering 340. (30 units.)

##### (e) Marine Geology

**Additional Preparation for the Major.** Geological Sciences 230; Mathematics 150, 151, 252; Physics 195, 195L, 196, 196L, 197, 197L. (28 units.) Recommended: Mathematics 107.

**Major (continued).** Geological Sciences 530, 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. (28 units.)

##### (f) Paleontology

**Additional Preparation for the Major.** Biology 100L or 110L, 200B or 202, 201, 215; Mathematics 150, 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. (25-26 units.)

**Major (continued).** Geological Sciences 506, 507, 516, 526; two courses from the following: Biology 353, 515, 517, 522, 526; plus additional departmentally approved courses to complete a minimum of 36 upper division units for the major. (20 units.)

##### (g) Hydrogeology

**Additional Preparation for the Major.** Geological Sciences 230; Mathematics 107, 150, 151, 252; Physics 195, 196, 197. (28 units.) Recommended: Engineering 140; Civil Engineering 218; Physics 195L, 196L, 197L.

**Major (continued).** Geological Sciences 314, 505, 510 or 512, 526, 530, 551; Mathematics 340A-340B. (24 units.)

## 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, 303, 305, 314, 319-S, 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.

## Oceanography Minor

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.

## LOWER DIVISION COURSES

### 100. General Geology (3) I, II

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

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

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.

Physics of the earth and its application to mineral exploration. Emphasis on case histories. Not open to students with credit in Geological Sciences 510 or 512.

### 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 particular concern to the engineer. Open only to students majoring in engineering. Not open to students with credit in Geological Sciences 100 and 101.)

### 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. Geology of National Parks and Monuments (3) I, II

Prerequisite: Geological Sciences 100.

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.)

### 303. Environmental Geology (3) I, II

Prerequisites: Geological Sciences 100 and 101.

Study of geologic processes and man, including landslides, flooding, earthquakes, and ground water resources. 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. Field Geology (4) I, II, W

One lecture and three hours of laboratory, and twelve Saturday field sessions in the local area.

Prerequisites: Geological Sciences 224 and 305.

Techniques and methods of geologic observation, interpretation, and field mapping.

### 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.

### 319-S. Summer Field Tour (2-3)

Prerequisite: Consent of instructor.

A two-week study of some of the classic geologic localities in the southwestern United States. Classroom lecture followed by a camping trip with travel by chartered bus or vans. Localities visited may vary from year to year. See Class Schedule for specific sites to be visited each year.

### 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 110-110L.

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. Field Geology (4) I, II (4 or 6) Summer**

One lecture and three hours of laboratory and seven weekend field sessions.

Summer: Twenty-four days in the field (4 units); ten additional days of field and laboratory work (6 units).

Prerequisites: Geological Sciences 308. Summer: Geological Sciences 308 and 524.

Geologic investigation of an assigned area with preparation of an individual report and a geologic map.

Summer: Geological investigation of an assigned area with preparation of an individual report and a geologic map. Students enrolling for six units will undertake additional petrographic and geochemical studies as part of their report.

**510. Petroleum Geophysics (3) I**

Two lectures and three hours of laboratory. Occasional field trips.

Prerequisites: Geological Sciences 305, Mathematics 252, Physics 195, 196, 197. Recommended: Physics 195L, 196L, 197L.

Airborne, surface, and bore-hole geophysical techniques as presently used in oil exploration.

**512. Mining Geophysics (3) II**

Two lectures, and three hours of laboratory or occasional field trips.

Prerequisites: Geological Sciences 305, Mathematics 252, Physics 195, 196, 197. Recommended: 195L, 196L, 197L.

Airborne, surface, and bore-hole geophysical techniques used for delineation of ore bodies.

**516. Micropaleontology (3) II**

Two lectures and three hours of laboratory.

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, II**

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 221.

Theory and use of the polarizing microscope for determining optical properties of minerals as an aid to their identification.

**525. Petrography (3) II**

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 524.

A study of rocks with the polarizing microscope; identification of mineral constituents; interpretation of textures; classification of rocks; problems of genesis.

**526. Sedimentology (3) I**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 105 and 224.

Origin, description, and interpretation of sedimentary rocks and structures.

**530. Geochemistry (3) I, II**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 224; Chemistry 201; Mathematics 121 and 122, or 150.

The relationship of basic chemical principles to geologic phenomena and environments, including applications to geologic exploration problems.

**540. Marine Geology (3) I**

Prerequisites: Geological Sciences 105, and either Geological Sciences 224, 314, 502, or 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; 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; 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.

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.

**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 six units.

**GRADUATE COURSES**  
Refer to the Graduate Bulletin.



## German

### In the College of Arts and Letters

#### Faculty

Emeritus: Lawson, Walker, Wolf  
 Chair: Wulbern  
 Professors: Boney, Dukas, Paulin, Schaber, Tanaka, Westervelt, Wulbern  
 Associate Professor: Dunkle

#### Offered by the Department of German and Russian Languages and Literatures

Master of Arts degree in German.\*  
 Major in German with the A.B. degree in liberal arts and sciences.  
 Teaching major in German for the single subject teaching credential in foreign languages.  
 Minor in German.

\* No students will be admitted to this program during the current academic year.

#### 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 A.B. 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."

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 101, 102, 201, 202, 211, and 212. (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.

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through course work for preparation for the major.

**Major.** A minimum of 30 upper division units to include German 301, 302, 310; 15 units selected from German 403, 505, 510, 540, 545, 549, 555, 561, 596; and Humanities 320 and 321.

#### German Major

##### For the Single Subject Teaching Credential in Foreign Languages

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

This major may be used by students in teacher education as an undergraduate major for the A.B. 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 101, 102, 201, 202, 211, and 212. (21 units.)

**Foreign Language Requirement.** The foreign language requirement is automatically fulfilled through course work 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 German to include 301, 302, 310, 403, 420, 505, 510; and nine units selected from German 540, 545, 549, 555, 561, 596.

**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.

#### 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.

#### Foreign Language Requirement for the A.B. 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 201 or the equivalent level of achievement. The usual sequence of course work is German 101, 102, and 201. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

#### 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 101, 102, 201, 202, 301 taken out of sequence. German 302 may be taken before 301.

##### 101. First Course in German (4½) I, II

Four lectures and one hour of laboratory.

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.

##### 102. Second Course in German (4½) I, II

Four lectures and one hour of laboratory.

Prerequisite: German 101 or two years of high school German.  
 Continuation of German 101. Not open to students who have completed four years of high school German unless the fourth course was completed five or more years ago.

##### 201. Third Course in German (4) I, II

Prerequisite: German 102 or three years of high school German.

Practical application of the basic principles of the language. Oral practice, reading in German of cultural material.

##### 202. Fourth Course in German (4) I, II

Prerequisite: German 201 or four years of high school German.

Continuation of German 201.



**211. Conversation (2) I, II**

Prerequisite: German 102 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.

**212. Conversation (2) I, II**

Prerequisite: German 201 or 211, or four years of high school German.

Continuation of German 211.

**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 202 and 212.

Grammar and stylistics; intensive writing practice; reports based on outside reading.

**302. Grammar and Composition (3)**

Prerequisites: German 202 and 212.

Grammar and stylistics; intensive writing practice; reports based on outside reading.

**310. Introduction to German Literature (3)**

Prerequisite: German 202.

Introduction to literary study in German, with selected readings representative of different periods and genres.

**403. Advanced Oral and Written German (3)**

Prerequisites: German 301 and 302.

Advanced forms of oral and written German.

**420. German Civilization (3) I, II**

Prerequisite: Twelve units of German language at the 200-level or higher.

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)**

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.

Individual study. Maximum credit six units.

**UPPER DIVISION COURSES**  
(Also Acceptable for Advanced Degrees)

**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 202 and 212.

Sounds and intonation of German.

**540. German Literature from Its Beginning to the Baroque Period (3)**

Prerequisite: German 310.

Literature from the eighth century to about 1700.

**545. German Literature of the Eighteenth Century (3)**

Prerequisite: German 310.

Reading and discussion of representative works of significant authors and movements of the eighteenth century.

**549. Goethe's *Faust* (3)**

Prerequisite: German 310.

Goethe's *Faust*, Parts 1 and 2: its philosophical content and its position in German and European literature; lectures, reading, reports.

**555. German Literature of the Nineteenth Century (3)**

Prerequisite: German 310.

Reading and discussion of representative works of significant authors and movements of the nineteenth century.

**561. German Literature of the Twentieth Century (3)**

Prerequisite: German 310.

Reading and discussion of representative works of significant authors and movements of the twentieth century.

**596. Topics in German Studies (3)**

Prerequisites: German 310 (for literary topics) or 505 (for linguistic topics).

Topics in German language, literature, or linguistics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**Greek**

Refer to section on Classics.



## Health Science

In the College of Human Services

### Faculty

Emeritus: Barnes, Fellers, Harper, Kitzinger  
Chair (Acting): Boskin  
Professors: Bender, Burgess, McTaggart, Sorochan  
Associate Professors: Boskin, Kessler, Noto, Senn, Sleet

### 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.

## Health Science Major

### With the B.S. 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 Community Health Education

**Preparation for the Major.** Health Science 101, 102; Biology 120, 120L, 150; Chemistry 100; Family Studies and Consumer Sciences 107; Psychology 101; Sociology 101; Speech Communication 103. (30 units.)

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 304W or 305W with a grade of C (2.0) or better.

**Major.** A minimum of 40 upper division units to include Health Science 400, 401, 402, 406, 470, 490, 497 (six units), 561; Biology 336; Development, Administration and Technology 532; Social Work 350; and three units of electives in health science.

## Health Science Major

### For the Single Subject Teaching Credential

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

This major may be used by students in teacher education as an undergraduate major for the B.S. degree in applied arts and sciences.

**Preparation for the Major.** Health Science 102; Biology 150; Chemistry 100; Family Studies and Consumer Sciences 107; Psychology 101; Sociology 101; Speech Communication 103. (23 units.)

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 304W or 305W with a grade of C (2.0) or better.

**Major.** A minimum of 39 upper division units to include Health Science 301, 321, 331, 345, 350, 355, 400, 470, 475, 490, 574, 575; Biology 336.

## Health Science Minor

The minor in health science consists of a minimum of 15 or 18 units in health science selected from one of two areas:

**Community Health Education:** Health Science 101, 400, 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.

## 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.

### 102. Community Health (3) I, II

Community health problems; the role of the citizen, of the public, and of community health agencies in promoting and protecting the health of the community.

### 170. Physiology of Reproduction (2)

A series of lectures and discussions dealing with normal and abnormal physiology and anatomy of reproduction; facts and frauds in sex hygiene, and related topics.

### 220. The Biology of Health (3)

Prerequisite: Biology 100.

Basic human biology in health and disease; the nature and scope of health education.

### 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 102; First Aid and CPR certification required.

Causes and incidence of accidents with emphasis on role of education, prevention, and injury control.

### 350. Environmental Health Education (3)

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)

Recognition and prevention of morbidity and mortality in occupational and environmental settings.

### 355. Consumer Health (3)

Hazards of consumer products from the viewpoint of design and use.

### 362. International Health (3)

Population dynamics, vital statistics, global disease patterns, and analysis of variations among nations and cultures with respect to health problems and health care services.

### 400. Health Education as a Profession (3) I, II

Prerequisite: Health Science 101 or 301.

Principles of health education and its role in the health system. For students with professional interests in health education.

### 401. Change Process in the Community (3) I, II

Prerequisites: 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 400, 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)**

Prerequisite: Health Science 400.

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 (4) I, II**

Three lectures and three hours of laboratory.

Prerequisites: Successful completion of the SDSU Mathematics Competency requirement and Health Science 101 or 301. Proof of completion of prerequisites required.

Measurement in health science: data gathering techniques; organization; presentation and interpretation of data; computer utilization; basic principles of evaluation of student achievement.

**491. Advanced Measurement and Evaluation in Health Science (3) II**

Prerequisite: Health Science 490.

Measurement and evaluation of accumulated health science 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. Supervised Field Experience (1-6) I, II Cr/NC**

Prerequisites: Community Health Education students: Senior standing and Health Science 401, 402 and 560.

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)

**520. Administration of the School Health Program (3)**

Administrative responsibilities of the school health program. Principles, policies, and practices involved in health instruction, health services, environment, legal implications, and community relationships.

**560. Introduction to Public Health (3)**

Prerequisite: Health Science 400.

Philosophy, development, organization, administration, and legal aspects of public health in the United States. Disease prevention and control, health education, and the other functions and activities of official health departments, voluntary agencies, private physicians and others engaged in professional health work.

**561. Health and Medical Care (3)**

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)**

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)**

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. Maximum credit six units; maximum credit three units applicable to a master's degree. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.



## Hebrew

### In the College of Arts and Letters

#### Faculty

Assistant Professor: Gefter

#### Offered by the Department of Classical and Oriental Languages and Literatures

Courses in Hebrew.

Major or minor work in Hebrew is not offered.

### Foreign Language Requirement for the A.B. 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 course work is Hebrew 101, 102, and 201. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

#### 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.

#### 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.

#### 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: Nasatir, Norman, Rader, Ragen, Ridout, Rohfleisch, Webb

Chair: Berge

Professors: Berge, Cheek, Chu, Coox, Cox, Cuniff, Davies, Detweiler, Dunn, Flemion, J., Hamilton, Hanchett, Heyman, Hoidal, Kushner, McDean, Munter, O'Brien, Peterson, Phillips, Pincetl, Ruettgen, Schatz, Smith, C., Smith, R., Starr, Steele, Stites, Strong, Vanderwood, Vartanian

Associate Professors: DuFault, Filner, Flemion, P., Oades

Assistant Professor: Bartholomew

Lecturer: Ferraro

#### Offered by the Department

Master of Arts degrees in history and public history; and a Master of Arts degree for teaching service with a concentration in history.

Major in history with the A.B. degree in liberal arts and sciences.

Teaching major in history for the single subject teaching credential.

Minor in history.

Certificate in public history.

### 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 A.B. 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.

**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 9 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

All candidates for a teaching credential must complete all requirements outlined in this section of the catalog under the College of Education.

This major may be used by students in teacher education as an undergraduate major for the A.B. 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.

**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 425 is recommended.

*\*The major for the Single Subject Teaching Credential has been submitted to the Commission on Teacher Credentialing. Consult department to verify current program requirements.*

## 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.

### 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)

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)

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)

The political and social development of the United States, with emphasis on the rise of American Civilization and ideals. This course is primarily for lower division students.

The year course meets the graduation requirements in American Institutions, U.S. Constitution and California state and local government.

#### 115A-115B. Comparative History of the Americas (3-3)

The western hemisphere from ancient times to the present, with focus on the interactions between the European, Amer-Indian and Afro-American cultures, institutions and traditions. Semester I: Ancient American civilizations, European colonial systems, creation of new nations. Semester II: Nations and cultures of the Americas since independence.

The year course meets the graduation requirements in American institutions, U.S. Constitution and California state and local government.

#### 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. The Sources of Civilization in the West (3-3)

Prerequisite: Open only to upper division students.

A survey of the most important ideas and attitudes which have shaped Western Civilization since ancient times. Emphasis on cultural themes rather than a political continuum. Not open to students with credit in History 105 and 106. The course cannot be used to satisfy requirement for the major.

#### 310A-310B. United States History (3-3)

Survey of American history. Semester I: to 1877. Semester II: 1877 to the present.

Designed primarily for students seeking upper division elective or graduation requirements in American institutions. 310A-310B together meet all graduation requirements in American history and institutions, U.S. Constitution, and California government. Not open to students with History 110A-110B or the equivalent; it may not be counted toward requirements for the history major.

#### 340. Environmental Problems in Historical Perspective (3) I, II

Past attitudes, policies, and behavior toward the land in context of religious and ethical beliefs, social values, economic practices, and political systems. Cannot be used to satisfy requirements for major.

#### 396W. Writing Proficiency (3)

Expository writing course intended only for students not majoring in history. Emphasis on clear, concise, and well-organized prose based on study of selected historical questions. 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. May not be used to fulfill upper division requirements in the history major.

#### 430W. The Writing of History (3) I, II

Historical method and research in some aspect of history. 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. (Formerly numbered History 430.)

#### 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.



**504. Medieval Spain (3)**

Survey of the Spanish regions to the early sixteenth century. Social and economic developments.

**506. The Renaissance (3)**

The intellectual, artistic, and social transformation of Europe from the fourteenth through the early sixteenth century.

**507. The Reformation (3)**

Continental Europe in the sixteenth century; split of Christendom, the religious wars, national rivalries, the expansion of Europe and the beginnings of the scientific revolution.

**513A. Scandinavia (3)**

The major political, social and economic developments in Scandinavia 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**

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. Scandinavia (3)**

The major political, social and economic developments in Scandinavia from 1814 to the present.

**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)**

Prerequisite: History 105 and 106.

The development of France since 1815.

**515. Modern Spain (3)**

Social, economic and political developments from the sixteenth century to the present. Overseas expansion.

**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.

**521A-521B. Constitutional History of England (3-3)**

Evolution of the common law and the development of parliamentary institutions.

**522A-522B. Tudor and Stuart England (3-3)**

Semester I: The Age of the Tudors. Semester II: England during the Stuart Dynasty, 1603-1714.

**523A-523B. Modern Britain (3-3)**

Semester I: The development of constitutional and social patterns from the Glorious Revolution to the French Revolution, emphasizing the immediate background to the American Revolution. Semester II: From the 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.

**527A-527B. Diplomatic History of Modern Europe (3-3)**

Diplomatic relations of the various European states with European and non-European powers. Semester I: From the Concert of Europe (1815) to the Era of *Realpolitik* in the late nineteenth century. Semester II: The diplomatic backgrounds and results of two wars.

**528A-528B. Social History of Modern Europe (3-3)**

Historical survey of European society emphasizing changes in the family, health, diet, the standard of living, urbanism, crime, migration, and literacy. Semester I: From 1350 to the beginning of Industrial Revolution. Semester II: From the Industrial Revolution to the present.

**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.

Survey of United States history with emphasis on historiography, bibliography, and relationship between philosophy of history and teaching. Semester I: to 1877. Semester II: since 1877. Intended primarily for students in teacher training programs. History 410A-410B meets all graduation requirements in American history and institutions, U.S. Constitution, and California government. Not open to students with credit in History 310A-310B.



**442A-442B. People Out of Our Past (3-3)**

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, 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 of British colonies in North America and their development into a distinctive American civilization through modification of Old World institutions in the new environment.

**531. The American Revolution (3)**

Development of colonial resistance to British rule after 1760, the War for Independence, the Confederation, and the Constitution of 1787. This course meets the requirements in United States Constitution.

**532. The Early Republic (3)**

Political, economic, and social development of United States from Washington through John Quincy Adams. This course meets the requirements in United States Constitution.

**533A. The Jacksonian Era (3)**

Territorial expansion, democratic politics, revivalism, and the slavery controversy.

**533B. Civil War and Reconstruction (3)**

The Civil War and Reconstruction, emphasizing political affairs and the role of Lincoln.

**534. The Rise of Modern America, 1868-1900 (3)**

Economic, social, political, and intellectual developments from the end of the Civil War to the close of the 19th century.

**535A. The Age of Reform (3)**

The United States from the 1890s to the Crash of 1929.

**535B. The Age of Roosevelt (3)**

The United States in Depression, War, and Cold War.

**536. The United States Since World War II (3) I, II, S**

Major foreign and domestic issues confronting the United States, and the government policies and popular movements generated in response.

**537A-537B. The Westward Movement (3-3)**

The American frontier: Expansion, exploration, settlement and building of the new states, with emphasis on frontier problems of defense, communications, finance, etc.; the development of cultural institutions. The causes, effects and results of the frontier experiences of the American people. This year course meets the graduation requirement in American history, institutions and ideals.

**538A-538B. The American Southwest (3-3)**

Semester I: Exploration, colonization and development of the Southwest under Spanish and Mexican rule. Emphasis on frontier institutions and Indian policy. Semester II: Anglo-American penetration and acquisition of the Southwest. Themes such as boundary problems, mining, transportation, water, ranching and ethnic relations.

**540. Environmental History of the United States (3)**

The relationship of Americans to their environment from colonial times to the present with emphasis on how attitudes and values have affected personal behavior and public policy toward the land.

**541A-541B. California (3-3)**

Political institutions; social, cultural, economic and intellectual development; international background. Semester I: To 1850; Spanish and Mexican heritage. Semester II: 1850 to the present. History 541B will fulfill the requirement in California state and local government.

**543A-543B. The City in American History (3-3) I, II**

Development, character and role of city in American history. Through study of the city as a social-cultural organization and political-economic center, course will examine urban institutions, populations, problems, values, decision making, services.

**544A-544B. American Foreign Policy (3-3)**

Semester I: The development of American foreign policy from the Colonial Period to the First World War. Semester II: Developments from the First World War to the present. This year course meets the graduation requirements in American history, institutions, and ideals.

**545A-545B. Constitutional History of the United States (3-3)**

American constitutional history since the establishment of the federal government. This year course meets the graduation requirement in U.S. Constitution and in American history, institutions, and ideals.

**546A-546B. Development of American Capitalism (3-3)**

The changes in agriculture, industry, labor, banking, transportation and commerce in a capitalist society with emphasis on the prominent personalities who made the changes possible.

**547A-547B. Intellectual History of the American People (3-3)**

Survey of American thought from 1620 to the present, focusing on the ideas of individuals, groups and movements in religion, politics, society, the arts and reform. Emphasis on liberal and conservative impulses and their role in the making of the modern American mind. This year course meets the graduation requirements in American institutions, U.S. Constitution, and California state and local government.

**548A-548B. Social History of the United States (3-3)**

Historical survey of American society emphasizing demographic trends, the changing role of the family, social structure, immigration patterns, religious movements, developments in education, the economy, and entertainment.

**Field (d). Latin America****UPPER DIVISION COURSES**

(Intended for Undergraduates)

**415A-415B. Latin America (3-3)**

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 20th 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.

**Field (e). South, Southeast and East Asia****UPPER DIVISION COURSES***(Intended for Undergraduates)***420. Asia's Dynamic Traditions (3)**

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)**

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.

**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 premodern 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)**

Semester I: Islamic civilization in the imperial ages, 600-1600. Semester II: Colonialism and nationalism in the modern Middle East.

**475A-475B. Africa (3-3)**

Semester I: Civilization of precolonial Africa both north and south of the Sahara from the advent of Islam to 1880. Semester II: Colonial and postcolonial Africa.

**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)***425. Great Historians and Historical Literature (3)**

Lectures and readings in the history of history and the works of major historians. Open to all upper division students; especially recommended for history and social science majors.

**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.

**481A-481B. The Contemporary World in Historical Perspective (3-3)**

Trends and developments in the recent past which can contribute to an understanding of the problems of our age. (Formerly numbered History 581A-581B.)

**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.

**483A-483B. The Quest for Peace (3-3)**

Prerequisite: Six units in history.

Historical analysis of man's efforts to control violence from the Greeks to the present.

**484. The Rise of Modern Science (3)**

Historical development of scientific ideas from ancient Greece to 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.

**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

**B.** Modern Europe

**C.** United States

**D.** Latin America

**E.** South, Southeast, and East Asia

**F.** Africa and Middle East

**G.** Topical Subjects

**499. Special Study (1-3) I, II**

Prerequisite: Consent of department chair and instructor.

Individual study. Maximum credit six units.

**UPPER DIVISION COURSE**

(Also Acceptable for Advanced Degrees)

**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. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. See Class Schedule for specific content. Maximum credit six units.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**Humanities**

Administered by the Dean of the College of Arts and Letters

**Faculty**

Faculty assigned to teach courses in humanities are drawn from departments in the College of Arts and Letters. Dr. Leon Rosenstein is chair of the Humanities Committee and is also director of the European Studies Program and adviser to European Studies and Humanities majors.

**Offered by the College of Arts and Letters**

Major in European studies with the A.B. degree in liberal arts and sciences.

Major in humanities with the A.B. degree in liberal arts and sciences.

Minor in European studies.

Minor in humanities.

All classes are conducted in English.

**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 A.B. 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."

**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 French, German, Italian, Latin, Russian or 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 401A-401B and 402A-402B; six units in one of the foreign languages listed above; six units selected from Art 371\*, 402B\*, 557\*, 558\*, 573\*, 574\*, 575\*, Music 351A, 351B, 351C; six units selected from Economics 335, 557\*, 558\*, 573\*, 574\*, 575\*, Music 351A, 351B, 351C; six units selected from Anthropology 440, Geography 336, Political Science 301A, 301B, 302; and six units from History 503A, 503B, 506, 509, 510A, 510B, 511A, 511B, 512A, 512B, Comparative Literature 510, 511, 512, 513, 514, Philosophy 303, 502, 504, 505, 506. Majors in European Studies must have their program for each semester approved in advance by the adviser.

\* Indicates course with prerequisites not included in requirements listed above.

**European Studies Minor**

The minor in European studies consists of a minimum of 15 units to include Humanities 401A-401B and 402A-402B, and either Anthropology 440\*, Economics 335\*, Political Science 356, or Geography 336. 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.

\* Indicates course with prerequisites not included in requirements listed above.



## Humanities Major

### With the A.B. 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."

**Preparation for the Major.** History 100 and 101, or 105 and 106; three units selected from Humanities 130, 140, 157, 158, Classics 140, Women's Studies 205; three units selected from Art 258, 259, Music 151, Drama 105, 120; three units selected from Philosophy 101, 102, 103, Religious Studies 101, Comparative Literature 270A-270B; and three additional units selected from the courses listed above excluding history. (18 units.)

**Foreign Language Requirement.** Twelve units in Arabic, Chinese, French, German, Greek, Hebrew, Italian, Japanese, Latin, Portuguese, Russian, or 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 selected with the approval of the adviser to include Humanities 401A-401B, 402A-402B, Asian Studies 458A-458B, Classics 340; twelve units from two or more of the following areas: Art 365, 366, 371, 557, 558, 559, 560, 561, 562, 567, 568, 569, 570, 572, 575, 576, 577, Music 351A, 351B, 351C, 351D, 351E, 351F, 580, Drama 460A-460B; and three units in Humanities 499.

## Humanities Minor

The minor in humanities consists of a minimum of 21 units, 12 of which must be upper division. No more than six units may be taken in any one department. In order to ensure a cohesive program, students must seek prior approval of the humanities minor adviser to determine which courses can be used to satisfy requirements for this minor. The plan must be approved and filed with the Evaluations Office.

**Plan A – Disciplinary Structure.** A minimum of six units selected from Humanities 401A, 401B, 402A, 402B; Art 258, 259, 264, 265, 365, 366, 371, 557, 558, 559, 560, 561, 562, 567, 568, 569, 570, 572, 573, 574, 575, 576, 577; Asian Studies 458A, 458B; Drama 105, 120, 460A, 460B; Music 151, 351A, 351B, 351C, 351D, 351E, 351F, 580; Spanish 441; Women's Studies 205; a minimum of twelve units from Classics 310, 320, 330, 340; Comparative Literature 270A, 270B, 272, 405, 495, 510, 511, 512, 513, 514, 535, 560; English 250A, 250B, 260A, 260B, 507; History 305A, 305B, 407A, 407B, 415A, 415B, 420, 421, 473A, 473B, 500A, 500B, 503A, 503B, 506, 507; Philosophy 301, 303, 502, 504, 505, 506, 507; Religious Studies 201, 301, 305, 340, 506; and three additional units from the courses listed above.

**Plan B – Interdisciplinary Structure.** Six units selected from Humanities 130, 140, 157, 158, Women's Studies 205; three units from Humanities 402B; nine units selected from Humanities 401A, 401B, 402A, Classics 340, Spanish 441; and three units selected from Art 258, 259, Drama 105, 120, Music 151.

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.

### LOWER DIVISION COURSES

#### 101. Introduction to Humanities (3)

Preliminary investigation: How values and ideals are expressed in the literary, artistic and intellectual achievements of individuals and civilizations throughout the world.

#### 102A-102B. Introduction to European Heritage (3-3)

Integrated survey from an interdisciplinary perspective of the major achievements of European culture, especially those in art, literature, music, and philosophy, and emphasizing their relevance for contemporary civilization. Semester I: 476 to 1600. Semester II: 1600 to 1940.

#### 130. The Jewish Heritage I (3)

Major Hebraic concepts of the Biblical and post-Biblical periods; their impact on Western civilization and their contemporary relevance.

#### 131. The Jewish Heritage II (3)

Major Jewish concepts from medieval through modern times; their impact on Western civilization and their contemporary relevance.

#### 140. Mythology (3) I, II, S

Comparative themes and figures from various mythologies of the world. Interpretation of myths; their influence on art, culture, and history.

#### 157. Arab-Islamic Culture and Civilization (3)

Interdisciplinary survey of Islamic culture and civilization, emphasizing religious beliefs, their developments, and their role in creating or being integrated with sociopolitical systems of the Islamic Near East from the time of Muhammad to the present.

#### 158. African Culture and Civilization (3)

An interdisciplinary survey.

#### 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

French culture from the earliest times to the Enlightenment, with emphasis on the people, their social and political institutions, their arts and letters. Not open to students with credit in French 421.

#### 311. French Civilization (3) II

French culture from the Enlightenment to the present. Continuation of Humanities 310. Not open to students with credit in French 422.

#### 320. German Civilization (3) I

Investigation of the forces shaping German civilization in the Middle Ages and the Renaissance. Emphasis on history of ideas with reference to their manifestations in the arts and social institutions.

#### 321. German Civilization (3) II

Investigation of the forces shaping German civilization since the Renaissance. Emphasis on history of ideas with reference to their manifestations in the arts and social institutions.

#### 330. Russian Civilization (3) I

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

Modern Russia's cultural development from early nineteenth century (The Golden Age) to the present.

#### 340. Italian Civilization (3) I

The major aspects of Italian civilization with emphasis on literature, art, philosophy, music and history from the earliest times to the Renaissance.

#### 341. Italian Civilization (3) II

Continuation of Humanities 340 from the Renaissance to the present.

#### 350. Spanish Civilization (3)

The principal aspects of Spanish civilization with emphasis on literature, philosophy and the arts. 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.

#### 400. Civilization Through Travel/Study (1-3)

Civilization through supervised foreign travel/study tour. May be repeated with new content. Maximum credit six units.

#### 401A-401B. The Cultural Heritage of Europe I, II (3-3) I, II

European civilization from the Middle Ages to the end of the sixteenth century with emphasis on major cultural movements. Semester I: Romanesque and Gothic; Semester II: Renaissance, Reformation, Mannerism.



**402A-402B. The Cultural Heritage of Europe III, IV (3-3) I, II**

European civilization from the seventeenth to twentieth centuries with emphasis on major cultural movements. Semester I: Baroque, Rococo, Neo-Classicism; Semester II: Romanticism, Realism, Naturalism, Symbolism, Expressionism, Existentialism, Structuralism.

**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.

**499. Special Study (1-3)**

Prerequisite: Consent of instructor.

Individual study. Maximum credit six units.

**UPPER DIVISION COURSE**

(Also Acceptable for Advanced Degrees)

**580. Seminar: Topics (3)**

Special topics appropriate to the interdisciplinary study of civilization. Reading, observation and evaluation of scholarly literature of topic under consideration. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**Industrial Arts**

In the Department of Industrial Studies  
In the College of Professional Studies and Fine Arts

**Faculty**

Emeritus: Anderson, Irgang, McLoney, McMullen, Rasmussen  
Chair: Dirksen  
Professors: Bailey, G.D., Dirksen, Guentzler, Hammer, Thiel  
Associate Professors: Bailey, G.W., Lybarger, Marsters, McEowen

**Offered by the Department of Industrial Studies**

Master of Arts degree in industrial arts.  
Major in industrial arts with the A.B. degree in applied arts and sciences.  
Teaching major in industrial arts for the single subject teaching credential.  
Minor in industrial arts.

**Industrial Arts Major****With the A.B. 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.

**Preparation for the Major.** Industrial Arts 100 and 121 to be taken at the beginning of the major; four courses selected from Industrial Arts 115, 131, 140, 151, 161, 171 and 181. (17 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 nine units in *each of two* of the following fields: industrial drawing, metalworking, plastics, woodworking, electricity-electronics, power technology, graphic arts, industrial crafts, and photography; and six additional units in industrial arts excluding Industrial Arts 498 and 499.

**Industrial Arts Major****For the Single Subject Teaching Credential**

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

This major may be used by students in teacher education as an undergraduate major for the A.B. degree in applied arts and sciences.

**Preparation for the Major.** Industrial Arts 100 and 121 to be taken at the beginning of the major; four courses selected from Industrial Arts 115, 131, 140, 151, 161, 171, and 181. (17 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 Industrial Arts 492; nine units in each of three of the following fields: industrial drawing, metalworking, woodworking, electricity-electronics, power technology, and graphic arts; and three additional units in industrial arts excluding 498 and 499.

**Industrial Arts Minor**

The minor in industrial arts consists of 23 units in industrial arts to include Industrial Arts 100, 121; six units selected from Industrial Arts 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, electricity-electronics, power technology, graphic arts, industrial crafts, 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.



## Certificate

### Manual Arts Clinical Training (Vocational Rehabilitation Therapy)

Students may complete the academic and clinical requirements leading to the Manual Arts Therapist certificate issued by the Veterans Administration of the United States Government. This certification requires the completion of a bachelor's degree with an Industrial Arts major and 280 hours of clinical training in a veterans hospital. Consult an adviser in the Department of Industrial Studies for more detailed information.

### LOWER DIVISION COURSES

#### 100. Introduction to Industrial Studies (2) I, II

Required of all industrial arts majors during their first semester.

The history and philosophy of industrial arts with emphasis on the current status and development of the secondary school curriculum. Discussion of professional requirements, obligations and development.

#### 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.

#### 121. Industrial Drawing (3) I, II

Six hours of laboratory.

Fundamental theories, procedures and techniques of modern industrial drafting; study and practice intended to develop skill and judgment in application to drafting as the universal language of industry.

#### 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.

#### 140. Introduction to Photography (3) I, II

Six hours of laboratory.

A consideration of photographic optics and chemistry; nature of light and image formation; photographic emulsions, exposure and development. Composition and lighting. Not open to students with credit in Industrial Arts 540 or Journalism 350.

#### 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, emphasizing hand tools.

#### 161. DC and AC Circuit Analysis (3) I, II

Six hours of laboratory.

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.

#### 171. Power Mechanics (3)

Six hours of laboratory.

Introduction to the various forms of power transmission with emphasis on small gas engines and automotive preventive maintenance.

#### 181. Introduction to Graphic Arts (3) I, II

Six hours of laboratory.

The theory and practice in planning, designing and processing in the various graphic reproduction activities involving type, stencils, paper, and allied materials.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 301. Industrial Crafts (3) I, II

Six hours of laboratory.

Prerequisite: Previous industrial arts experience.

Emphasis on skills in the industrial arts crafts by laboratory experiences in such areas as jewelry, lapidary, leather, enameling and mosaics. Stress on creativity in design and in utilization of materials.

#### 315. Tooling for Plastics Production (3) I, II

Six hours of laboratory.

Prerequisite: Industrial Arts 115.

Design and use of basic tooling; dies for injection and compression molding, forms for reinforced plastics processes, and molds for thermoforming and casting.

#### 321. Intermediate Industrial Drawing (3) I, II

Six hours of laboratory.

Prerequisite: Industrial Arts 121.

Complex theories and techniques of graphic delineation. Activities selected to develop individual competence.

#### 331. Machine Tool Processes (3) I, II

Six hours of laboratory.

Prerequisite: Industrial Arts 131.

Study of machine tools as a manufacturing medium emphasizing precision measurement, standards, tolerance and inspection methods.

#### 341. Intermediate Photography (3) I, II

Six hours of laboratory.

Prerequisite: Industrial Arts 140 or 540.

Exposure theory, sensitometry, contrast control, specialized development, and advanced studies of photographic lenses and equipment.

#### 351. Machine Woodworking (3) I, II

Six hours of laboratory.

Prerequisite: Industrial Arts 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.

#### 361. Transistor Circuits and Applications (3) I, II

Six hours of laboratory.

Prerequisite: Industrial Arts 161.

Development of skills through planning, designing, constructing and experimenting. Emphasis on the application of advanced transistor principles for use in power, transmission, communication, radio and television.

#### 371. Power Systems (3) I, II

Six hours of laboratory.

Prerequisite: Industrial Arts 171.

Power systems to include sources of power, power transmission, and its utilization. Emphasis on internal combustion engine to include theory of operation, system design, and machining operations.

#### 381. Intermediate Graphic Arts (3) I, II

Six hours of laboratory.

Prerequisite: Industrial Arts 181.

Activities in the various graphic arts with emphasis on new technology in the industry.

#### 402. Advanced Industrial Arts Crafts (3) I, II

Six hours of laboratory.

Prerequisite: Industrial Arts 301.

Advanced techniques of industrial arts crafts. Development of audiovisual aids, projects, and resource materials with emphasis on physical setting, organization, and other pertinent laboratory problems.



**416. Thermoplastics (3)**

Six hours of laboratory.

Prerequisite: Industrial Arts 115.

Composition and selection of materials; evaluation of physical and mechanical properties of various thermoplastics; special techniques for processing and production of thermoplastics.

**422. Architectural Drafting (3) I, II**

Six hours of laboratory.

Prerequisite: Industrial Arts 121.

Architectural drafting, primarily in small home planning. Development of drafting skills and understanding of good contemporary home design.

**432. Welding Processes and Procedures (3) I, II**

Six hours of laboratory.

Prerequisite: Industrial Arts 131.

A study of the basic welding processes with emphasis on physical principles and properties, inspection methods and equipment operations.

**443. Problems in Photography (3)**

Six hours of laboratory.

Prerequisite: Industrial Arts 341.

Technical research problems in photography.

**444. Color Photography (3)**

Six hours of laboratory.

Prerequisite: Industrial Arts 341.

Exposure and processing techniques as applied to current color films and papers in relation to the theory of color photography.

**452. Wood Manufacturing Applications (3) I, II**

Six hours of laboratory.

Prerequisite: Industrial Arts 351.

Course designed to increase professional skills, craftsmanship, advanced technical skills in equipment maintenance, patternmaking, design analysis, and upholstery.

**462. Electronic Circuit Applications (3)**

Six hours of laboratory.

Prerequisite: Industrial Arts 361.

Development of advanced skills with application to industrial electronics. Techniques in the use of electronics test equipment and analysis of electronic devices using FET, SCR, and TRIACs.

**464. Basic Digital Computers (3)**

Six hours of laboratory.

Prerequisite: Industrial Arts 361.

Functions of circuitry as applied to switching, timing and pulse circuits. Basics of computer digital logic. Machine programming.

**472. Power System Diagnosis (3) I, II**

Six hours of laboratory.

Prerequisite: Industrial Arts 371.

Theory and application of various types of diagnostic testing equipment, with emphasis on trouble shooting and power system analysis.

**482. Advanced Graphic Arts (3)**

Six hours of laboratory.

Prerequisite recommended: Industrial Arts 381.

Planning of activities and perfecting of skills in printing and publication; efficient operation of machines and equipment.

**491. Manual Arts Therapy Clinical Training (6)**

Prerequisite: Consent of department chair.

Supervised experiences in manual arts therapy at various Veterans' Administration Hospitals and rehabilitation centers. Students will acquire, through observation and participation, clinical insight and experience in procedures and practices in the field. Two hundred forty hours of clinical training required.

**492. Teaching Methods in Industrial Education (3) I, II**

Study of methodology needed to teach industrial subjects. It is recommended that this course be taken prior to student 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.

**498. Senior Project (3) I, II**

Six hours of laboratory.

Prerequisite: Consent of instructor.

Each student will work on a project in a selected industrial arts activity area. Oral progress reports will be made and a final written report is required.

**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. Advanced Industrial Crafts (3)**

Six hours of laboratory.

Prerequisite: Industrial Arts 402.

Advanced techniques of industrial crafts. Concentration on the design of craft projects with best utilization of materials. Development, in at least three areas specified by the instructor, of individual exhibits showing originality.

**517. Thermoset Plastics (3)**

Six hours of laboratory.

Prerequisite: Industrial Arts 115.

Composition and selection of materials; evaluation of physical and mechanical properties of various thermoset plastics, special techniques for processing and production of thermoset plastics.

**523. Industrial Arts Drawing (3) I, II**

Six hours of laboratory.

Prerequisite: Industrial Arts 121.

Practice in and analysis of modern industrial drafting techniques and theories.

**533. Applied Metal Forming Operations (3) I, II**

Six hours of laboratory.

Prerequisite: Industrial Arts 131.

Theory of conventional and high energy industrial forming processes augmented with laboratory forming experiences.

**540. Photography for Teachers (3)**

Six hours of laboratory.

Designed for more mature students to learn photographic skills useful in teaching. Not open to students with credit in Industrial Arts 140 or Journalism 350.

**542. Advanced Photography (3) I, II**

Six hours of laboratory.

Prerequisite: Industrial Arts 140 or 540.

A consideration of advanced negative control, projection printing techniques, composition and editorial content, architectural and illustrative photography, and flood photoflash techniques.

**553. Construction Woodworking (3) I, II**

Six hours of laboratory.

Prerequisite: Industrial Arts 351.

Residential building construction techniques and advanced machine operations.



**563. Industrial Control Circuits (3)**

Six hours of laboratory.

Prerequisite: Industrial Arts 361.

Advanced problems in industrial electronics circuit development, analysis, theory and application.

**573. Power Systems Accessories (3) I, II**

Six hours of laboratory.

Prerequisite: Industrial Arts 371.

Study of accessory power systems and technological innovations in education and power related industries.

**583. Industrial Arts Graphic Arts (3)**

Six hours of laboratory.

Prerequisite recommended: Industrial Arts 381.

Advanced techniques in developing skills involved in graphic arts facilities.

**596. Experimental Topics in Industrial Arts (1 or 2)**

Prerequisite: Consent of instructor.

Individual laboratory work on complex projects on an experimental basis. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**Interdisciplinary Programs**

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), Humanities (European Studies), Latin American Studies, Liberal Studies, and Social Science.

**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.

**African Studies Minor**

Dr. Wade C. Pendleton, Anthropology Department, 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 158; and six units from the following courses in any two departments: Anthropology 449\*; Geography 335\*; 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.

\* Additional prerequisites required for this course.

**Energy Studies Minor**

Dr. Alan R. Sweedler, Physics Department, and Dr. Philip R. Pryde, Geography Department, 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 Biology 316, Economics 452, Mechanical Engineering 352, Family Studies and Consumer Sciences 343, Geography 571, Physics 301; plus six units selected from Art 247 or 347, Biology 544, Economics 453, Electrical Engineering 380, 580, Mechanical Engineering 582, 586, Geography 371, Geological Sciences 521, Industrial Arts 171, Natural Science 351, Physics 302, 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.

Courses in the major department or required for the major may not be used to satisfy requirements for the minor. Additional prerequisites are required for these courses.

**Environment and Society Minor**

Dr. Warren Johnson, 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 or 555, and Geography 370 or 371; and six units selected from Anthropology 428, Biology 454, 500, 544, Economics 452, 453, 454, 458, 555, Geography 370, 371, 570, 574, 575, 576, History 340, 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.

\* Additional prerequisites required for these courses.

**Gerontology Minor**

Dr. Shirley A. Lockery, University Center on Aging, is adviser for this 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 Anthropology 509, Biology 473,



Family Studies and Consumer Sciences 496 "Aging in the Family," Nursing 343, 343L, Recreation 580, Social Work 120, Sociology 528, 596 "New Views on Aging" and "Images of Aging in Film," Women's Studies 421 or Communicative Disorders 580, and General Studies 502 (when content relevant to aging).

Additional prerequisites may be required for the courses in 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.

### Jewish Studies Minor

Dr. Ita G. Sheres, Department of English and Comparative Literature, is adviser for this minor.

The minor in Jewish 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 Jewish 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.

The minor in Jewish Studies consists of 18 to 22 units to include Humanities 130 and 131, or Hebrew 101, 102 and 296; and 12 units selected from Comparative Literature 405 (English 405), 526, 571 (Legend and Mysticism), 577 (Kafka), History 496 (Jewish History), Philosophy 336\*, 535\*, Religious Studies 496\* (Hasidism and Jewish Mysticism), 580\* (Martin Buber). Relevant courses not here listed may apply to the minor with approval of the Coordinator of Jewish Studies. The 12 upper division units are to be taken in no more than two departments.

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.

\* Additional prerequisites required for these courses.

### Middle East Studies Minor

Dr. Wade C. Pendleton, Anthropology Department, 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 157, Religious Studies 340\*; six units from History 473A, 473B and 574; and three units from Anthropology 474\*, Art 365\*, Comparative Literature 535, and 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.

\* Additional prerequisites required for these courses.

### Russian and East European Studies Major

#### With the A.B. Degree in Liberal Arts and Sciences

Dr. Vytas Dukas, Department of German and Russian Languages and Literatures, is adviser for this major.

**Preparation for the Major.** Russian 101, 102, 201, 202, or equivalent. (17 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 course work 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 Comparative Literature 513, 514, Humanities 330, 331, History 518A-518B; nine units from at least two departments in the social sciences selected from Economics 330, Geography 336, 337, Political Science 358, 359; six units in Russian selected from 301, 302, 305A-305B, 555A-555B, 561A-561B, 563, 580, 581; and six units of electives selected with the approval of the adviser.

## Italian

### In the College of Arts and Letters

#### Faculty

Emerita: Vergani, L.

Professor: Vergani, G.

#### Offered by the Department of French and Italian Languages and Literatures

Minor in Italian.

### Italian Minor

The minor in Italian consists of a minimum of 15 units in Italian, six units of which must be in upper division courses in the language.

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.

#### 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.

### Foreign Language Requirement for the A.B. Degree in Liberal Arts and Sciences

Students electing the study of Italian to fulfill the foreign language requirement for the Bachelor of Arts degree in liberal arts and sciences must successfully complete Italian 200A or 200B or the equivalent level of achievement. The usual sequence of course work is Italian 100A, 100B, and 200A or 200B. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

#### LOWER DIVISION COURSES

Native speakers of Italian will not receive credit for taking lower division courses in Italian except with advance approval from the department.

**All lower division courses in Italian are taught in Italian.**

No credit will be given when Italian 100A, 100B, 200, or 301 are taken concurrently or out of sequence. However, Italian 200A and 200B may be taken in any order.

#### 100A. Elementary (5) I, II

Pronunciation, speaking and writing, readings on Italian culture and civilization, essentials of grammar. Not open to students who have completed three years of high school Italian unless the third course was completed five or more years ago. (Numbered Italian 101 in academic years 1982-83 and 1983-84.)



**100B. Elementary (5) I, II**

Prerequisite: Italian 100A or two years of high school Italian.

Continuation of Italian 100A. Not open to students who have completed four years of high school Italian unless the fourth course was completed five or more years ago. (Numbered Italian 102 in academic years 1982-83 and 1983-84.)

**200A. Intermediate Grammar and Composition (3) II**

Prerequisite: Italian 100B or three years of high school Italian.

Comprehensive survey of Italian grammar at the intermediate level. Study of a variety of prose models and practice in writing.

**200B. Reading and Speaking Italian (3) I**

Prerequisite: Italian 100B or three years of high school Italian.

Emphasis on the spoken language with readings of cultural material serving as a basis for discussion.

**296. Topics in Italian Studies (1-4)**

Prerequisite: Italian 100B or three years of high school Italian.

Topics in Italian language and culture. May be repeated with new content. Taught in Italian. 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 Italian courses are taught in Italian unless otherwise noted.

**301. Advanced Oral and Written Composition (3)**

Prerequisite: Six units of 200-level Italian.

Grammar review. Reading of modern Italian prose, with written reports and oral discussions in Italian.

**305A. Italian Literature (3)**

Prerequisite: Six units of 200-level Italian.

Important movements, authors and works in Italian literature from Middle Ages to the Renaissance.

**305B. Italian Literature (3)**

Prerequisite: Six units of 200-level Italian.

Continuation of Italian 305A from the Renaissance to the present.

**496. Selected Topics (1-4)**

Topics in Italian language, literature, culture and linguistics. Conducted in English or in Italian. 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**

Prerequisites: Italian 301 and 305A or 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 Italian available in any given semester.

## Japanese

In the College of Arts and Letters

**Faculty**

Associate Professor: Higurashi

Lecturer: Nishimura

**Offered by the Department of  
Classical and Oriental Languages and Literatures**

Courses in Japanese.

Major or minor work in Japanese is not offered.

### Foreign Language Requirement for the A.B. Degree in Liberal Arts and Sciences

Students electing the study of Japanese to fulfill the foreign language requirement for the Bachelor of Arts degree in liberal arts and sciences must successfully complete Japanese 303 or the equivalent level of achievement. The usual sequence of course work is Japanese 101, 102, and 201. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

#### LOWER DIVISION COURSES

Native speakers of Japanese will not receive credit for taking lower division courses except with advance approval from the department.

**All lower division courses in Japanese are taught in Japanese.**

No credit will be given for Japanese 101, 202, 303, 304 taken out of sequence.

**101. Elementary Japanese I (4) I**

Four lectures and one hour of laboratory.

Elementary language skills: fundamental grammar, idiomatic expressions, hiragana, katakana, and basic kanji characters. Reading, writing, speaking, oral-aural drills, and relationship between language and culture. Not open to students who have completed three years of high school Japanese unless the third course was completed five or more years ago.

**102. Elementary Japanese II (4) II**

Four lectures and one hour of laboratory.

Prerequisite: Japanese 101.

Continuation of Japanese 101. Preparation for Japanese 201. Not open to students who have completed four years of high school Japanese unless the fourth course was completed five or more years ago. (Formerly numbered Japanese 202.)

**201. Intermediate Japanese I (4) I**

Four lectures and one hour of laboratory.

Prerequisite: Japanese 102.

Continuation of Japanese 102. More kanji and grammar. Further development of language competence for advanced courses in Japanese. Preparation for Japanese 202. (Formerly numbered Japanese 303.)

**202. Intermediate Japanese II (4) II**

Four lectures and one hour of laboratory.

Prerequisite: Japanese 201.

Continuation of Japanese 201. Preparation for advanced courses in Japanese. (Formerly numbered Japanese 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 Japanese are taught in Japanese unless otherwise stated.

#### 301. Third Year Japanese I (3) I

Three lectures and one hour of laboratory.  
Prerequisite: Japanese 202.

Strengthening communication skill in Japanese; various literary styles; additional joyo kanji. Cultural values shaping modern Japanese society; intercultural communication. Preparation for Japanese 302.

#### 302. Third Year Japanese II (3) II

Three lectures and one hour of laboratory.  
Prerequisite: Japanese 301.

Continuation of Japanese 301. Strengthening communication skill in Japanese; various literary styles; most joyo kanji. Cultural values shaping modern Japanese society; intercultural communication. Preparation for Fourth Year Japanese I.

#### 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

The Department of Journalism is accredited by the  
American Council on Education for Journalism/Mass Communication.

### Faculty

Emeritus: Julian, Whitney, Wimer

Chair: Brown

Professors: Broom, Brown, Buckalew, Holowach, Odendahl, Sorensen

Associate Professors: Dozier, Hartung, Towers

Assistant Professors: Severn, Spevak, Strickland

Lecturer: Center

### Offered by the Department

Master of Science degree in mass communication (in cooperation with other departments).  
Major in journalism with the A.B. degree in liberal arts and sciences.

Emphasis in advertising.

Emphasis in news-editorial.

Emphasis in photojournalism

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.

## Journalism Major

### With the A.B. 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."

Journalism majors must complete 30 units in journalism, 24 of which must be upper division units. Majors may exceed 30 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 33. A maximum of six lower division units in journalism may be applied to the total of 30 units.

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.

Students are required to achieve a passing score on the Department of Journalism grammar, spelling, and punctuation examination before enrolling in journalism skills, activity and laboratory courses.

### Emphasis in Advertising

**Preparation for the Major.** Journalism 220. (3 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 220. (3 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 Photojournalism

**Preparation for the Major.** Journalism 220. (3 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, 350, 450, 451, and 502; nine units of upper division electives.

#### Emphasis in Public Relations

**Preparation for the Major.** Journalism 220. (3 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 220. (3 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

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

A major in journalism selected from any one of the emphases in journalism may be used by students in teacher education as an undergraduate major for the A.B. 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, 582W, 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.)

**Photojournalism:** Journalism 220, 310, 350, 450, 451 and 502. (18 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.

## LOWER DIVISION COURSES

### 200. Introduction to Mass Communication (3)

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)

One lecture and four hours of activity.

Prerequisites: Sophomore standing, ability to type, and satisfactory score on departmental grammar, spelling and punctuation examination.

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.

### 310. Information Gathering and Reporting (3)

Prerequisites: Journalism 220; upper division standing; ability to type, and satisfactory score on departmental grammar, spelling and punctuation examination.

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.

Prerequisite: Journalism 310.

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.

Prerequisite: Journalism 310.

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, upper division standing.

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)**

Prerequisite: Upper division standing.

Social factors underlying nature, functions of mass media. Theories, models, research in media as culture carriers, opinion shapers; other societal interrelationships. (Formerly numbered Journalism 508.)

**425. Editorial and Critical Writing (3)**

Prerequisite: Journalism 320.

Principles and practices in editorial and critical writing. Editorials, columns and commentary. Analysis and interpretation.

**441. Magazine Article Writing (3)**

Prerequisites: Journalism 220, upper division standing.

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.

Prerequisite: Journalism 310.

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 I (3)**

One lecture and four hours of activity.

Prerequisites: Journalism 310 and 350.

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 II (3)**

One lecture and four hours of activity.

Prerequisites: Journalism 310 and 350.

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 and 460.

Preparation of copy, layout, planning and production. Graphics, typography, and visual literacy. Copy writing.

**465. Advertising Research and Analysis (3)**

Prerequisites: Journalism 310 and 460.

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 465, or Telecommunications and Film 540.

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 or Telecommunications and Film 110, and credit or concurrent registration in Journalism 310.

Special applications of news writing and editing for the broadcast media, including the use of wire copy, film, and audio and video tape recorders in producing news casts. Emphasis on news writing. (Not open to students with credit in Telecommunications and Film 310.)

**474. Broadcast News Reporting and Editing (3)**

Two lectures and three hours of activity.

Prerequisites: Journalism 310 and 470 or Telecommunications and Film 310, and satisfactory score on departmental grammar, spelling and punctuation examination.

Principles of reporting, photographing, recording in the production of newscasts for broadcast media. Special applications of principles of visual and aural literacy. Social responsibility. Field and laboratory practice.

**475. Radio and Television News Production (3)**

Two lectures and six hours of activity.

Prerequisites: Journalism 310 and 470 or Telecommunications and Film 310, and satisfactory score on departmental grammar, spelling and punctuation examination.

Radio and television news production with experience in news scripting. Writing and editing. Editing film and taped recordings. Problems and practices in the broadcast editing process. Laboratory and field 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 and 480.

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 and consent of instructor. Advertising: Journalism 463; News-Editorial: Journalism 320, 441 or 443; Photojournalism: Journalism 450 or 451; Public Relations: Journalism 481; Broadcast News: Journalism 470.

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, 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. Not more than three units in journalism to apply to the degree in journalism.

**499. Special Study (1-3)**

Prerequisite: Consent of instructor.

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 220, 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 220, 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 220 or History 110B, and upper division standing.

American journalism from colonial times to the present, with special attention to twentieth century trends and developments, including the emergent concept of social responsibility.

**509. Research Methods in Mass Communication (3)**

Prerequisites: Journalism 320 or 450 or 460 or 470 or 480. Upper division standing.

Investigative tools and evaluation methods of mass media research: content analysis, readership studies, audience measurement, experimental designs, and representative studies.

**526. Advanced Editing Techniques (3)**

One lecture and four hours of activity.

Prerequisite: Journalism 326.

Principles of typography, page and publication design; use of graphics and other pictorial material. Selection, evaluation, editing and display of news. Attention to electronic editing.

**529. Investigative Reporting (3)**

One lecture and four hours of activity.

Prerequisite: Journalism 320.

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.

**585. Problems and Practices in Public Relations (3)**

Prerequisite: Journalism 481.

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.

**Latin**

Refer to section on Classics.

**Latin American Studies**

In the College of Arts and Letters

**Faculty**

Latin American Studies is administered by the Latin American Studies Committee. The program draws upon courses offered by faculty in 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.

Professor Thomas M. Davies, Jr., is the undergraduate adviser.

**Offered by Latin American Studies**

Master of Arts degree in Latin American studies.

Major in Latin American studies with the A.B. degree in liberal arts and sciences.

Minor in Latin American studies.

**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.

**Latin American Studies Major****With the A.B. 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."

The major provides (1) a basis for a more effective understanding of the cultures and governments of the western hemisphere; and (2) a basic education and training for a business or professional career involving understanding of Latin America.

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.

**Preparation for the Major.** Portuguese 101, 211, 212, or Spanish 101, 102, 201, 202, 211 and 212 with a minimum grade point average of 2.0 for all work attempted (11-21½ 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.** The foreign language requirement for graduation is automatically fulfilled through course work 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 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 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 498, 499, 580; Anthropology 442\*, 443\*, 470, 476; Art 561, 562; Comparative Literature 445; Economics 336, 365, 464, 483, 562, 565; Geography 323, 324, 498A, 498B (when relevant); History 415A-415B, 496 (when relevant), 551A-551B, 552, 553, 554, 555, 556, 557, 558; Mexican-American Studies 333, 335, 350A, 376; Political Science 382, 566, 567, 568; Portuguese 535; Sociology 404\*, 506\*, 519\*, 558\*; Spanish 306A-306B, 441, 442, 470, 471, 472, 515A-515B, 520, 522, 524, 596\* (when relevant); Women's Studies 310 (when relevant); and 499 (when relevant) taken in one of the departments listed above.

\* Indicates course with prerequisites not included in requirements listed above.



## Latin American Studies Major – Imperial Valley Campus

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 course work 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 will be courses having Latin American content: Latin American Studies 344; Anthropology 442; Art 496 (when relevant), 561, 562; Comparative Literature 445; Economics 365, 464, 496 (when relevant), 565; Geography 323, 324, 496 (when relevant); History 415A-415B, 496 (when relevant), 538A-538B, 551A-551B, 552, 557, 558; Mexican-American Studies 333, 335, 350A, 376; Political Science 566, 567, 568; Sociology 350, 404, 506, 519; Spanish 306A-306B, 470, 471, 472, 515A-515B; Women's Studies 310 (when relevant).

## Latin American Studies Minor<sup>+</sup>

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 201 or the equivalent or Portuguese 211 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:

Anthropology 442, 443, 470, 476, 496\*, 499\*; Art 496\*, 499\*, 561, 562; Comparative Literature 445; Economics 464, 496\*, 499\*, 562, 565; Finance 329\*; Geography 323, 324, 496\*, 499\*, 521, 522; History 115A-115B, 496\*, 499\*, 538A, 551A-551B, 552, 553, 554, 555, 556, 557, 558, 596; Latin American Studies 101, 498, 499; Marketing 376\*; Mexican-American Studies 333, 334, 350A, 376, 496\*; Music 596\*; Political Science 382, 496\*, 499\*, 566, 567, 568; Portuguese 535; Public Administration 580\*; Sociology 496\*, 506\*, 519\*, 558; Spanish 306A-306B, 441, 442, 470, 471, 472, 515A-515B, 520, 522, 524, 596\*; Women's Studies 310 (when relevant), 496\*.

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. In designing their Latin American studies programs for a minor, students may not include courses drawn from their major department.

\* Courses to be included with approval of the undergraduate adviser in Latin American studies.

+ Additional prerequisites may be required for courses in the minor.

## 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 Autonoma de Baja California (3-9) (Offered at IVC only)

Prerequisites: Spanish 301; declared major in Latin American Studies.

Latin American Studies majors will attend classes with a Latin American focus at the Universidad Autonoma de Baja California; SDSU/IVC faculty will cooperate in supervision and evaluation of students. May be repeated with new content. Maximum credit nine units.

### 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 COURSE (Also Acceptable for Advanced Degrees)

### 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 Office of the Division of Undergraduate Studies.

### Liberal Studies Major

#### With the A.B. Degree in Applied Arts and Sciences and in Liberal Arts and Sciences

The liberal studies major provides three options for students wishing to follow degree programs involving more than one discipline or area of study. Option 1 offers an opportunity to combine three disciplines in a focused program of study; Option 2 permits a more general education with courses chosen from four broad groups and is designed mainly for students planning to enter elementary education; Option 3 is an alternative to Option 2 for students interested in bilingual/bicultural education.

#### OPTION 1. Liberal Studies in Three Departments with the A.B. Degree in Liberal Arts and Sciences.

The student selects three departments participating in this liberal studies option to provide a cohesive plan not otherwise provided in the regular programs of the university. Approval of the plan must be secured from each of the involved departmental advisers and from the Dean of Undergraduate Studies *prior to completion of 90 semester units*. If extenuating circumstances have clearly made it impossible for a student to declare a Liberal Studies Option 1 major prior to completion of 90 units, such student should expect to be required to take additional courses for completion of the major. Information regarding participating departments and procedures for application is available from the Division of Undergraduate Studies (265-5841). A special program in Drama, Music and Dance is offered through Liberal Studies.

**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, with no fewer than nine units from any one. No courses numbered 296, 496, 499, or 596 may be used for the major.

A minor is not required with this major.

#### OPTION 2. Liberal Studies in the Multiple Subjects Groups with the A.B. 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."

Completion of the Liberal Studies Option 2 major also fulfills General Education requirements.

A minor is not required with this major.

The Liberal Studies Major Option 2 meets all the requirements for the multiple subjects/diversified major as specified in the Ryan Bill, and is recommended for prospective elementary teachers.

Advising for this major is available at the University Advising Center (CL-107), and in a descriptive booklet available at the bookstore.

**Preparation for the Major.** (Completion of preparation for the major also fulfills the General Education requirements.) Fifty-two units distributed as follows: (Courses listed under numbers 1, 2, 3, and 6 must be taken for a letter grade.)

#### Group A: English and Speech (12 units)

1. **Composition** – Three units selected from Afro-American Studies 120; English 100; Linguistics 100; Mexican-American Studies 111B.
2. **Composition** – English 200.
3. **Speech** – Three units selected from Afro-American Studies 140; Mexican-American Studies 111A; Speech Communication 103.
4. **Literature** – Three units selected from English 220; Comparative Literature 270A, 270B.

#### Group B: Mathematics and Science (16 units)

5. **Mathematics** – Mathematics 210A.
6. **Mathematics** – Mathematics 210B.  
With approval of the mathematics adviser, any of the following pairs of mathematics courses may be substituted for Mathematics 210A, 210B: Mathematics 121, 122; 150, 151; 310A, 310B.
7. **\*Biological Science** – Three units (or four including laboratory) selected from Biology 100, 100L (strongly recommended), 110, 110L, 120, 120L, 130, 130L; Natural Science 110B.
8. **\*Physical Science** – Three units (or four including laboratory) selected from Astronomy 101, 109; Geological Sciences 100, 101; Natural Science 100, 102, 110A, 210A, 210B; Physics 103.

\* Either item 7 or 8 must include a laboratory.

9. **Mathematics/Science Elective** – Three units selected from any course approved in 7 or 8 above or from the following: Anthropology 101; Chemistry 100; Geography 101; Mathematics 104, 107, 140; Natural Science 103; Physics 107, 201.

#### Group C: Social Science (9 units)

10. **Global Perspective** – Anthropology 102 or Geography 102.
11. **Individual Perspective** – Psychology 101.
12. **U.S. Organization** – Three units selected from Economics 100, 101, 102; Sociology 101; or any General Education American Institutions course.

#### Group D: Humanities and Fine Arts (15 units)

13. **Values and Ethics** – Three units selected from Philosophy 101, 102, 103; Religious Studies 101.
14. **Western Civilization** – Three units selected from Art 258, 259; Drama 120; History 105, 106; Humanities 102A, 102B.
15. **Art or Drama** – Three units selected from Art 100, 101, 157; Drama 105, 255.
16. **Music** – Music 102.
17. **Language or Elective** – Three units selected from items 13 through 16 above or from the following: Art 158; Classics 140; Drama 130; Humanities 101, 140; Music 151; or any foreign language course.

#### Additional Requirements.

1. Health Science 101 or 320.
2. Physical Education 241.

#### Pattern Requirement.

One three-unit course in the major or preparation for the major must be selected from Afro-American, American Indian, Mexican-American, or Women's Studies courses listed in the Liberal Studies curriculum. Afro-American Studies 120, 140, Mexican-American Studies 111A, 111B do not meet this requirement.

**Upper Division Writing Requirement.** English 306W (very strongly recommended) or English 500W with a grade of C (2.0) or better.

**Major.** Thirty-seven units distributed as follows:

#### Group A: English and Speech (9-12 units)

**Required** – Linguistics 420. (Communicative Disorders credential students ONLY may substitute Communicative Disorders 531.)



**Required** – Either English 306A and 306W (very strongly recommended) or English 500W and three units selected from Afro-American Studies 460; English 301, 302, 405, 494, 501; Comparative Literature 470; Mexican-American Studies 335; Women's Studies 352.

**Electives** – Zero to three units of electives selected from required courses listed above or from the following: Afro-American Studies 362; Communicative Disorders 305; Linguistics 452 (recommended), 521, 522, 524, 550, 552, 553; Mexican-American Studies 461, 464; Speech Communication 475.

**Group B: Mathematics and Science (7-10 units)**

**Required** – Mathematics 496 "Algorithms" only (strongly recommended) or 310A.

**Required** – Natural Science 412A or 412B or 412C.

**Electives** – Zero to three units selected from required courses listed above or from the following: Astronomy 301; Biology 304, 307, 319, 321, 324, 327, 330, 336, 339, 341, 341L, 365, 454, 480; Geological Sciences 301, 303; Mathematics 310B; Natural Science 305, 315, 316, 317, 333, 431; Oceanography 320; Physics 301.

**Group C: Social Science (12-15 units)**

**Required** – Six units in history/political science to be selected as follows:

If American Institutions has not been completed at lower division level, select from one of the following sequences: History 310A-310B, 410A-410B, 547A-547B; Political Science 305 and 320, 305 and 321, 320 and 321; Women's Studies 341A-341B.

If American Institutions has been completed at lower division level, select three units of history and three units of political science from History 407A, 407B, 442A, 442B, 540, 545A, 545B, 546A, 546B, 548A, 548B; Political Science 334, 335, 346, 348, 356, 375.

**Required** – Psychology 310 or 330.

**Required** – Three units selected from Anthropology 350, 420, 426, 432, 433, 444; Geography 312A, 312B, 321, 350, 356, 357, 370, 371; Sociology 325, 333, 404, 422, 440, 508, 514, 536, 539.

**Electives:** Zero to three units selected from required courses listed above or from the following: Afro-American Studies 330, 331, 363, 380, 445, 452, 470, 471A, 471B; American Indian Studies 303, 320, 400, 420, 440; Economics 330, 335, 336, 338, 360, 370, 489; History 415A, 415B, 420, 421; Linguistics 551; Mexican-American Studies 301, 320, 350A, 350B, 480, 481; Women's Studies 310, 320, 325, 340, 370, 375, 390.

**Group D: Humanities and Fine Arts (6-9 units)**

**Required** – Three units in art, drama, or music selected from the following: Art 387 (recommended), 558, 560, 562, 569, 576; Drama 310, 329A, 329B (all three recommended), 460A, 460B; Music 351A, 351B, 351C, 351D, 351E, 351F, 343 (recommended), 344, 355.

**Required** – Three units selected from art, drama, or music courses listed above or from the following: Afro-American Studies 480; American Indian Studies 430, 470; Classics 310, 340; Humanities 401A, 401B, 402A, 402B; Mexican-American Studies 310, 331, 376, 380; Philosophy 301, 310, 329, 334, 336, 350, 351; Religious Studies 301, 305, 318, 340, 350, 353, 354, 363, 401, 403; Women's Studies 351, 356; or any upper division foreign language course.

**Electives** – Zero to three units selected from required courses listed above.

**OPTION 3. Liberal Studies with Bilingual/Bicultural Spanish Emphasis in the Multiple Subjects Groups with the A.B. 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."

Completion of the Liberal Studies Option 3 major also fulfills General Education requirements.

A minor is not required with this major.

The Liberal Studies Major Option 3 meets all the requirements for the multiple subjects/diversified major as specified in the Ryan Bill, and is recommended for prospective elementary teachers.

Advising for this major is available at the University Advising Center (CL-107) and in a descriptive booklet available at the bookstore.

The Liberal Studies Option 3 major is designed to help prepare students to enter the Bilingual Emphasis program of the College of Education. A student majoring in this emphasis

will have a good preparation for passing the bilingual competency tests. Merely completing this major, however, is no guarantee of passing the entrance exams. In general, students should select those courses which will improve oral and written Spanish language ability, English language proficiency, and cultural awareness and sensitivity. Students should take courses in Spanish when offered, e.g., history taught in Spanish.

**Spanish Language Requirement:** Students need to have proficiency in Spanish equivalent to four years of high school or Spanish 101, 102, 201 to follow this curriculum.

**Maximum Units in One Department:** 24 units, upper division and lower division combined. Mexican-American Studies and Multicultural Education are considered as one department.

**Preparation for the Major.** Fifty-one units distributed as follows: (Courses listed under numbers 1, 2, 3, and 6 must be taken for a letter grade.)

**Group A: English and Speech (12 units)**

1. **English Composition** – English 100 or Mexican-American Studies 111B.
2. **Composition** – English 200.
3. **Speech** – Mexican-American Studies 111A or Speech Communication 103.
4. **Literature** – Three units selected from English 220; Comparative Literature 270A, 270B.

**Group B: Mathematics and Science (13 units)**

5. **Mathematics** – Mathematics 210A.
6. **Mathematics** – Mathematics 210B. (Students may substitute calculus sequences approved by the Department of Mathematical Sciences or Mathematics 310A and 310B for items 5 and 6.)
7. **\*Biological Science** – Three units (or four including laboratory) selected from Biology 100, 100L (strongly recommended), 110, 110L, 120, 120L, 130, 130L; Natural Science 110B.
8. **\*Physical Science** – Three units (or four including laboratory) selected from Astronomy 101, 109; Geological Sciences 100, 101; Natural Science 100, 102, 110A, 210A, 210B; Physics 103.

\* Either item 7 or 8 must include a laboratory.

**Group C: Social Science (9 units)**

9. **Global Perspective** – Anthropology 102 or Geography 102.
10. **Individual Perspective** – Psychology 101.
11. **United States Organization** – Three units selected from Economics 100, 101, 102; History 110A, 110B; Mexican-American Studies 120A, 120B, 141A, 141B; Political Science 101, 102; Sociology 101.

**Group D: Humanities and Fine Arts (17 units)**

12. **Values and Ethics** – Three units selected from Philosophy 101, 102, 103; Religious Studies 101.
13. **Western Civilization** – Three units selected from Art 258, 259; Classics 140; Drama 120; History 105, 106; Humanities 102A, 102B.
14. **Art or Drama or Music** – Three units selected from Art 100, 101, 157; Drama 105, 255; Music 102.
15. **Spanish Language** – Spanish 202.
16. **Spanish Language** – Spanish 211 and 212.

(Students with equivalent knowledge and proficiency may substitute, with written permission of the major adviser, alternative courses in place of items 15 and 16.)

**Additional Requirements** (for entrance into Teacher Education).

1. Health Science 101 or 320.
2. Physical Education 241.

**Upper Division Writing Requirement.** English 306W (very strongly recommended) or English 500W with a grade of C (2.0) or better.

**Major.** Thirty-seven units distributed as follows:

**Group A: English and Speech (12 units)**

- Required** – English 306A-306W (very strongly recommended) or 500W and 501.  
**Required** – Linguistics 420 and 553.



**Group B: Mathematics and Science (7 units)**

**Required** – Mathematics 496 "Algorithms" only (strongly recommended) or 310A.

**Required** – Natural Science 412A or 412B or 412C.

**Group C: Social Science (9 units)**

**Required** – Mexican-American Studies 350A or 350B.

**Required** – Psychology 310 or 330.

**Required** – Three units selected from the following: Afro-American Studies 330, 331, 363, 471B; American Indian Studies 320, 420, 533; Anthropology 410, 432, 443; History 310A, 310B, 410A, 410B, 415A, 415B, 551A, 551B, 557; Linguistics 551; Mexican-American Studies 480, 481; Political Science 305, 320, 321, 335; Psychology 310, 330, 351; Social Work 350; Sociology 325, 536; Women's Studies 310, 341A, 341B, 390.

**Group D: Humanities and Fine Arts (9 units)**

**Required** – Spanish 301 (or equivalent knowledge and proficiency\*).

**Required** – Spanish 302 (or equivalent knowledge and proficiency\*).

**Required** – Spanish 450 (or equivalent knowledge and proficiency\*).

\* Students with knowledge and proficiency equivalent to the required Spanish courses may substitute, with written permission of the major adviser, nine units selected from the elective upper division courses listed below as follows: maximum three units in Groups A and B; maximum six units in Group C; at least three units in Group D.

**Group A Electives** – Zero to three units selected from Afro-American Studies 362, 460; Linguistics 452, 524, 550 (strongly recommended), 552; Mexican-American Studies 335, 396W, 464; Speech Communication 475; Communicative Disorders 305; Women's Studies 352.

**Group B Electives** – Zero to three units selected from required courses above or Astronomy 301; Biology 304, 307, 319, 321, 324, 327, 330, 336, 339, 341, 341L, 365, 454, 480; Geological Sciences 301, 303; Mathematics 310B; Natural Science 305, 315, 316, 317, 333, 431; Oceanography 320; Physics 301.

**Group C Electives** – Zero to six units selected from courses included in the third paragraph of Group C listed above.

**Group D Electives** – Three to six units selected from Afro-American Studies 480; American Indian Studies 430, 470; Art 387, 558, 560, 562, 569, 576; Drama 310, 329A, 329B; Foreign Language (any upper division class); Music 343, 344, 351A, 351B, 351C, 351D, 351E, 351F, 355; Mexican-American Studies 310, 324, 331, 376, 380; Women's Studies 356.

## Linguistics

In the College of Arts and Letters

**Faculty**

Emeritus: Elgin, Tidwell

Chair: Webb

Professors: Donahue, Frey

Associate Professors: Bar-Lev, Kaplan, Seright, Underhill, Webb

Lecturers: Bardovi-Harlig, Delahunty

**Offered by the Department**

Master of Arts degree in linguistics.

Major in linguistics with the A.B. 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).

**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 A.B. 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."

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 15 of these must be in Linguistics (and those 15 must include Linguistics 521 and 522); a maximum of nine units may be selected from Afro-American Studies 360, 362, 363; American Studies 501; Anthropology 304, 410; Communicative Disorders 305; French 401, 431; German 505, 510; Journalism 509; Philosophy 521, 522, 531; Russian 580, 581; Sociology 422, 424, 440, 557; Spanish 448, 449; Speech Communication 391, 496 (when appropriate), 530, 535. Substitutions may be made at the discretion of the undergraduate adviser.

**Linguistics Major****For the Single Subject Teaching Credential in English**

For a description of the single subject teaching credential in English with a major in linguistics, 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, 550, 560; Anthropology 510; Philosophy 531.

**Applied Linguistics:** Linguistics 450, 525, 550, 553; Anthropology 410.

**Historical Linguistics:** Linguistics 410, 560 (both required).

**Linguistics and English** (recommended for English majors): Linguistics 410, 450, 470, 525, 550, 560; Anthropology 410.

**Linguistics and Foreign Languages** (recommended for foreign language majors): Linguistics 410, 450, 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.

## Applied Linguistics and English as a Second Language (ESL) Certificate

The Linguistics Department offers a basic and an advanced Certificate in Applied Linguistics and English as a Second Language (ESL). The basic certificate requires 12 units to include either Linguistics 420 or 520, Linguistics 550, 552, and either Linguistics 524 or 551. 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.

Refer to the Graduate Bulletin for information on the advanced certificate.

### LOWER DIVISION COURSES

#### General

#### 101. Introductory Linguistics (3) I, II

Introduction to the principles and practice of modern linguistics as applied to the study of English. 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.

#### 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: Completion of English Placement Test and Writing Competency requirements. (See Graduation Requirements, I: Competency Requirements, section of this catalog.) PROOF OF COMPLETION OF COMPETENCY PREREQUISITE REQUIRED. Student to bring to first class meeting evidence of **one** of the following: Test score of 44+ on SAT/TSWE or 18+ on ACT or 7 essay and 150+ total on EPT or proof of having passed the final examination in Academic Skills 110 or credit for Academic Skills 150.

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 Afro-American 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: Completion of English Placement Test and Writing Competency requirements and satisfactory completion of Linguistics 100 or equivalent. PROOF OF COMPLETION OF COURSE AND COMPETENCY PREREQUISITES REQUIRED.

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

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. 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.

#### 396W. Writing Proficiency (1)

Prerequisite: Consent of instructor. Limited to linguistics majors.

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. 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.

#### 410. History of English (3) I, II

The history of English and its present-day use.

#### 420. Modern English (3) I, II

Principles of linguistics. Structure of Modern English, with attention to sounds and sentence patterns. Psychology of language; language acquisition; sociology of language; study of dialects; language change. Not open to students with credit in Linguistics 520.

#### 450. Introduction to Teaching English as a Second Language (3) I, II

Introduction to English as a second language, bilingual, and foreign language teaching. Basic concepts of linguistics as they apply to teaching second languages. Survey of ESL methodologies and techniques. Not open to students with credit in Linguistics 550.

#### 452. Child Language Acquisition (3) I, II

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. Structure of English (3) I, II

The structure of modern English, including the various approaches to linguistic analysis.

#### 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**

The development of American English; regional and cultural differences in pronunciation, grammar and vocabulary.

**525. Semantics and Pragmatics (3)**

Prerequisite: Linguistics 101.

Advanced semantic theory; systematic analysis of the interaction of sequences of language with real world context in which they are used.

**550. Theory and Practice of English as a Second Language (3) I, II**

Prerequisite: Linguistics 450 or 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. Functional Bilingual Linguistics (3) I, II**

Prerequisites: Knowledge of Spanish, Linguistics 520, and consent of instructor.

Recommended prerequisite: Communicative Disorders 528.

English and Spanish linguistic differences as related to children's second language acquisition; assessment of children's linguistic competence in second language learning through contrastive analyses of English and Spanish phonology, morphology and syntax. Research on current linguistic theories in second language acquisition and in bilingualism.

**554. Linguistics and Computers (3) I, II**

Issues of man-machine communication from a linguistic perspective. Comparison of human language and computer programming language. Aspects of Natural Language Processing and computer simulation of human linguistic abilities. Implications of linguistics for the use of computers.

**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 (3)**

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.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**Mathematics****In the College of Sciences****Faculty**

Emeritus: Branstetter, Bryant, Burton, Clark, Eagle, Harris, Harvey, Riggs, Willerdig

Chair: Carlson

Professors: Baase, Beck, Becker, Bell, Branca, Bray, Carlson, Davis, Deaton, Drobnies, Eisemann, Flanigan, Fountain, Garrison, Gindler, Golomb (Visiting Professor), Ho, Holmes, Howard, Lesley, Marovac, McLeod, Moser, Park, Pierce, Romano, Ross, Salamon, Saltz, Shaw, Short, Silver, Smith, Van de Wetering, Villone, Warren

Associate Professors: Burdick, Carroll, Donald, Eckberg, Elwin, Hager, Hintzman, Lopez, Macky, Marcus, Marosz, Nower, Sung, Vinge, Whitman

Assistant Professors: Erdogan, Golbeck, Gursel, Stewart, Thompson

Lecturers: Adams, Ananthanarayanan, Brulois, Hall, Meckstroth, Okada, Root, Zandi

Visiting Lecturers: Adichie, Dreyfus, Fischer-Colbrie, Kopec, Swart

**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 computer science.

Master of Science degree in statistics.

Master of Arts for teaching service with a concentration in mathematics.

Major in computer science with the B.S. degree in applied arts and sciences.

Major in mathematics with the A.B. 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 computer science.

Minor in mathematics.

**Computer Science Major****With the B.S. 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 for this major.

**Preparation for the Major.** Mathematics 107, 108, 137, 150, 151, 252, 253. (26 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 370, 371, 372, 541A, 580 and 21 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.

**Mathematics Major****With the A.B. 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.

**Preparation for the Major.** Mathematics 150, 151, 252, 253. (16 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 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, selected with approval of the departmental adviser before starting upper division work, including Mathematics 521A, 524, and 534A and one two-semester sequence chosen from the following: Mathematics 370 and 372; 521A-521B; 521A and 573; 537 and 531; 534A-534B; 534A and 535; 541A-541B; 551A and 551B; 550 and 553. 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

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.

**Preparation for the Major.** Mathematics 107, 150, 151, 252, 253. (19 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 524, 534A; at least nine units selected from Mathematics 336, 341A, 341B, 362, 521A, 531, 532, 533, 534B, 537; 12 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 nine units of electives in mathematics excluding Mathematics 302, 303, 310A-310B. Student must complete outline for major and file a copy signed by adviser with Evaluations Office.

In addition the student must complete Mathematics 524 with a grade of C or better prior to enrolling in Mathematics 370, 372, 573, 576, 578, 580, 581, 582, 583, 584, and certain sections of 596.

### Emphasis in Applied Mathematics

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 107, 108, 150, 151, 250, 252, 253. (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 to include Mathematics 521A, 524, 534A, 534B, 537, 541A, 350A or 551A; and 12 units selected from Mathematics 336, 362, 370, 372, 531, 532, 533, 541B, 550, 350B or 551B, 561, or 596 (approved by the Applied Mathematics adviser); and three units of electives excluding Mathematics 302, 303, 310A-310B. Student must complete outline for major and file a copy signed by adviser with Evaluations Office.

In addition the student must complete Mathematics 524 with a grade of C or better prior to enrolling in Mathematics 370, 372, 573, 576, 578, 580, 581, 582, 583, 584, and certain sections of 596.

**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 201 and 202 and courses for which these are prerequisite; or Economics 101, 102, 307, 541. 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

**Preparation for the Major.** Mathematics 107, 108, 137, 150, 151, 252, 253. (26 units.)

**Upper Division Writing Requirement.** Passing the University Writing Examination or completing one of the approved writing course with a grade of C (2.0) or better.

**Major.** A minimum of 36 upper division units in mathematics to include Mathematics 370, 372, 524, 534A; at least nine units from Mathematics 336, 341A, 341B, 362, 521A, 531, 532, 533, 537, 534B, 561; at least six units from Mathematics 371, 541A, 541B, 573, 574, 575, 576, 578, 580; and nine units of electives excluding Mathematics 302, 303, 310A-310B. Student must complete outline for major and file a copy signed by adviser with Evaluations Office.

In addition the student must complete Mathematics 524 with a grade of C or better prior to enrolling in Mathematics 370, 372, 573, 576, 578, 580, 581, 582, 583, 584, and certain sections of 596.

### Emphasis in Statistics

**Preparation for the Major.** Mathematics 107, 150, 151, 250, 252, 253. (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 in mathematics to include Mathematics 524, 534A, 551A, 551B; at least nine units from Mathematics 336, 341A, 341B, 521A, 531, 532, 533, 534B, 537; at least 12 units from Mathematics 350A, 350B, 550, 553, 554; and three units of electives excluding Mathematics 302, 303, 310A-310B. Student must complete outline for major and file a copy signed by adviser with Evaluations Office.

In addition the student must complete Mathematics 524 with a grade of C or better prior to enrolling in Mathematics 370, 372, 573, 576, 578, 580, 581, 582, 583, 584, and certain sections of 596.

## Mathematics Major

### For the Single Subject Teaching Credential

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

This major may be used by students in teacher education as an undergraduate major for the A.B. degree in liberal arts and sciences.

**Preparation for the Major.** Mathematics 107, 150, 151, 252, 253. (19 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 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 27 upper division units in mathematics to include Mathematics 302, 314, 357, 521A, 524, 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 107, 150, 151, 252, 253, 302, 314, 510, 521A, 524, 577; and 12 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.



## Computer Science Minor

The minor in computer science consists of a minimum of 18-24 units in mathematics to include Mathematics 107, 108; and at least 12 upper division units from the courses listed below, or at least nine upper division units from the courses listed below if the student completes a full calculus sequence, i.e., Mathematics 121, 122; or 150, 151; or 141, 142. The courses selected are subject to the approval of the minor adviser:

Mathematics 370, 371, 372, 541A, 573, 574, 575, 576, 578, 580 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.

## 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 142; or Mathematics 252 and nine upper division units in mathematics, at least six of which have as prerequisite Mathematics 151 or 142. 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.

## Mathematics Placement Examinations

All students who expect to enroll in Mathematics 104, 106, 107, 119, 120, 121, 140, 150 or 250, and have not completed prerequisite courses at San Diego State University must take the mathematics placement tests. These tests may be used to satisfy all or part of the prerequisite requirements for these courses and they also serve as a basis for the selection of students for the mathematics honors program. The schedule for these examinations will be posted on the mathematics bulletin board. Provision is also made for these examinations to be taken by the entering freshman or the transfer student prior to registration. Refer to the calendar.

### LOWER DIVISION COURSES

#### 104. Trigonometry (2) I, II

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Placement Examination, Part I. Proof of completion of prerequisites required. Basic concepts of analytic trigonometry.

#### 106. Introduction to Computer Programming with FORTRAN (3) I, II

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Placement Examination, Part I. Proof of completion of prerequisites required. Introduction to problem solving on a computer, design of algorithms, and use of FORTRAN language. Extensive programming.

#### 107. Introduction to Computer Programming (3) I, II

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Placement Examination, Part I. Proof of completion of prerequisites required. Introduction to machine and data organization; the rudiments of job control; design and analysis of algorithms; flowcharts. Extensive programming of problems on the computer in PASCAL.

#### 108. Intermediate Computer Programming (3) I, II

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement; qualification on the Mathematics Placement Examination, Part I; and Mathematics 107. Proof of completion of prerequisites required.

Further training in program design and development, especially with regard to larger projects. More complete presentation of a programming language. Basic data structures and algorithms.

#### 118. Topics in Mathematics (3)

Prerequisites: Satisfaction of Entry-Level Mathematics requirement and the Mathematics Competency requirement. Proof of completion of prerequisites required.

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

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Placement Examination, Part I. Proof of completion of prerequisites required.

Descriptive statistics: histogram, frequency polygon measures of central tendency and variability. Elementary probability and sampling distributions, including binomial, Normal, Bayes theorem. Point and interval estimation of means, proportion. Not open to students with credit in Mathematics 250. Students with credit or concurrent registration in another statistics course other than Mathematics 250 will be awarded a total of four units for the two (or more) courses.

#### 120. Mathematics for Business Analysis (3) I, II

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Placement Examination, Part I. Proof of completion of prerequisites required.

Basic mathematics for business students, including topics from finite mathematics and calculus.

#### 121. Calculus for the Life Sciences I (3) I, II

Prerequisite: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Placement Examination, Part I. Proof of completion of prerequisites required.

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 141 or 150.

#### 122. Calculus for the Life Sciences II (3) I, II

Prerequisite: Satisfaction of the Entry-Level Mathematics requirement; qualification on the Mathematics Placement Examination, Part I; and Mathematics 121. Proof of completion of prerequisites required.

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 141 or 150.

#### 137. Machine Organization and Assembly Language (4) I, II

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement; qualification on the Mathematics Placement Examination, Part I; and Mathematics 108. Proof of completion of prerequisites required.

General concept of machine and assembly languages, including data representation, looping and addressing techniques, subroutine linkages and use of system and programmer-defined macros.

#### 138. Higher Level Languages (1-2)

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement; qualification on the Mathematics Placement Examination, Part I; and Mathematics 107. Proof of completion of prerequisites required.

Syntax and semantics of a given high level language. Units will depend on language. Programs will be run on computer. Possible languages include FORTRAN, COBOL, ALGOL, PL/I, LISP, SNOBOL, APL. Simulation languages. See Class Schedule for current offering. Maximum credit six units.

#### 140. College Algebra (3) I, II

Prerequisite: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Placement Examination, Part I. Proof of completion of prerequisites required. Functional notation, mathematical induction, complex numbers, DeMoivre's theorem, inequalities, binomial theorem, determinants, etc. Not open to students with credit in Mathematics 150.

#### 141. Calculus for the Social Sciences (4) I, II

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and either qualification on the Mathematics Placement Examination, Parts I and II, or Mathematics 140 taken at this university. Proof of completion of prerequisites required.

Types of functions and their graphs, especially those arising from social and behavioral models; trigonometry; single variable calculus, including techniques of integration, differentiation, and optimization. Not open to students with credit in Mathematics 121 or 150.



**142. Calculus for the Social Sciences (4) I, II**

Prerequisite: Satisfaction of the Entry-Level Mathematics requirement; either qualification on the Mathematics Placement Examination, Parts I and II, or Mathematics 140 taken at this university; and Mathematics 141. Proof of completion of prerequisites required.

Matrix and vector algebra, and linear systems of equations and inequalities; multivariate calculus, including optimization methods; elementary techniques for solution of differential and difference equations. Not open to students with credit in Mathematics 122 or 151.

**149. Introductory Matrix Algebra (3)**

Prerequisite: Satisfaction of the Entry-Level Mathematics requirement and either qualification on the Mathematics Placement Examination, Parts I and II, or Mathematics 140 taken at this university. Proof of completion of prerequisites required.

Matrices, vectors, linear dependence and independence, basis, change of basis, similarity and congruence. Applications to systems of equations, characteristic values and orthogonality.

**150. Single Variable Calculus (5) I, II**

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and either qualification on the Mathematics Placement Examination, Parts I, II, and III, or Mathematics 104 and 140 taken at this university with minimum grades of C. Proof of completion of prerequisites required.

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**

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.

**210A. Structure and Concepts of Elementary Mathematics (3) I, II**

This course or its equivalent is required for students working toward a teaching credential in elementary education.

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and the Mathematics Competency requirement. Proof of completion of prerequisites required.

Sets and relations, functions, the development of the number system from the natural numbers, including the whole numbers, the integers, the rational numbers and the real numbers.

**210B. Structure and Concepts of Elementary Mathematics (3) I, II**

This course or its equivalent is required for students working toward a teaching credential in elementary education.

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and the Mathematics Competency requirement and Mathematics 210A. Proof of completion of prerequisites required.

Elementary number theory and congruences, metric and nonmetric geometry, introduction to logic, probability and statistics and some concepts from algebra.

**250. Basic Statistical Methods (3) I, II**

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Placement Examination, Part I. Proof of completion of prerequisites required.

Descriptive statistics: histogram, measures of central tendency and variability; sampling distributions. Estimation and hypothesis tests for means, proportions, variances. AOV models, linear regression and correlation, nonparametric methods. Not open to students with credit in Mathematics 119. Students with credit or concurrent registration in another statistics course other than Mathematics 119 will be awarded a total of four units for the two (or more) courses.

**252. Multivariable Calculus (4) I, II**

Prerequisite: Mathematics 151 with minimum grade of C.

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. (Formerly numbered Mathematics 152.)

**253. Linear Algebra and Differential Equations (3) I, II, S**

Prerequisite: Mathematics 142 or 252.

First-order ordinary differential equations; matrices and systems of equations, vector spaces, linear transformations, eigenvalues and eigenvectors. Applications to higher-order ordinary differential equations and first-order systems. Not open to students with credit in Mathematics 340A.

**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)

**302. Basic Mathematical Concepts (3) I, II**

Prerequisite: Mathematics 150.

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**

Prerequisite: Mathematics 121 or 140.

History of mathematics down to early modern times.

**310A-310B. Modern Elementary Mathematics (3-3)**

Prerequisite: Mathematics 210B or qualification on Mathematics Education Placement Test.

Mathematics 310A is prerequisite to 310B.

Integers, rationals, and real numbers as mathematical systems; operations, mappings, properties of relations; coordinate geometry; mensuration. Enrollment limited to those in training for or engaged in teaching in the elementary schools.

**314. Mathematics Curriculum and Instruction (3)**

Prerequisite: Mathematics 151.

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.

**336. Introduction to Mathematical Modeling (3) I**

Prerequisite: Mathematics 122 or 142 or 252.

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. Not open to students with credit in Mathematics 536.

**340A-340B. Methods of Applied Mathematics (3-3) I, II**

Prerequisite: Mathematics 252. Mathematics 340A is prerequisite to 340B.

Selected topics from ordinary differential equations, with applications; hyperbolic, elliptic, Bessel and gamma functions, Fourier series and integrals, electromechanical analogies, the Laplace transform, and partial differential equations. Mathematics 340A is not open to students with credit in Mathematics 530; Mathematics 340B is not open to students with credit in Mathematics 531. (This course to be offered for the last time during the 1986-87 academic year.)

**340C. Methods of Applied Mathematics (3)**

Prerequisite: Mathematics 340B.

Finite and infinite dimensional vector spaces. Linear transformations and matrix representations, eigenvalue problems. Introduction to functions of the complex variable. Contour integration and conformal mapping. This course cannot be used as part of a major or minor in the Department of Mathematical Sciences. (This course to be offered for the last time during the 1985-86 academic year.)

**341A. Methods of Applied Mathematics I (3) I, II**

Prerequisite: Mathematics 253.

Vector calculus, Stokes theorem and related integral theorems. Second-order linear partial differential equations, spherical harmonics, Legendre polynomials. Not open to students with credit in Mathematics 340B.



**341B. Methods of Applied Mathematics II (3) II**

Prerequisite: Mathematics 341A.

Fourier and Laplace transforms and applications, perturbation theory, Green's functions, Hilbert spaces, or thogonal expansions and delta functions. Not open to students with credit in Mathematics 340C.

**350A. Statistical Methods (3) I**

Prerequisite: Mathematics 119 or 250 or equivalent statistics course.

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) II**

Prerequisite: Mathematics 142 or 151.

Probability, measures of central tendency and dispersion, characteristics of frequency functions of discrete and continuous variates; applications. Highly recommended for all prospective secondary school teachers of mathematics (Formerly numbered Mathematics 577.)

**362. Optimization Theory (3) I**

Prerequisite: Mathematics 253.

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. (Formerly numbered Mathematics 562.)

**370. Data Structures (3)**

Prerequisite: Mathematics 108.

Basic concepts of data. Linear lists, strings, arrays, and orthogonal lists. Representation of trees and graphs. Multilinked structures. (Formerly numbered Mathematics 570.)

**371. Discrete Mathematics, with Computer Applications (3)**

Prerequisite: Mathematics 122 or 142 or 151.

Equivalence and order relations, Boolean algebra, finite machines and their optimization, logical design.

**372. Programming Languages (3)**

Prerequisite: Mathematics 108.

Formal definition of programming languages including specification of syntax and semantics. Structure of algorithmic languages. Special purpose languages. (Formerly numbered Mathematics 572.)

**480. ADA and Programming Methodologies (3) I, II**

Prerequisite: Mathematics 370.

Introduction to programming in ADA. Advanced concepts and features present in a variety of modern programming languages and programming methodologies as applied in ADA.

**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)

**510. Introduction to the Foundations of Geometry (3) II**

Prerequisite: Mathematics 122 or 142 or 151.

The foundations of Euclidean and hyperbolic geometries. Highly recommended for all prospective teachers of high school geometry.

**511. Projective Geometry (3) I**

Prerequisites: Mathematics 122 or 142 or 151 and consent of instructor.

Concurrence of lines, collinearity of points and other properties of figures not altered by projections; construction and study of ellipses, hyperbolas, and parabolas by means of projections.

**512. Non-Euclidean Geometry (3)**

Prerequisite: Mathematics 122 or 142 or 151.

History of attempts to prove the fifth postulate; emphasis on plane synthetic hyperbolic geometry; brief treatment of other types of non-Euclidean geometry.

**520A. Linear Algebra (3) I, II**

Prerequisite: Mathematics 142 or 252.

A study of linear equations, Euclidean spaces, linear transformations, matrices, determinants, and eigenvalues. (This course will be offered for the last time during the 1986-87 academic year.)

**520B. Applied Linear Algebra (3)**

Prerequisite: Mathematics 520A.

Jordan forms, vector and matrix norms, condition numbers, generalized inverses, linear programming, analysis of a few standard algorithms in linear algebra. (This course will be offered for the last time during the 1986-87 academic year.)

**521A-521B. Abstract Algebra (3-3) I, II**

Prerequisites: Mathematics 142 or 252. Mathematics 521A is prerequisite to 521B.

Selected topics from abstract algebra to include an introduction to the theory of groups, theory of equations, and finite mathematics.

**522. Number Theory (3)**

Prerequisite: Mathematics 142 or 252.

Selected topics from the theory of numbers to include congruences, Diophantine equations, and a study of prime numbers.

**523. Mathematical Logic (3)**

Prerequisite: Mathematics 142 or 151 or Philosophy 120.

The logical rules of proof governing sentential connectives and the universal and existential quantifiers with applications. Not open to students with credit in Philosophy 521.

**524. Linear Algebra (3) I, II**

Prerequisite: Mathematics 253.

Systems of linear equations and inequalities, normed linear spaces, matrix norms, condition numbers, generalized inverses, linear, bilinear and quadratic forms. Euclidean spaces, Sylvester's law, the spectral theorem, and canonical forms. Not open to students with credit in Mathematics 520A-520B.

**530. Differential Equations (3) I, II**

Prerequisite: Mathematics 142 or 252.

Ordinary differential equations with applications to geometry, physics and chemistry. Not open to students with credit in Mathematics 340A. (This course will be offered for the last time during the 1986-87 academic year.)

**531. Partial Differential Equations (3)**

Prerequisite: Mathematics 537.

Study of boundary-initial value problems via separation of variables, eigenfunction expansions, Green's functions, and transform methods. Introductory material includes uniform convergence, divergence theorems and Fourier series. Not open to students with credit in Mathematics 340B.



**532. Functions of a Complex Variable (3)**

Prerequisite: Mathematics 142 or 252.

Analytic functions, Cauchy-Riemann equations, theorem of Cauchy, Laurent series, calculus of residues.

**533. Vector Analysis and Differential Geometry (3)**

Prerequisite: Mathematics 253.

Vector algebra, differentiation and integration, classical theory of curves and surfaces, divergence theorem, Stokes' theorem and related integral theorems, curvilinear coordinates, elements of tensor analysis. Applications to geometry and physics.

**534A. Advanced Calculus I (3) I, II**

Prerequisite: Mathematics 253.

Properties of the real numbers, continuity and differentiability of functions of one real variable, the Riemann integral, infinite series, uniform convergence.

**534B. Advanced Calculus II (3) I, II**

Prerequisite: Mathematics 534A.

Functions of several real variables; continuity and differentiability; transformations, Jacobians, Green's and Stokes' theorems.

**535. Introduction to Topology (3)**

Prerequisite: Mathematics 534A.

Topological spaces. Functions, mappings, and homeomorphisms. Connectivity, compactness. Metric spaces.

**537. Differential Equations (3)**

Prerequisite: Mathematics 253.

Ordinary differential equations with topics including boundary value problems, stability and Laplace transforms, applications in physics and chemistry. Oscillation and comparison theorems. Not open to students with credit in Mathematics 530.

**541A. Numerical Analysis and Computation (3) I**

Prerequisites: Mathematics 107 and 253.

Iteration methods for solving nonlinear equations. Curve fitting. Interpolation: Lagrange's formula and Newton's formula. Numerical methods for integration. Runge-Kutta and predictor-corrector methods for solving systems of ordinary differential equations.

**541B. Numerical Analysis and Computation (3) II**

Prerequisites: Mathematics 340A or 530, 524 and 541A.

Numerical linear algebra: direct and iterative methods for solving systems of equations, methods for finding eigenvalues and eigenvectors. Optimization. Numerical methods for solving partial differential equations.

**550. Probability (3)**

Prerequisite: Credit or concurrent registration in Mathematics 253.

Definitions, computation of probability by enumeration of the cases, discrete and continuous random variables, density functions, moments, limit theorems, selected distributions.

**551A. Mathematical Statistics (3) I, II**

Prerequisite: Mathematics 253.

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.

**552. Applied Time Series Analysis (3) I**

Prerequisite: Mathematics 551B.

Computation and statistical analysis relative to time series arising in economics, engineering and biomedical research. Box-Jenkins methodology. Robust and nonparametric techniques.

**553. Stochastic Processes (3)**

Prerequisite: Mathematics 550.

Introduction to stochastic processes with selected applications.

**554. Computer Oriented Statistical Analysis (3)**

Prerequisite: Mathematics 350A.

Using statistical computer packages such as SPSS and BMDP to analyze problems involving experimental data.

**561. Applied Graph Theory (3)**

Prerequisite: Mathematics 253.

Undirected and directed graphs, trees, Hamiltonian circuits, classical problems of graph theory including applications to linear systems.

**563. Fourier Transforms with Applications (3)**

Prerequisites: Mathematics 253 and any one of the following: Mathematics 340A or 341A, 520A or 524, 530 or 537, 541A, Engineering 310.

Continuous and discrete Fourier transforms, sampling, digital filters, fast Fourier transform and convolution algorithms. Sample applications.

**573. Automata Theory (3) II**

Prerequisite: Mathematics 371 or 521A.

Definition and algebraic description of finite automata. Reduced forms for sequential machines. Regular sets and expressions. Introduction to context-free languages.

**574. Introduction to Computability (3)**

Prerequisite: Mathematics 371 or 523.

Definition of algorithm by abstract (Turing) machines and by recursion. Application of this definition to the limitations and capabilities of computing machines. Applications to logic, algebra, analysis.

**575. Compiler Construction (3)**

Prerequisites: Mathematics 370 and 372.

Syntactical specification of languages. Scanners and parsers. Precedence grammars. Runtime storage organization. Code generation and optimization.

**576. Artificial Intelligence (3) II**

Prerequisite: Mathematics 371 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.

**578. Algorithms and Their Analysis (3)**

Prerequisite: Mathematics 370.

Algorithms for solving frequently occurring problems. Sorting, merging, fast matrix multiplication, graph problems (e.g., finding shortest paths), the assignment problem and others.

**579. Combinatorics (3)**

Prerequisite: Mathematics 122 or 142 or 151.

Permutations, combinations, generating functions, recurrence relations, inclusion-exclusion counting. Polya's theory of counting, other topics and applications.

**580. Systems Programming (3) I, II**

Prerequisites: Mathematics 137 and 370.

Review of batch process systems programs, their components, operating characteristics, user services and their limitations. Implementation techniques for parallel processing of input/output and interrupt handling. Details on addressing techniques, core management, system updating, documentation and operation. (Formerly numbered Mathematics 557.)

**581. Small Computers (3)**

Prerequisite: Mathematics 137.

Organization and application of minicomputers. Hands-on experience with minicomputers. Software aspects of and several detailed descriptions of popular minicomputers. Presentation of several microcomputers.

**582. Database Theory and Implementation (3) I, II**

Prerequisites: Mathematics 370 and 371.

Abstract data structures and techniques for their implementation. Review of sentential and predicate logic, relational view of data, relational calculus and algebra, normalization of relations; hierarchical and network views of data; review of some existing database systems (chosen from ADABAS, DBTG, IMS, S2000, TOTAL); data security and integrity.



**583. Computer Simulation (3) I, II**

Prerequisites: Mathematics 350A and 541A.

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.

**584. Aspects of Interactive Computer Graphics (3) I, II**

Prerequisites: Mathematics 253 and 370.

Theoretical and practical concepts and software requirements related to use of interactive computer graphics. Mathematical functions used in 3D graphics; data structures and languages both for programming graphical system and for communication between a user and a graphical system.

**586. Software Engineering (3) II**

Prerequisite: Mathematics 372.

Theory and methodology of programming complex computer software. Analysis, design and implementation of programs. Team projects required.

**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 six units.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**Mexican-American Studies**

In the College of Arts and Letters

**Faculty**

Chair: Cuellar

Professors: Griswold del Castillo, Vega

Associate Professors: Cuellar, Gonzalez, Rodriguez, Villarino

**Offered by the Department**

Major in Mexican-American studies with the A.B. degree in liberal arts and sciences.

Minor in Mexican-American studies.

**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 A.B. 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 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 majoring in Mexican-American studies must demonstrate knowledge of Spanish by satisfactory completion of written and oral examinations administered by the Department of Mexican-American Studies. 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: (social sciences) Mexican-American Studies 303, 304, 306, 320, 324, 334, 350A-350B, 355, 360, 370, 450, 481, 484; or 21 units selected from (humanities) Mexican-American Studies 310, 324, 333, 334, 335, 375, 376, 380, 396W; or 21 units selected from (bilingual systems) Mexican-American Studies 460, 461, 464, 480. Up to nine units, with appropriate content, can be applied to each area of specialization from Mexican-American Studies 496, 497 and 499.

**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 any one of the following three areas in Mexican-American studies: (social sciences) Mexican-American Studies 301, 303, 304, 306, 320, 324, 334, 350A-350B, 355, 360, 370, 450, 481, 484; (humanities) Mexican-American Studies 310, 333, 334, 335, 375, 376, 380, 396W; (bilingual systems) Mexican-American Studies 460, 461, 464, 480.

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.



## Mexican-American Studies Minor — Imperial Valley Campus

The minor in Mexican-American studies consists of a minimum of 18 units in Mexican-American studies to include 12 units of upper division courses selected from any one of the following three areas: (bilingual systems) Mexican-American Studies 461, 464, 480; (humanities) Mexican-American Studies 333, 335, 376, 380; (social sciences) Mexican-American Studies 320, 350A-350B, 360, 481, 484.

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.

### LOWER DIVISION COURSES

#### 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 U.S. roots; the new identity. Semester II: Contemporary problems; social and political movements.

#### 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 Afro-American Studies 140 or Speech Communication 103 or 104.

#### 111B. Written Communication (3)

Prerequisites: Completion of English Placement Test and Writing Competency requirements. (See Graduation Requirements, I: Competency Requirements, section of this catalog.) PROOF OF COMPLETION OF COMPETENCY PREREQUISITE REQUIRED. Student to bring to first class meeting evidence of **one** of the following: Test score of 44+ on SAT/TSWE **or** 18+ on ACT **or** 7 essay and 150+ total on EPT **or** proof of having passed the final examination in Academic Skills 110 **or** credit for Academic Skills 150.

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 Afro-American 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. This year course meets the graduation requirement in American Institutions.

#### 130. Mexican Literature in Translation (3)

Contemporary Mexican prose and poetry in translation.

#### 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)

Emphasis on Spanish and Mexican influences. Semester I: U.S. expansion to 1848. Semester II: 1848 to the present. The Treaty of Guadalupe Hidalgo; history of Mexican immigration; farm labor and urban Chicano history; contemporary movements. This year course meets the graduation requirement in American Institutions.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 301. Political Economy of the Chicano People (3)

Prerequisite 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. Barrio Studies (3)

Prerequisite recommended: Mexican-American Studies 110A or 110B.

Sociological and practical analysis of barrio problems and agencies. Observation in formal agencies for experience and sensitizing. Community fieldwork and application of theory.

#### 304. Narcotics in the Mexican-American Community (3) I, II

Prevention and cure of drug problems; old and new methods; formal and informal agencies explored.

#### 306. Immigration Law and Practices (3)

Legal and political status of the immigrant from Mexico; process of immigration; counseling the immigrant.

#### 310. Mexican and Chicano Music (3) I, II

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 U.S. Course will be taught bilingually.

#### 320. Mexican-American Life Styles (3)

The Mexican-American family in the past, present, and future. Traditional and evolving roles of the man and the woman. The new alternatives in the twentieth century.

#### 324. Gramatica Cantada (Pedagogia, Musica y Cultura) (3)

Methods and materials of Spanish instruction through music of Mexico and the Southwest.

#### 331. Chicano Poetry: Creative Writing (3)

Reading and writing of Spanish-English macaronic verse: a writing workshop in which students are given opportunity to criticize each other's work. Poetry is the point of departure and goal in sight. Maximum credit six units.

#### 333. Pre-Hispanic Literature (3)

Literature of Nahua and Maya areas in translation: studied as literature.

#### 334. Language of the Barrio (3)

Pachuco, calo, and barrio Spanish: a linguistic study.

#### 335. Mexican-American Literature (3)

Ideas, forms, history of significant Mexican-American prose, poetry and other literary genres.

#### 350A-350B. Chicano History (3-3) I, II

Semester I: Review of indigenous origins; Hispanic institutions and northward expansion; the Mexican Republic. Semester II: Early U.S. encroachment and the Mexican-American War; Chicano influences and contributions; the multilingual and multicultural Southwest.

#### 355. The United States-Mexico International Border (3) I

Prerequisite: Upper division standing.

History, culture, economics, and politics of U.S./Mexico border region. Theories and policy issues surrounding development of region; local regional problems and major agencies, institutions, organizations addressing these problems.

#### 360. Effects of Political and Economic Institutions on the Barrio (3) I

Prerequisite recommended: Mexican-American Studies 301.

Analysis of unique needs within the barrio and their relationship to political and economic institutions; a study of the consumer society; research and theoretical development of alternative economic modes in a multicultural society.

#### 370. Families in the Southwest: Documents and Methods (3)

Family history in the Southwest. Emphasis on Mexican and Chicano family. Methodology and materials in research. History of important families in the Southwest. Preparation of family histories.

#### 375. U.S./Mexico Border History (3) II

Prerequisite recommended: Mexican-American Studies 110A.

Historical problems and movements in the U.S./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)

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. Chicano Folklore (3)

Prerequisite recommended: Mexican-American Studies 110A or 110B.

Stories, legends, dichos, and common practices of the Chicano storytellers of old; analysis of ancient myths and their contemporary manifestations.



**396W. Chicano Prose: Creative Writing (3)**

A writing workshop. Mutual criticism. Exploration of new form and content in Mexican-American prose. 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. Maximum credit six units.

**450. Border Health Conditions and Cultural Practices (3) I**

Prerequisite recommended: Mexican-American Studies 110A or 110B.

Health practices and health conditions on the border. Environmental health issues, health-related risk factors/lifestyles, health services delivery, and cultural components of health behaviors, including review of trends.

**460. Bilingual Concepts (3)**

Prerequisite recommended: Mexican-American Studies 110A-110B.

Bilingual and bicultural philosophy; investigation of bilingual rationales and exploration of research in the area.

**461. Bilingual Linguistics (3) I**

Prerequisite recommended: Mexican-American Studies 110A or 110B.

Basic elements of linguistics in English and Spanish; definitions and applications. A study of comparative elements in bilingual linguistics. Taught bilingually.

**464. Literature for the Chicano Bilingual Student (3)**

Chicano literature for the preschool, elementary, and junior high bilingual Chicano student. (Formerly numbered Mexican-American Studies 464A.)

**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.

**481. Contemporary Issues and the Chicano Child (3)**

Housing and neighborhoods; family structure; Chicano culture; health and medical needs, problems in education, emotional, social and intellectual growth, meaningful school curriculum; measurement and evaluation of academic skills and relationship to the education of urban and rural Chicano child.

**484. Counseling the Mexican-American Student (3) I**

Motivation counseling at all levels; parent counseling and involvement; recruiting for secondary continuation and college.

**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.

**497. Senior Survey in Mexican-American Studies (3)**

Survey integrating studies of selected areas of Mexican-American Studies. Senior report will be written.

**499. Special Study (1-3)**

Prerequisite: Consent of instructor.

Individual study. Maximum credit six units.

## Military Science

In the College of Professional Studies and Fine Arts

**Faculty**

Chair: Ford

Professor: Ford

Assistant Professors: Belletti, Kershner, Roberts, Sponbeck

Lecturers: Bollenbach, Oelke, Rader, Stone

**Offered by the Department**

Army ROTC curriculum leading to a commission as a Second Lieutenant in the U.S. 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. Enrollment in the Army ROTC program is not a requirement for taking military science courses.

The Army ROTC program consists of one course per semester along with one leadership laboratory period per month. 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 one-unit introductory courses each semester. The second year consists of two-unit courses with instruction on Civil-Military Relations and Military Leadership. Uniforms, necessary military science textbooks, and materials are furnished without cost. After completing the Basic Course, students who have demonstrated officer potential and have met physical and scholastic standards 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. In addition to the required military science courses, students must complete one course in the area of written communications skills, human behavior, and military history. Students are also recommended to take a course in management and national security studies.

A paid six-week Advanced Camp is 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. 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.

Upon completion of the Advanced Course, students are commissioned Second Lieutenants in the U.S. Army. The available options after commissioning are active duty for a minimum of three years or three months active duty for training followed by participation in the U.S. Army Reserve or U.S. 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 Reserves 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 program consists of a six-week Army ROTC Basic Camp which qualifies a student for enrollment in the Advanced Course. The two-year program is designed for community and junior college graduates and students of four-year colleges who did not take Army ROTC during their first two years. The Basic Camp course of instruction is designed to provide the necessary military skills and leadership training normally provided during the Basic Course. The Basic Camp is conducted at Fort Knox, Kentucky, and a paid salary, transportation, meals and lodging will be furnished. No military obligation is incurred as a result of Basic Camp attendance.



## Cross Enrollment

Students can participate in Army ROTC while attending area community and junior colleges or other four-year area colleges. For further information concerning cross enrollment, contact the Department of Military Science.

## 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. The freshman classes consist of one-unit courses, Military Science 100A and 100B. The sophomore classes consist of Military Science 201 and 202. The Advanced Course classes consist of Military Science 301 and 302 during the first year and Military Science 410 and 411 during the second year. 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.

## Financial Assistance

All students have the opportunity to compete for three- and two-year scholarships. These scholarships cover all tuition, laboratory fees, textbooks, supplies and a \$100 monthly subsistence allowance during the school year. These scholarships are competitive nationwide and the initial processing is accomplished by the Military Science department during the spring semester each year. 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.

## Military Science Minor

The minor in military science consists of a minimum of 15 units to include Military Science 301, 302, 410, 411; and Military Science 499 or Sociology 499. (3 units.)

### LOWER DIVISION COURSES

#### 100A-100B. Introduction to the U.S. Army (2-2) I, II

Semester I: Structure, organization, and missions of the U.S. 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

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.

#### 202. Psychological Theories of Military Leadership (2) II

Psychological theories, models and concepts as applied in the practice of military leadership. Style and role of small unit military leader in applying principles of motivation, organizational behavior, participative group management in solving military leadership problems. Simulations, case studies and diagnostic tests.

### 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

Prerequisite: Military Science 301.

Current tactical doctrine and military techniques of planning and coordination required to apply doctrine to small unit operations.

#### 410. Senior Leadership Seminar (3) I

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. (Formerly numbered Military Science 402.)

#### 411. Contemporary Military Policy (3) II

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. (Formerly numbered Military Science 401.)

#### 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

The Department of Music is a Member of the  
National Association of Schools of Music.

#### Faculty

Emeritus: Anderson, Blyth, Flye, Forman, Hurd, Lambert, Loomis, Moe, Rohfleisch, Rost, Smith, D., Smith, J.D., Snider, Springston

Chair: Biggs

Professors: Almond, Barra, Biggs, Brown, Bruderer, Brunson, Estes, Genzlinger, Hogg, Logan, Meadows, Mitchell, Mracek, O'Donnell, Sheldon, Ward-Steinman, D., Yates

Associate Professors: Dutton, Hill

Assistant Professors: Follingstad, Kolar, Liebowitz, Stauffer

Lecturers: Bouterse, Erb, Friedrichs, Peterman, Ward-Steinman, S., Warman

#### Applied Music Instruction

Piano: Bruderer, Follingstad, Kolar

Harpsichord: Paul

Organ: Fall, Spellman

Voice: Genzlinger, Henderson, Lasher,  
MacKenzie, Schmor, Westbrook

Flute: Bursill-Hall, Reynolds

Oboe: Michel

Clarinet: Liebowitz

Saxophone: Rotter

Early Instruments: Bouterse, Peterman

Bassoon: Michel

French Horn: Cable

Trumpet: Logan, Siebert

Trombone: Hogg, Johnston

Baritone Horn: Dutton

Tuba: Dutton

Percussion: Mitchell

Violin/Viola: Brunson, Gerard, Hill, Tseitlin

Cello: Stauffer

Contrabass: G. Biggs, Rofe

Harp: Follet

Classical Guitar: Romero

Composition: Dutton, Hogg, Ward-Steinman

Non-Western Instruments: Specialists from  
specific cultures as available each  
semester

#### Offered by the Department

Master of Arts degree in Music.

Master of Music degree

Major in music with the A.B. 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.

## 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 A.B. 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 250 and 450 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 250. 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 Junior Level 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 CMP courses in order to advance to the next higher course.

5. Students are encouraged to participate in at least one performing group each semester. One-half of the requirement stated in each degree program must be met by participating in a major performance group in which the student's major instrument is used regularly.

6. Attendance at and performance in recitals is a requirement of all music majors as set forth in the department recital regulations.

Refer to Music Department Student Handbook for detailed information.

## Music Major

### With the A.B. 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.

**Preparation for the Major.** Music 110A-110B, 110C-110D (may be waived in full or in part by examination); 115A; four units selected from courses numbered 320A through 335; 158A-158B; four units selected from courses numbered 170 through 189; four units of Music 250; 258A-258B. (29-33 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.

**Major.** A minimum of 28-29 upper division units to include Music 358A-358B; five units selected from courses numbered Music 369 through 389; one unit selected from Music 448A or 449A; four units of Music 450; 552A-552B; elect one course from Music 310, 351B, 351C, 351D.

## Music Major

### With the B.M. 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.

**Preparation for the Major.** Music 110A-110B, 110C-110D (may be waived in full or in part by examination), 158A-158B, 258A-258B; six units selected from courses numbered Music 170 through 189; four to eight units in Music 250. (26-34 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.** Thirty-eight to forty-two upper division units to include two units selected from Music 448A-448B or 449A-449B, 358A-358B, 552A-552B, six units selected from courses numbered 370 through 389, four to eight units in Music 450, and the requirements in one of the following fields of emphasis:

(a) **Performance.** Ten units to include Music 367, 497, and seven units to be selected with the aid of the departmental adviser. (Pianists, vocalists, and string performers must include Music 541 and 542.)

Students emphasizing 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.** Ten units to include four units of Music 499 and six units of courses to be selected with the aid of the departmental adviser from related fields such as history, etc.

During the senior year, the student emphasizing 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.** Ten units to include two units of Music 207, two units of Music 497, two units of Music 507, and four units selected with the aid of the departmental adviser.

The emphasis may not be formalized until completion of Music 158B, or waiver by examination.

The student emphasizing 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.

**Foreign Language Requirement.** Eight to twelve units (or 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. All others—two semesters of one foreign language chosen from French, German, or Italian (except that classical guitar students may substitute Spanish).

## Music Major

### For the Single Subject Teaching Credential

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

Students in teacher education may use this major for the A.B. degree in applied arts and sciences by completing additional departmental requirements in recital attendance and performance.

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; four units selected from courses numbered 320A through 335; 158A-158B; four units selected from courses numbered 170 through 189; 246; four units of Music 250; 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 355, 358A-358B; four units selected from courses numbered 369 through 389; 446A-446B; 448A or 449A; 448B or 449B; four units of 450; 552A-552B.

### Electives in Music

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 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.

### 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. Properly enrolled music majors who elect to study off campus with a teacher approved by the Department of Music may do so and may apply for credit by examination. Application for such credit must be made each semester in the Office of the Registrar within the official time limits for filing a change of program. The examination will consist of the regular jury examination required of all music majors at the conclusion of each semester.
3. 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.

4. 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.
5. 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.
6. At the end of each semester, the Department of Music will sponsor a jury examination to satisfy itself that its standards have been met.
7. 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 demonstrate vocal or instrumental performing ability and take the placement examination in comprehensive musicianship.

The minor in music consists of 24 units in music to include Music 110A-110B, 158A-158B, 258A-258B, and six units of upper division electives selected 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.

### 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.

#### 103A. Basic Aural Skills (1) I, II

Three hours of laboratory.

Prerequisite: Ability to read music.

Emphasis on ear-training and sight-singing. May be taken as preparation to enter Music 158A.

#### 103B. Aural Skills (1) I, II

Three hours of laboratory.

Prerequisite: Music 103A.

Continued emphasis on ear-training and sight-singing. May be taken as review for the Junior Level Aural Skills Examination.

#### 110A-110B. Piano—Elementary Class Instruction (1-1) I, II

Two hours.

Prerequisite: Music 110A is prerequisite to 110B.

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.

Prerequisite: Music 110B is prerequisite to 110C; and 110C to 110D.

Continuation of Music 110A-110B.

#### 115A. Voice—Elementary Class Instruction (1) I, II

Two hours.

Mastery of the fundamentals of voice. Not open to voice majors.

#### 115B. Voice—Elementary Class Instruction (1) I, II

Two hours.

Prerequisite: Music 115A.

Observation of individual or group lessons; critiques and discussion; performance in class.



**140. Guitar—Elementary Class Instruction (1) I, II**

Two hours.

Open to all persons interested in fundamentals of guitar and elementary music skills.

**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. Closed 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.

Prerequisite: Music 158A is prerequisite to 158B.

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) I, II**

Prerequisite: Music 158B.

Jazz harmony. Building a basic repertoire. Harmonic analysis of jazz standards.

**169. Recorder: Elementary Instruction (1) I, II**

Two hours.

Learning music fundamentals and music reading through recorder playing of soprano and alto instruments. Progresses from simple one note exercises through familiar folk songs into sight reading new material. Rhythm and intonation given special emphasis.

**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.

**175. Marching Band (1) I**

Concurrent registration in Music 175 and 176 required. Combined activity, six hours.

Prerequisite: Consent of instructor.

Maximum credit two units.

**176. Symphonic Band (1) I, II**

Semester I: Concurrent registration in Music 175 and 176 required. Combined activity, six hours. Semester II: Activity, five hours.

Prerequisite: Consent of instructor.

Maximum credit four units.

**177. Wind Ensemble (1) I, II**

Five hours.

Prerequisite: Consent of instructor.

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.

**188. University Chorus (1) I, II**

Three hours.

Open to all persons interested in performing oratorio, cantata, opera, and the extended choral works. No entrance auditions are required. Maximum credit four units.

**189. Jazz Ensemble (1) I, II**

Three hours.

Prerequisite: Consent of instructor.

Maximum credit four units.

**207. Composition Laboratory (1) II**

Three hours of laboratory.

Prerequisite: Consent of instructor.

Original writing in different homophonic and polyphonic forms for various media. Maximum credit two units.

**246. Practicum in Music (3) II**

Two lectures and two hours of activity.

Materials and techniques used in music instruction at the elementary and secondary school level, including instrumental, vocal, and general music, with field observation. (Formerly numbered Music 246A-246B.)

**250. 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 A.B. 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 250 is eight units.

A. Piano

B. Harpsichord

C. Organ

D. Voice

E. Flute

F. Oboe

G. Clarinet

H. Saxophone

I. Medieval or Renais. Instruments

J. Bassoon

K. French Horn

L. Trumpet

M. Trombone

N. Baritone Horn

O. Tuba

P. Percussion

Q. Violin

R. Viola

S. Cello

T. Contrabass

U. Harp

V. Classical Guitar

X. Classical Accordion

Y. Composition

Z. Non-Western Instruments

**258A-258B. Comprehensive Musicianship (5-5) I, II**

Four lectures and two hours of activity.

Prerequisite: Music 158B. Music 258A is prerequisite to 258B.

Continuation of Music 158A and 158B. Late 19th and 20th century harmony. Counterpoint and texture in Medieval and Renaissance styles.

**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.



**320A. Strings—Elementary Class Instruction (1) I, II**

Two hours.

Fundamentals of violin, viola, cello and string bass by lecture and acquisition of elementary skills.

**320B. Strings—Elementary Class Instruction (1) I, II**

Two hours.

Prerequisite: Music 320A.

Fundamentals of violin, viola, cello and string bass by lecture and acquisition of elementary skills emphasizing those instruments not previously studied in Music 320A.

**325A. Clarinet and Flute—Elementary Class Instruction (1) I, II**

Two hours.

Fundamentals of the clarinet and flute by lecture and acquisition of elementary skills.

**325B. Oboe and Bassoon—Elementary Class Instruction (1) I, II**

Two hours.

Fundamentals of oboe and bassoon by lecture and acquisition of elementary skills.

**330. Brass—Elementary Class Instruction (1) I, II**

Two hours.

Fundamentals of brass instruments by lecture and acquisition of elementary skills.

**335. Percussion—Elementary Class Instruction (1) I, II**

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.

**340. Guitar—Elementary Class Instruction (1) I, II**

Two hours.

Open to all persons interested in fundamentals of guitar and elementary music skills. Not open to students with credit in Music 140.

**343. Music Literature for Children (3) I, II Offered at Imperial Valley Campus only**

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) I, II**

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**

Functional music in society to include its psychological, physical and recreational uses; music as communication; the composer, the musician, and the audience.

**351. Great Music (3) I, II**

Significant music literature of the various historical periods with emphasis on the stylistic characteristics through directed listening.

A. Musical Masterpieces of the 18th and 19th Centuries.

B. Musical Masterpieces of the 20th 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.

**355. Ethnic Musics (3)**

World music outside the European art tradition with emphasis on the musics of India, Africa, East Asia and Indonesia.

**358A-358B. Comprehensive Musicianship (5-5) I, II**

Four lectures and two hours of activity.

Prerequisite: Music 258B. Music 358A is prerequisite to 358B.

Continuation of Music 258A-258B. Counterpoint from 18th to 20th century, serial techniques, jazz, electronic music. Individual projects in instrumentation, composition, analysis, non-Western musics.

**364A-364B. History of Jazz (2-2) I, II**

Jazz style and forms as they have evolved historically. Classroom playing experience in jazz styles as a part of study. Designed for music majors.

**366. Elements of Jazz II (2) I, II**

Prerequisite: Music 166.

Techniques and materials of jazz. Melodic, rhythmic, and harmonic analysis of jazz solos and compositions.

**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: Music 169.

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. (Formerly numbered Music 190 and 390.)

**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.

**375. Marching Band (1) I**

Concurrent registration in Music 375 and 376 required. Combined activity, six hours.

Prerequisite: Consent of instructor.

Maximum credit two units.

**376. Symphonic Band (1) I, II**

Semester I: Concurrent registration in 375 and 376 required. Combined activity, six hours.

Semester II: Five hours per week.

Prerequisite: Consent of instructor.

Maximum credit four units.

**377. Wind Ensemble (1) I, II**

Five hours.

Prerequisite: Consent of instructor.

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.

**388. University Chorus (1) I, II**

Three hours.

Open to all persons interested in performing oratorio, cantata, opera and the extended choral works. No entrance auditions are required. Maximum credit four units.

**389. Jazz Ensemble (1) I, II**

Three hours.

Prerequisite: Consent of instructor.

Maximum credit four units.



**440. Intermediate Guitar (1) I, II**

Two hours.

Prerequisites: Music 102 and 140.

Music reading, theory of chord structure, chord progressions, and playing styles of classical, jazz, folk and popular music.

**446. Practicum in Music (2) I, II**

One lecture and two hours of activity.

Advanced materials and techniques used in instruction, with field observation.

A. Choral Music

B. Instrumental Music

**448A-448B. Choral Conducting (1-1) I, II**

Three hours.

Prerequisite: Music 258B. Music 448A is prerequisite to 448B.

Elements of baton technique and development of basic skills common to choral conducting. Representative literature and techniques for choral organizations will be studied and performed. Practical experience in typical conducting situations will be emphasized in various grade levels.

**449A-449B. Instrumental Conducting (1-1) I, II**

Three hours.

Prerequisite: Music 258B. Music 449A is prerequisite to 449B.

Orchestra and band scores of graduated levels of advancement. The class will prepare and conduct instrumental works in public performance.

**450. 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; 15 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 A.B. 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 on the music major. Maximum credit for Music 450 is eight units.

A. Piano

B. Harpsichord

C. Organ

D. Voice

E. Flute

F. Oboe

G. Clarinet

H. Saxophone

I. Medieval or Renais. Instruments

J. Bassoon

K. French Horn

L. Trumpet

M. Trombone

N. Baritone Horn

O. Tuba

P. Percussion

Q. Violin

R. Viola

S. Cello

T. Contrabass

U. Harp

V. Classical Guitar

X. Classical Accordion

Y. Composition

Z. Non-Western Instruments

**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) I, II**

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 III (2) I, II**

Prerequisite: Music 366.

Style analysis of jazz solos. Techniques of improvisation. Analysis of repertoire. Not open to students with credit in Music 566.

**468. Stylistic Interpretation (2) I, II**

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) II**

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) II**

Three hours of laboratory.

Prerequisites: Music 207 and consent of instructor.

Continuation of Music 207. Maximum credit two units.

**510. Advanced Electronic Music (3) I, II**

Two lectures and three hours of laboratory.

Prerequisite: Music 310.

Complex waveform generation, remote voltage control generation, and historic aspects of electronic music.

**541. Performance Studies Pedagogy (3) I, II**

Two lectures and three hours of laboratory.

Prerequisite: Consent of instructor.

Teaching beginning and intermediate applied music. Survey and evaluation of teaching materials. Observation of individual or group lessons.

A. Piano

B. Strings

C. Voice

**542. Performance Studies Laboratory (2) I, II**

One lecture and three hours of laboratory.

Prerequisite: Music 541A is prerequisite to 542A and 541B is prerequisite to 542B.

Practical experience in the teaching of individual or group lessons.

A. Piano

B. Strings

C. Voice

**552A-552B. History of Music (3-3) I, II**

Prerequisite: Music 358B. Music 552A is prerequisite to 552B.

The chronological development of musical art and forms from the Middle Ages to the present. Analytical score study and assigned recordings. Familiarity with musicological resources through individual assignments.

**553. Proseminar in Ethnomusicology (3) I**

Prerequisite: Music 258B.

Ethnomusicological theory and methodology, including history of the field and its relation to such disciplines as anthropology and linguistics. Areas of concentration include organology, field work, notation, transcription and analysis.



**554. Music Literature (2) I, II**

Prerequisite: Music 258B.

A concentrated study of the literature in the several areas listed. Analysis by use of scores and of recordings, when available.

A. Chamber Music Literature – (See Class Schedule for specific content.)

B. Symphonic Literature – (See Class Schedule for specific content.)

C. Keyboard Literature

D. Song Literature

**561. Area Studies: Ethnomusicology (3) I, II**

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) I, II**

Prerequisite: Music 466.

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.

**580. Analogs in Music, Art, and Literature (3) I**

Prerequisite: At least one survey course in music history or appreciation, art history, or comparative literature.

Cross-influences and correspondences in the arts from the standpoints of style, texture, rhythm, and form.

**596. Special Topics in Music (1-3)**

A specialized study of selected topics from the several areas of music. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

### GRADUATE COURSES

Refer to the Graduate Bulletin.

## Natural Science

### In the College of Sciences

#### Faculty

Emeritus: Merzbacher, Shull

Chair: Ingmanson

Professors: Dessel, Dowler, Ingmanson, Metzger, Phleger

Associate Professors: Feher, May, Springer, Wallace

Assistant Professor: Thompson

Lecturer: Hood

Adjunct Faculty: Hardy, Traganza

#### Offered by the Department

Teaching major in the physical sciences for the single subject teaching credential.

Minor in history of science and technology.

## Physical Science Major

### For the Single Subject Teaching Credential

All candidates for a teaching credential must complete all requirements outlined in this section of the catalog under the College of Education.

This major may be used by students in teacher education as an undergraduate major for the A.B. 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, 231, 237, 251 or 250; Geological Sciences 100; Mathematics 107, 150, 151, 152; Physics 195, 195L, 196, 196L, 197, 197L. (54 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 31 upper division units to include Chemistry 410A, 410B; Mathematics 340A, 340B; Natural Science 500 and 315 or 316 or 317; Physics 354A, 354B; and six units of upper division electives.

## 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 History 484, 485; Astronomy 305; Biology 365; Mathematics 303; Natural Science 314, 317; 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.

### 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 or 210A. (Formerly numbered Natural Science 102A.)

#### 103. Laboratory Exercises in Physical Science (2) I, II

One lecture and three hours of laboratory.

Prerequisite: Credit or concurrent registration in a course in a physical science.

Nature of scientific inquiry as illustrated by laboratory exercises and demonstrations based on experimental methods of physical sciences.



**110A-110B. Energy in Nature with Laboratory (4-4)**

Three lectures and three hours of laboratory.

An integrated introduction to the natural sciences at the university level. 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.

**210A-210B. Structure and Concepts of Physical Science (4-4) I, II**

Three lectures and three hours of laboratory.

Emphasis on processes of inquiry which are characteristic of physical science. Approach is suited for people interested in science instruction at the elementary level. Not open to students with credit or concurrent registration in Natural Science 100 or 102.

**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. Modern Physical Science (3) I, II**

Prerequisite: A college-level course in the physical sciences or life 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.

**311. Readings in Physical Science (3) I, II**

Prerequisite: Upper division standing and completion of lower division science requirement.

Reading of selected materials with informal class discussion of topics. Emphasis on the historical background, the philosophical implications and the impact of science on thought and culture.

**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 Foundations requirement in natural science and three units in classics history category of Foundations. Recommended: Astronomy 101.

The growth and development of science from antiquity to the 15th 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 Foundations requirement in natural science and three units in classics history category of Foundations. Recommended: Astronomy 101 and a course in chemistry.

The major developments during the 16th through 19th centuries: 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: Six units from astronomy, chemistry, geological sciences, natural science, or physics. 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 Foundations of Learning requirement in natural science. 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 mathematics competency requirement or Academic Skills 102.

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 general education requirements in natural science.

Investigation of processes of inquiry and rational thinking skills characteristic of the sciences.

A. Physical Sciences

B. Earth Sciences (mostly chemistry and astronomy)

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) I, II**

Prerequisite: Completion of general education requirements in natural science. Recommended: A course in chemistry or Natural Science 102.

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.

**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 six units.

### GRADUATE COURSES Refer to the Graduate Bulletin.



## Naval Science

In the College of Professional Studies and Fine Arts

### Faculty

Chair: O'Keefe

Professor: O'Keefe

Assistant Professors: Berg, Cuddy, Dobson, Meader, Mendez, Schartmann, Stier, Tollefson

### Offered by the Department

NROTC curriculum.

### 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.

### 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 (2) II

Prerequisite: Naval Science 201.

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 U.S. and Soviet strategies.

### UPPER DIVISION COURSES

(Intended for Undergraduates)

#### 301. Navigation and Naval Operations I (3) I

Prerequisite: Advanced standing.

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

Prerequisite: Advanced standing.

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

Prerequisite: Advanced standing.

Principles of leadership and management. Development of skills in the areas of communications, counseling, control, direction, management and leadership.

#### 402. Naval Leadership II (2) II

Prerequisite: Naval Science 401.

Human resource management, naval personnel management, material management and the administration of discipline.

#### 410. Amphibious Operations (3) I

Prerequisite: Advanced standing.

Concept of amphibious warfare, doctrinal origins, and its evolution as an element of naval policy during the twentieth century.



## Nursing

### In the College of Human Services

Agency Member of the National League for Nursing  
Agency Member of the American Association of Colleges of Nursing

Accredited by the California Board of Registered Nursing  
and by the National League for Nursing

#### Faculty

Emeritus: Coveny, Laiho, Moses, Nye, Thomas  
Director (Acting): Flagg  
Professors: Black, Salerno, Wozniak  
Associate Professors: Flagg, Freitas, Gulino, Heineken, Hines, Loveridge, Mechanic, Reed, Standeven, Sweeney, Verderber  
Assistant Professors: La Monica, Leslie, Moffett, Shively  
Lecturers: Borgie, Bormann, Broom, Carson, Colwell, Fraser, Georges, Gilbert, Goldberger, Good, Holm, Jordan, Lischke, Meador, Mitchell, Palomo, Rapps, Schreiber, Small-Capistrano, Smith, Wallace

#### 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.

## Standards for Admission

### Admission to the University

In addition to the requirements for admission to the University as listed in the section of this catalog on "Graduation Requirements," the following criteria must be met for admission to the University as a nursing major:

- 1. High School Course Requirements.** The following courses are required:
  - a. One year English composition at junior/senior level.
  - b. One year advanced algebra.
  - c. One year chemistry with a laboratory.
  - d. One year biology.
- 2. Transfer Students.** Transfer students will be required to demonstrate the four high school course requirements or introductory college or university course work in the same disciplines.

First-time freshman and transfer student applicants requesting a nursing major will be ranked and evaluated on the basis of performance in required high school courses or introductory college or university course work in the same disciplines. Points will be granted each applicant up to a maximum of 16 with grades of A (4) or B (3). Those applicants who select nursing as a major and meet the high school requirements will be given priority for enrollment and advisement as nursing majors. First-time freshman and transfer student applicants accepted as nursing majors are subject to further screening to determine their eligibility to be admitted into the professional course work.

### Admission to the Professional Program in Nursing

- 1. Declaration of Major.** Only students who are declared nursing majors at SDSU will have their application considered.
- 2. Prerequisite Courses.** The following courses and course grades are required for admission to the nursing program:
  - a. Course grade requirement (C or better) in each required university course:
    - Biology 210
    - Chemistry 130
    - Psychology 101

Sociology 101

- b. Course grade requirement (B or better) in each of these required university courses:
  - Biology 150 and 261

- 3. Minimum Grade Point Average** Applicants must complete the six prerequisite courses with a minimum overall grade point average of 2.5. (NOTE: The minimum grade point average of the last three nursing classes admitted to Nursing has been 3.2 or better.)
- 4. Writing Competency Requirement.** All students must demonstrate their writing competence on one of the following tests:

- a. By a score of 47 on the Test of Standard Written English of the Scholastic Aptitude Test
- b. By a score of 20 on the American College Tests
- c. By a score of 153 on the English Placement Test

Students who have not achieved the minimum score on the writing competency test must register in Academic Skills 110 and/or 150 prior to admission to the nursing program.

- 5. Additional Point System.** Applicants requesting admission to the professional course work 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. 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 medical 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. Formal Application.** Application to the nursing program must be made during the semester that the student is completing prerequisite non-nursing courses (22 units). Obtain application form at the College of Human Services or School of Nursing. Consult School of Nursing for deadline date.

## Special Instructions

- 1. Change of Major.** Requests for change of major during the 1984-85 academic year will be granted only on a space available basis. Students must be admitted to the University as declared nursing majors.
- 2. Full-Time Study.** Students enrolled in the nursing program are required to carry a full-time study load. Students with extenuating circumstances may petition the Student Affairs Committee for special consideration.
- 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 "Locally and Statewide 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.



## Nursing Major

### With the B.S. 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.

Nursing majors are eligible to take the State Board Registered Nurse license examination after completing six semesters of the prescribed curriculum. Graduates are eligible to apply for the California Certificate of Public Health Nursing.

Nursing majors are advised to consult with the School of Nursing office on a semester basis for program modification or policy revisions.

**Preparation for the Major.** Upon acceptance into the program, Nursing 202, 204, 250, 252; Chemistry 160; three units in statistics; and three units in growth and development must be successfully completed before continuation in the upper division courses required for the major.

**NOTE:** A grade of C (2.0) or better is required in all nursing or corequisite courses. No nursing course may be repeated more than once.

Progress in the nursing program is dependent upon completion of corequisite and nursing courses in the prescribed sequence as outlined below. While corequisite courses may be completed prior to the specified semester, students will not be permitted to progress to the next semester until both corequisite and nursing courses are completed at each semester.

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 304W with a grade of C (2.0) or better.

**Major.** A minimum of 45 upper division units in nursing to include Nursing 306, 308, 310, 350, 354, 356, 412, 414; and 452 or 454.

### 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	Growth and Development.....	3
+ American Institutions.....	3	Nursing 250.....	4
Nursing 202.....	5	Nursing 252.....	5
Nursing 204.....	3	General Education.....	3
G.E. (Statistics).....	3		
	17		15
Third Year			
First Semester	Units	Second Semester	Units
Nursing 306.....	3	Nursing 350.....	3
Nursing 308.....	6	Nursing 354.....	6
Nursing 310.....	6	Nursing 356.....	6
Psychology 351.....	3		
	18		15
Fourth Year			
First Semester	Units	Second Semester	Units
Nursing 412.....	5	Nursing 452 or 454.....	5
Nursing 414.....	5	General Education.....	3
General Education.....	3	+ American Institutions.....	3
Specified Elective.....	3		
	16		14

+ May be satisfied 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 of Learning: 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., 2., 3., 4. from the Humanities section 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 three units from Humanities. At least nine of the twelve units must be upper division and three must be cross-cultural. Refer to General Education requirements in the Graduation Requirements section of the catalog.

### Health Services Credential

San Diego State University offers curricula leading to the Health Services Credential. This authorizes the holder to serve as a School Nurse. For information concerning the credential, the student is referred to the School of Nursing Office, SS-101.

The Health Services Credential has been approved by the Commission on Teacher Credentialing.

All applicants seeking admission to the Health Services Credential *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 advisement *required* with School of Nursing Graduate Adviser.

#### Program

The following program elements are required of all health services credential candidates: (31 units.) In addition, Nursing 412 is a prerequisite for the program.

	Units
NURS 500 Client Assessment .....	4
NURS 502 School Nursing Management Practices .....	3
NURS 504 Primary Health Care of the School-Aged Child .....	3
NURS 504L Primary Health Care of School-Aged Child Practicum .....(180 hours)	3
HS 574 Habit-forming Substances .....	3
*HS 575 Sex Education .....	3
*PH 601 Epidemiology .....	3
C DIS 540 Hearing Conservation and Audiometry for School Nurses .....	3
SPED 500 Exceptional Individuals .....	6
Electives: Three units selected from Nursing 630, 637, 638, 639; Health Science 520, 552; Public Health 621, 661, 753; Social Work 550; Special Education 505.	

\* Prerequisites waived for students in this program.



### LOWER DIVISION COURSES

#### 202. Nursing Science I (5) I, II

Three lectures and six hours of laboratory.

Prerequisites: Admission to the nursing program. Satisfactory completion or concurrent registration in Chemistry 160 and concurrent registration in Nursing 204.

Analysis of the nursing process and the role of the professional nurse in utilization of this process. Emphasis on determining and measuring variables relevant to assessment.

#### 204. Nurse-Client Relationships (3) I, II

Study of nurse-client communication and its application to the clinical practice of nursing. Emphasis on development of each student's ability to communicate in collaborative health team efforts and in patient care situations.

#### 250. Nursing Science II (4) I, II

Two lectures and six hours of laboratory.

Prerequisites: Nursing 202, 204; 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.

#### 252. Stress in the Health Continuum (5) I, II

Three lectures and six hours of laboratory.

Prerequisite: Concurrent registration in Nursing 250.

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.

### UPPER DIVISION COURSES

(Intended for Undergraduates)

#### 300. Honors Course (2-2) I, II

Prerequisites: Nursing 350, 354 and 356, concurrent registration in Nursing 412 and 414. Cumulative overall G.P.A. of 3.5.

Current issues and trends in the nursing profession will be studied in depth, with emphasis on ethics, values, philosophy and history.

#### 306. Nursing Science III (3) I, II

Prerequisites: Nursing 250, 252; concurrent registration in Nursing 308, 310 and Psychology 351.

Analysis of the implementation of quality client care and rights with emphasis on cultural variations. Exploration of professional, ethical, and legal aspects of nursing practice.

#### 308. Adult Health Nursing (6) I, II

Three lectures and nine hours of laboratory.

Prerequisites: Nursing 250, 252; concurrent registration in Nursing 306, 310 and Psychology 351.

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.

#### 310. Psychosocial Nursing (6) I, II

Three lectures and nine hours of laboratory.

Prerequisites: Concurrent registration in Nursing 306, 308 and Psychology 351.

Theory and clinical laboratory in the application of the nursing process to the 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.

#### 320. Health and the Nature of Stress (3) I, II

Interdisciplinary focus on health; psychosocial and physiological stressors affecting health status. Concepts of stress theory with attention to developmental and situational stressors commonly experienced in modern society. People's adaptive and maladaptive responses from birth through senescence and death.

#### 335. The Professional Role (3) Irregular

Development of the nursing profession in Western Civilization. Focus on the multifaceted role of the professional nurse in modern social order.

#### 343. Health Care of the Aged (3)

Prerequisite: Open to Nursing and non-nursing majors.

Assessment of the mental and physical health care needs of the aged client and principles of gerontology.

#### 343L. Health Care of the Aged Laboratory (2)

Six hours of laboratory.

Prerequisites: Credit or concurrent registration in Nursing 343 and consent of instructor.

Open to students with clinical background in nursing or a related health discipline.

#### 350. Nursing Science IV (3) I, II

Prerequisites: Nursing 306, 308 and 310; concurrent registration in Nursing 354 and 356.

Analysis of evaluation phase of nursing process as a form of documentation of qualitative care. Emphasis on development of critical elements, criteria, and conclusions in effecting objective evaluation of client care.

#### 354. Maternal-Neonatal Nursing (6) I, II

Three lectures and nine hours of laboratory.

Prerequisites: Concurrent registration in Nursing 350 and 356.

A 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. Child Health Nursing (6) I, II

Three lectures and nine hours of laboratory.

Prerequisites: Concurrent registration in Nursing 350 and 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.

#### 412. Health Care Systems and Methods (5) I, II

Three lectures and six hours of laboratory.

Prerequisites: Nursing 350, 354 and 356; concurrent registration in Nursing 414.

Theories and functions of nursing management within health care delivery systems. Role and function of nurse managers as they manage personnel and clients.

#### 414. Community Health Nursing (5) I, II

Three lectures and six hours of laboratory.

Prerequisite: Concurrent registration in Nursing 412.

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.

#### 452. Clinical Nursing in Complex Situations (5) I, II

Three lectures and six hours of laboratory.

Prerequisites: Nursing 412, 414; concurrent registration in Nursing 453.

Theory and selected laboratory experience in the care of clients with complex health problems requiring intensive nursing care. Consideration will be given to student's preference for specific clinical area of concentration.

#### 453. Basic EKG Monitoring (1) I, II

Prerequisite recommended: Concurrent registration in Nursing 452.

Basic electrophysiological and interpretive concepts necessary for identification and management of supraventricular and ventricular rhythms.



**454. Ambulatory Nursing in Complex Situations (5) I, II**

Three lectures and six hours of laboratory.

Prerequisites: Nursing 412, 414.

Theory and selected laboratory experience in the care of ambulatory clients requiring specific or complex nursing care. Consideration will be given to the student's clinical area of concentration.

**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. Client Assessment (4)**

Three lectures and three hours of laboratory.

Prerequisite: Permission of graduate adviser.

Physical diagnosis and psychosocial assessment of clients with health problems. Nursing process emphasis to include biopsychosocial health history and nursing diagnosis.

**502. School Nursing Management Practices (3) II**

Prerequisite: Nursing 412.

Professional and organizational systems and structures which influence health care practices of the school nurse. Health services administration; legal responsibility; role and function of the school nurse in the school, home, and community. Current practices in school health setting. (Formerly numbered Nursing 480.)

**504. Primary Health Care of the School-Aged Child (3) I**

Prerequisite: Nursing 500.

Primary health care of the school-aged child and adolescent. Major health problems, chronic illnesses, communicable diseases, traumatic injuries, learning and behavior disorders. (Formerly numbered Nursing 481A.)

**504L. Primary Health Care of School-Aged Child Practicum (3) II**

Twelve hours of practicum.

Prerequisite: Nursing 504.

Application of theory to a select population of school-aged children and adolescents. Provides direct experience in clinical nursing management of common health problems and developmental disabilities. (Formerly numbered Nursing 481B.)

**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 six units. Maximum credit three units applicable to a master's degree.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**Oceanography**

Administered by the Dean of the College of Sciences

San Diego State University provides preparation for work in the oceans by offering degree programs in fundamental fields, supplemented by marine-related course work and oceanographic experience. A minor in oceanography is offered for undergraduate science students through the Department of Geological Sciences. Ocean-oriented courses and bachelor's degree programs are available in the departments of Biology, Chemistry, Civil and Mechanical Engineering, Geography, Geological Sciences, Natural Science, and Physics. Master's degrees with emphasis on marine problems may be earned in these departments. The Ph.D. degree is offered in Chemistry, Ecology and Genetics jointly with the University of California. Students who require advising in Oceanography should inquire at the Center for Marine Studies.

**Marine Studies**

Marine studies at San Diego State University are offered by departments in the sciences, engineering, economics, geography, and other fields. The Center for Marine Studies coordinates work in the area of marine studies and provides special supporting services to the faculty, staff, and students involved. Services provided by the Center include advising students concerning marine studies and employment opportunities, assistance in research and publication, operation of the University's marine laboratory at Mission Bay, a boat operations program, and support of the University's Diving Safety Program.

Degrees in oceanography or marine studies are not offered by the University. Instead, students emphasize marine studies within the traditional departmental degree programs through advanced, marine-related course work and research. Courses in general oceanography are offered with the cooperation of faculty from the departments of Geological Sciences, Natural Science, Biology, and Chemistry. Advanced course work and research in geological and physical oceanography are conducted in the Geological Sciences Department. An option and physical geology is offered as part of the undergraduate major in geology. 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 course work 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 Center for Marine Studies.

**UPPER DIVISION COURSES**

(Intended for Undergraduates)

**320. The Oceans (3) I, II**

Prerequisites: One introductory college course in a life science and one in a physical science.

Biological and physical aspects of the oceans and their significance to man; problems of modern oceanography.

**320L. Oceanography Laboratory (1) I, II**

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Oceanography 320.

Laboratory elective to accompany Oceanography 320. Laboratory and field methods of study in the major areas of oceanography.

**400. Practical Oceanography (6) I, II Cr/NC**

Laboratory, field work, or on-the-job training by arrangement.

Prerequisites: Chemistry 200, 201; Physics 180A-180B and 182A-182B; a course in intermediate college algebra and an elementary course in statistics. Recommended: a course in analytical chemistry (Chemistry 250 or 251).

Practical experience in oceanography at shore installations and at sea. An intensive full-time program in the laboratory and field aspects of the marine sciences. Offered only when ship scheduling permits. Enrollment only by application; students will be notified of selection by the tenth week of the semester preceding the desired interval because of ship berth limitations. Students will normally participate on extended cruises at sea and are advised not to enroll for other courses nor to make employment commitments during the semester.



**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 Oceanography see:**

Biology 513. Marine Microbiology  
Biology 515. Marine Invertebrate Zoology  
Biology 517. Biological Oceanography  
Chemistry 501. Chemical Oceanography  
Geological Sciences 540. Marine Geology  
Geological Sciences 545. Descriptive Physical Oceanography  
Geological Sciences 548. Coastal and Estuarine Physical Oceanography

## Oriental Languages

Refer to sections on Chinese, Hebrew, Japanese.

## Philosophy

### In the College of Arts and Letters

**Faculty**

Emeritus: Lauer, Nelson, O'Reilly, Ruja, Shields  
Chair: Howard  
Professors: Carella, Feenberg, Friedman, Howard, McClurg, Rosenstein, Snyder, Warren, Weissman  
Associate Professors: Gregor, Troxell, Weston  
Assistant Professor: Chaffin  
Lecturers: Freeman, Wawrytko

**Offered by the Department**

Master of Arts degree in philosophy.  
Major in philosophy with the A.B. degree in liberal arts and sciences.  
Minor in philosophy.

**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 A.B. 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.

**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 English 500W, or History 396W with a grade of C (2.0) or better.

**Major.** A minimum of 27 upper division units in philosophy (18 of which must be in 500-numbered courses) to include 301 and 303. The remaining units for the major distributed as follows:

- a. Three units from among 502, 504, 505.
- b. Three units, either 506 or 507.
- c. Three units from among 523, 525, 537.
- d. Three units from among 512, 527, 528.
- e. Three units from among 521, 522, 531.
- f. Three units from among 532, 541, 542.
- g. Three units of electives in any 500-numbered course.

**Philosophy Minor**

The minor in philosophy consists of a minimum of 15 units in philosophy, 12 units of which must be in upper division courses. At least six units must be in one of the following groups:

**History:** Philosophy 301, 303, 336, 502, 504, 506, 507, 508, 509, 532 and 564.

**Values:** Philosophy 329, 334, 510, 512, 527, 528, 533, 535, 541 and 542.

**Knowledge and Reality:** Philosophy 521, 522, 523, 525, 531, 537, 575 and 596.

Philosophy 301 is 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.



## LOWER DIVISION COURSES

**101. Introduction to Philosophy: Values (3) I, II**

Introduction to philosophical inquiry, with emphasis on problems of value. Each student is encouraged to think independently and formulate his 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. Each student is encouraged to think independently and formulate his 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**

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)

**300. Honors Course (1-3)**

Refer to Honors Program.

**301. History of Philosophy I (3) I, II**

Prerequisite: Three units of philosophy.  
Thales through Marcus Aurelius.

**303. History of Philosophy III (3)**

Prerequisite: Six units of philosophy.  
Nicholas of Cusa through Kant.

**310. Philosophy and Human Nature (3)**

Concept of human nature. Descriptive and normative aspects of major theories of human nature.

**329. Social Ethics (3)**

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)**

Value judgments upon which medicine is based and the ethical issues which medicine faces.

**334. Philosophy of Literature (3)**

Study of literature of philosophical significance, and of philosophical problems of literature.

**336. Jewish Philosophy (3)**

Prerequisite: Three units of philosophy.

Outstanding men and movements, e.g., Biblical ethics and law, Philo of Alexandria, the rabbinical tradition, the Kabbala, Moses ben Maimon, Moses Mendelssohn and Martin Buber.

**351. Chinese Philosophy (3)**

Philosophical traditions which have shaped the intellectual life and culture of China. Emphasis on foundational texts surviving from pre-Han China.

**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: Twelve upper division units in philosophy and consent of instructor.  
Individual study. Maximum credit six units.

## UPPER DIVISION COURSES

(Also Acceptable for Advanced Degrees)

**502. History of Philosophy II (3)**

Prerequisite: Philosophy 301.  
Plotinus through William of Occam.

**504. Continental Philosophy After Kant (3)**

Prerequisite: Six units of philosophy.  
Major figures and movements in European philosophy from Hegel to Nietzsche.

**505. British Philosophy After Hume (3)**

Prerequisite: Six units of philosophy.  
British philosophy from the late eighteenth century to World War I.

**506. Twentieth Century Continental Philosophy (3)**

Prerequisite: Six units of philosophy.  
Major figures and movements in European philosophy from Husserl to the present.

**507. Twentieth Century Anglo-American Philosophy (3)**

Prerequisite: Six units of philosophy.  
Major figures and movements in Anglo-American philosophy since World War I.

**508. Existentialism (3)**

Prerequisite: Six units of philosophy.  
The philosophical aspects of Existentialism. Major emphasis is on the diversity of thought within a common approach as this is shown in individual thinkers.

**509. Ordinary Language Analysis (3)**

Prerequisite: Six units of philosophy.  
Foundations of linguistic philosophy with emphasis on achieving an awareness of the relationship between thinking and language.

**510. Philosophy of Law (3)**

Prerequisites: Three units of philosophy and three units of political science.  
The nature of law and the logic of legal reasoning. An exploration of certain key legal concepts such as causation, responsibility, personality and property.

**512. Political Philosophy (3)**

Prerequisite: Philosophy 101, 102 or 103.  
Selected aspects of the political structures within which we live, such as law, power, sovereignty, justice, liberty, welfare.

**521. Deductive Logic (3)**

Prerequisite: Philosophy 120.  
Principles of inference for symbolic deductive systems; connectives, quantifiers, relations and sets. Interpretations of deductive systems in mathematics, science and ordinary language. Not open to students with credit in Mathematics 523.

**522. Inductive Logic (3)**

Prerequisite: Philosophy 120.  
Definition, classification and division. The logic of experimentation and statistics. Formation and validation of hypotheses. Probability theories.

**523. Theory of Knowledge (3)**

Prerequisite: Six units of philosophy.  
The major theories of human knowledge: mysticism, rationalism, empiricism, pragmatism.

**525. Metaphysics (3)**

Prerequisite: Six units of philosophy.  
Prominent theories of reality, e.g., realism and nominalism, materialism and idealism, teleology and determinism.

**527. Values and Social Science (3)**

Prerequisite: Six units of philosophy.  
Analysis and discussion of the nature of values and value-judgment with particular reference to the social sciences. Among relevant issues: the naturalistic fallacy, facts and values; authoritarianism, emotivism, objective relativism; the individual and the community.



**528. Theory of Ethics (3)**

Prerequisite: Six units of philosophy.

Significant and typical value theories and systems and the concrete problems such theories seek to explain. Emphasis will be on moral values.

**531. Philosophy of Language (3)**

Prerequisite: Six units of philosophy.

An introduction to theories of meaning for natural languages and formal systems; concepts of truth, synonymy and analyticity; related epistemological and ontological problems.

**532. Philosophy of History (3)**

Prerequisite: Six units of philosophy.

The nature of history and historical inquiry. As metaphysics: A study of theories of historical development. As methodology: History as science, truth and fact in history, historical objectivity, the purpose of history.

**533. Philosophy of Education (3)**

Prerequisite: Philosophy 101, 102 or 103.

Various philosophical viewpoints concerning education. The functions of education as conceived by major figures in the Western philosophical tradition.

**535. Philosophy of Religion (3)**

Prerequisite: Six units of philosophy.

Philosophical examination of issues raised by the religious impulse in man.

**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 of philosophy.

The basic concepts and methods underlying contemporary scientific thought. Contributions of the special sciences to a view of the universe as a whole.

**541. History of Aesthetics (3)**

Prerequisite: Philosophy 101, 102 or 103.

Major documents in the history of aesthetics.

**542. Philosophy of Art (3)**

Prerequisite: Six units of philosophy.

The nature of aesthetic experience. Principal contemporary theories of art in relation to actual artistic production and to the function of art in society.

**564. American Philosophy (3)**

Prerequisite: Six units of philosophy.

American philosophy from 1850 to the 1920s: idealism, pragmatism, new and critical realism.

**575. A Major Philosopher (3)**

Prerequisite: Six units of 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 on a master's degree.

**596. Selected Topics (3)**

Prerequisite: Six units of philosophy.

A critical analysis of a major problem or movement in philosophy. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable toward the major in philosophy. Maximum credit six units for both 596 and 795 applicable to a master's degree. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

**GRADUATE COURSES**  
Refer to the Graduate Bulletin.

**Physical Education**

In the College of Professional Studies and Fine Arts

**Faculty**

Emeritus: Andrus, Benton, Broadbent, Cave, Friedman, Kasch, Landis, Lockman, Murphy, Olsen, A., Schutte, Schwob, Scott, Sportsman, Terry, Tollefsen, Wilhelm, Williamson, Ziegenfuss  
Chair: Carlson

Professors: Aufesser, Carlson, Carter, Cullen, Fox, Grawunder, Olsen, L., Phillips, Selder, Sucec

Associate Professors: Barone, Francis, Franz, Hempel, King, McKenzie, Nunn, Simmons, Wells, Willis

Assistant Professors: Buono, Gutowski, Mechikoff, Quinn, Sandback, Smith, Wallace, Whitby

Lecturers: Lasko, Verity

**Offered by the Department**

Master of Arts degree in physical education.

Major in physical education with the A.B. degree in liberal arts and sciences.

Major in physical education with the A.B. degree in applied arts and sciences.

Emphasis in athletic training.

Emphasis in dance.

Teaching major in physical education for the single subject teaching credential.

Adapted physical education credential.

Minor in dance.

Minor in physical education.

**Physical Education Major****With the A.B. Degree in Liberal Arts and Sciences**

All candidates for a degree in liberal arts and sciences must complete the requirements listed in the section of this catalog on "Graduation Requirements."

**Preparation for the Major.** Biology 150, 336; Physical Education 276; 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 304W or 305W 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 371, 376A, 385, 476, 560, 561, 570, and 12 units selected with the approval of the adviser.

**Physical Education Major****With the A.B. Degree in Applied Arts and Sciences**

All candidates for a degree in applied arts and sciences must complete the requirements listed in the section of this catalog on "Graduation Requirements."

**Emphasis in Athletic Training**

Purpose of the emphasis is to prepare students to meet the academic requirements necessary for a career in athletic training and to meet degree requirements for National Certification in athletic training. Students wishing to meet *all* requirements for National Certification by the National Trainers Association must also complete a minimum of two years' clinical internship under the direct supervision of a certified athletic trainer. Students interested in completing this requirement at San Diego State must make application for clinical internship to the athletic medical section of the San Diego State Physical Education Department. Selection is competitive and limited in number. Applications are accepted in Spring for Fall selections.



**Preparation for the Major.** Physical Education 265, 276; Biology 100, 100L, 150; Chemistry 100, 130; Family Studies and Consumer Sciences 204; Psychology 101. (25 units.) Recommended: Physics 107.

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 304W or 305W with a grade of C (2.0) or better.

**Major.** A minimum of 37 upper division units to include Physical Education 361, 362, 368, (2 units), 371, 376A, 385, 560, 561, 563, 564, 565, 567, 570; Biology 336. Recommended: Health Science 301, 574, 575.

This emphasis does not meet the teaching credential requirements.

#### Emphasis in Dance

**Preparation for the Major.** Biology 150, 336; Physical Education 132A, 133A-133B, 134A-134B, 135A-135B, 136A-136B, 153, 154; Psychology 101; and six units selected from the areas of art, drama, and music with the approval of the adviser in dance. (29 units.)

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 304W or 305W with a grade of C (2.0) or better.

**Major.** A minimum of 43 upper division units to include Physical Education 376B, 385, 450, 451, 452, 453, 454, 455, 550, 551, 552, 553, 557, 560, 561, 570; and four units selected from Physical Education 341B, 346D, 346F, 456. In addition to course requirements, the student must be a member of the Choreographer's Ensemble and participate in a minimum of three semesters of dance programs. Substitution for such participation will require approval of the Dance Committee. This emphasis does not meet the teaching credential requirements. Physical Education 398 (3 units), Supervised Field Experience (in an advanced dance area), may be substituted for Physical Education 453.

### Physical Education Major

#### For the Single Subject Teaching Credential

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

This major may be used by students as an undergraduate major for the A.B. degree in applied arts and sciences.

#### Elementary/Secondary

**Preparation for the Major.** Biology 150, 336; Physical Education 190, 265, 276; Psychology 101. (16 units.)

**Upper Division Writing Requirement.** Passing the University Writing Examination or English 304W or 305W with a grade of C (2.0) or better.

**Major.** A minimum of 41 upper division units to include Physical Education 340, 347, 361, 371, 376A, 380, 385, 560, 561, 568, 570; two units from team sports (346A, 346K); two units from individual sports (346B, 346G, 346H, 346I); and six units from Physical Education 322, 331, 341 or 346.

### Adapted Physical Education Credential

#### 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 371, 560, 561, 567, 568 and at least two units of Physical Education 368, 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 course work.

1. Adapted Program: Minimum 15 units. Physical Education 567, 568, 667, 672, 398\* (1 unit), and Special Education 501.
2. Practical Experience and Student Teaching: The candidate must complete four units of Physical Education 368 and a full-time student teaching experience in adapted physical education.

\* Approved by Coordinator, 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 course work.

1. Adapted Program: Minimum of 15 units. Physical Education 567, 568, 667, 672, 683 and 398\* (1 unit).
2. Practical Experience and Student Teaching: The candidate must complete four units of Physical Education 368 and a full-time student teaching experience in adapted physical education or equivalent experience.

\* Approved by Coordinator, Adapted Physical Education.

### Dance Minor

The minor in dance consists of a minimum of 24 units in physical education to include Biology 150, Physical Education 134A, 134B, 136A, 136B, 153, 154, 450, 451, 454\*, 455, 550\*, 551.

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.

\* Prerequisites waived for students in minor.

### Physical Education Minor

**Sport Skills and Coaching Area:** A minimum of 20 units to include Psychology 101; Physical Education 265\*, 276, 346-I, 570; four units selected from the Physical Education 331 series; two units of Physical Education 398; and two units selected from Physical Education 346A, 346B, or 361.

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.

\* Additional prerequisites required.

### Exercise Leadership Certificate

This program is designed to prepare individuals interested in working in preventive and rehabilitative exercise programs for the certifications of (1) Exercise Technologist, (2) Fitness Instructor, and (3) Exercise Specialist which are awarded by the American College of Sports Medicine (ACSM).

Prerequisites for the program are an undergraduate degree in any major and previous work in physical activity programs. All prerequisites to certificate program courses are required. Applications should be made to the director of the certificate program.

Thirty units are required to include Biology 590, Physical Education 562, 663, 666, 668, 669, 796 (6 units with SDSU Adult Fitness Program), and 798 (6 units). With the approval of the graduate adviser, the units may be applied to a graduate degree program in physical education.

Recommendations for application to the American College of Sports Medicine for ACSM certification will be made based on completion of course work with a GPA of 3.0 or better and fulfilling basic requirements for specific certification set by ACSM.



## Types of Activity Courses

Adapted physical education classes to care for special needs are offered. The content of these courses is planned to give each student an opportunity to participate in many activities of carry-over value, developmental nature and recreational interest. An opportunity is afforded students to participate in competitive sports in the extramural and intramural programs.

### 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)

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.

#### 102A-102B. Conditioning (1-1)

#### 103A-103B. Jogging (1-1)

#### 104A-104B. Weight Training (1-1)

#### 105. Individual Adaptives (1)

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)

#### 109A-109B. Soccer (1-1)

#### 110A-110B. Volleyball (1-1)

#### 111A-111B. Softball (1-1)

#### 115A. Track and Field (1)

#### 116A-116B. Golf (1-1)

#### 117A-117B. Archery (1-1)

#### 118A-118B. Tennis (1-1)

#### 119A-119B. Bowling (1-1)

#### 120A-120B. Badminton (1-1)

#### 122A-122B. Fencing (1-1)

#### 123A-123B. Racquetball (1-1)

#### 124A-124B. Sailing (1-1)

Physical Education 124A is prerequisite to 124B.

#### 125A-125B. Men's Gymnastics Apparatus (1-1)

#### 127A-127B. Women's Gymnastics Apparatus (1-1)

#### 128A-128B. Ice Skating (1-1)

#### 129A-129B. Swimming (1-1)

#### 130A-130B. Synchronized Swimming (1-1)

#### 132A-132B. Ballroom Dance (1-1)

#### 133A-133B. Folk and Square Dance (1-1)

#### 133C. Advanced Folk Dance (1) II

Prerequisite: Physical Education 133B.

#### 134A-134B. Modern Dance (1-1)

#### 135A-135B. Ballet (1-1)

#### 136A-136B. Jazz (1-1)

#### 137A. Aerobic Dance (1)

#### 138. Selected Activities (1)

May be repeated with new activity for additional credit. See Class Schedule for specific content.

#### 139. Competition Fitness (1) 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.

#### 140A. Sabre Fencing (1)

#### 141A-141B. Martial Arts (1-1)

Physical Education 141A is prerequisite to 141B.

#### 145. Waterskiing (1)

#### 146. Surfing (1)

#### 147. Windsurfing (1)

#### 150A-150B. Horseback Riding (1-1)

Physical Education 150A is prerequisite to 150B.

#### 153. Introduction to Dance (2)

Dance as an art form with emphasis on the development of contemporary trends; American dance personalities and their contributions.

#### 154. Rhythmic Analysis Related to Movement (2)

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.

#### 171. Intercollegiate Practicum in Athletics (1) I, II 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
- D. Gymnastics
- E. Swimming
- F. Soccer

##### Offered in Spring

- D. Gymnastics
- G. Volleyball
- H. Baseball
- I. Golf
- J. Softball
- K. Tennis
- L. Track

#### 190. Skill Competency in Physical Education (2) Cr/NC

Four hours of activity.

Designed for potential physical education majors and minors as a prerequisite to all professional teaching method course offerings. Proficiency tests will be given in each area commonly taught in secondary physical education.

#### 241. Physical Education of Children (2) I, II

Four hours of activity.

Scientific principles, programs, activities, and instructional techniques for physical education in elementary schools. Practical field experience with elementary students. Not open to physical education majors.

#### 265. Techniques in Athletic Training (2) I, II

One lecture and three hours of laboratory.

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.

#### 276. Introduction to Sport and Physical Education (2) I, II

Overview of discipline of physical education. Development of a basic philosophy and background for entering profession.

#### 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. Skin and Scuba Diving (1)**

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.

**320L. Skin and Scuba Diving Laboratory (1)**

Three hours of laboratory.

Prerequisite: Concurrent registration in Physical Education 320.

**322. Practicum: Life Saving and WSI (2)**

Four hours of activity.

Prerequisite: Intermediate swimming class at SDSU or its equivalent. (Swimmers level of Red Cross.)

Content designed to qualify expert swimmers in both American Red Cross Life Saving and Water Safety Instructor's Certification. Includes methods and materials for teaching all levels of swimming.

**323. Instructor's Course in Swimming for the Handicapped (1)**

Two hours of activity.

Prerequisites: Medical exam, waiver for hazardous procedures, pass swimming competency test.

To develop knowledge of various types of handicapping conditions, as well as how to adapt programs, methods and materials for these conditions. Red Cross certification (WSIH) is given upon satisfactory completion of course.

**331. Practicum: Theory and Analysis of Coaching Competitive Sports (2)**

Four hours of activity.

Concentrated study to include mechanical analysis, tactics and strategy, scouting, officiating and rules, and daily-seasonal practice planning in one of the sports listed below.

- A. Basketball
- B. Football
- C. Baseball
- D. Track and Field (including Cross Country)
- F. Additional sports (offered on student demand) may be repeated with new content.

**340. Physical Education for Elementary Schools (3) I, II**

Two lectures and two hours of activity.

Prerequisite: Physical Education 371.

Objectives, curricula, activities, and application of basic scientific principles for the conduct of elementary school physical education. Includes a practicum experience. Not open to students with credit in Physical Education 141 or 241.

**341. Practicum: Physical Education Activities for Elementary Schools (2)**

Four hours of activity.

Prerequisite: Physical Education 241 or 340.

In-depth study of selected physical education activities for elementary school children. Includes teaching techniques, unit planning, progressions and resource materials.

- B. Rhythm and dance activities for children
- C. Educational games for children
- E. Gymnastic activities for children
- F. Developmental motor activities for primary school children

**346. Practicum: Physical Education Activities for Secondary Schools (2)**

Four hours of activity.

Prerequisite: Skill competencies for the specific activities of that section as determined by the instructor.

Selection and care of equipment and facilities; analysis of skills; progressions for skills, drills and the game; lead-up activities; safety; performance cues; resources; terminologies; skill evaluations; and prescriptions.

- |                                    |                          |
|------------------------------------|--------------------------|
| A. Basketball, Volleyball          | G. Combatives            |
| B. Track and Field                 | H. Gymnastics            |
| C. Racquetball, Softball           | I. Tennis, Badminton     |
| D. Folk, Square and Ballroom Dance | K. Flag Football, Soccer |
| F. Modern Dance                    |                          |

**347. Leadership for Physical Education (3) I, II**

Two lectures and two hours of activity.

Prerequisite: Physical Education 385.

Theory and development of leadership behavior of physical educators, emphasizing leadership qualities unique to diverse physical activity settings.

**350. Ballet for Professional Dance (2) I, II**

Four hours of activity.

Prerequisites: Physical Education 135A and 135B.

Advanced work in ballet to enhance performance skills of dancers interested in career in dance.

**352. Workshop in Dance (1-2)**

Two hours per unit.

Choreographic techniques and skills with visiting master teachers; written report or project. Maximum credit four units.

**361. Weight Training and Physical Fitness (2) I, II**

One lecture and two hours of activity.

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 345A.)

**362. Exercise Physiology Laboratory (1)**

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Physical Education 561.

Laboratory experiences in the application of exercises and the analysis of the results.

**364. Kinesiology-Biomechanics Lab (1)**

Three hours of laboratory.

Prerequisites: Physical Education 560 and 563.

Experiments in application of kinesiology and biomechanics to human movement.

**368. Adapted and Special Physical Education Laboratory (1-4)**

Three hours of laboratory per unit.

Prerequisite: Credit or concurrent registration in Physical Education 567 or 568.

Supervised laboratory of practicum experience in adapted or special physical education programs. Maximum credit four units.

**369. Practicum in Athletic Training (1-3)**

Three hours of laboratory per unit.

Prerequisite: Physical Education 265.

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.

**371. Physical Growth and Development (3)**

Principles of human growth; performance as affected by developmental levels and individual differences in structure and function.



**376A. History and Philosophy: Physical Education and Sport (3)**

Prerequisite: Physical Education 276.

Integrated approach to understanding of historical, philosophical, and sociological forces shaping development of physical education and sport. (Formerly numbered Physical Education 376.)

**376B. History and Philosophy: Dance (3) II**

Prerequisite: Physical Education 153.

Integrated approach to understanding of historical, philosophical, and sociological forces shaping development of dance. (Formerly numbered Physical Education 556.)

**380. Organization and Administration of Physical Education (3)**

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.

**385. Measurement and Evaluation in Physical Education (3)**

Use of testing and measurement to improve and evaluate instruction. Concepts of elementary statistics, computer use, objectives definition, test construction, test evaluation, and test program administration. (Formerly numbered Physical Education 585.)

**398. Supervised Field Experience (1-3) Cr/NC**

Prerequisite: Consent of department chair.

Supervised practical experience in the area of physical education. Maximum credit six units.

**450. Dance Technique: Alignment (3)**

Six hours of activity.

Prerequisite: Completion of preparation for the major in physical education with emphasis in dance.

Basic modern dance skills with emphasis on alignment.

**451. Dance Technique: Movement Patterns (3)**

Six hours of activity.

Prerequisites: Physical Education 450 and 560.

Continuation of development of modern dance skill with emphasis on function of alignment and articulation of the extremities in motion.

**452. Dance Technique: Complex Movement Patterns (3)**

Six hours of activity.

Prerequisite: Physical Education 451.

Progressively difficult movement patterns based on previously developed skills with emphasis on elevation, rhythm, body design, and dynamic flow of movement.

**453. Dance Technique: Performance Qualities (3)**

Six hours of activity.

Prerequisite: Physical Education 452.

Advanced modern dance techniques based on skills developed in Physical Education 450 through Physical Education 452 with emphasis on performance qualities in projection, vitality, and executing.

**454. Elementary Improvisation (1)**

Two hours of activity.

Prerequisite: Completion of lower division prerequisites for emphasis in dance.

Exploring improvisation through specific stimulus leading to the acquisition of basic improvisational skills.

**455. Intermediate Improvisation (1)**

Two hours of activity.

Prerequisite: Physical Education 454.

Practice in more complex arrangements of improvisation.

**456. Dance Pedagogy (2)**

Four hours of activity.

Prerequisite: Completion of preparation for the major in physical education with emphasis in dance.

Teaching modern dance in the commercial studio environment.

**476. Contemporary Sociocultural Aspects of Physical Activity (3)**

Prerequisite: Physical Education 376A.

Historical, anthropological and cultural factors influencing development of sport and physical education in America, and current sociological, philosophical, sociopsychological, and comparative factors influencing role and significance of sport and physical education in modern American society.

**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)****550. Choreography: Basic Elements (2)**

Four hours of activity.

Prerequisite: Completion of preparation for the major in physical education with emphasis in dance.

Using concepts of space, time, and energy to investigate and explore basic elements of choreography. Studies and compositions emphasizing solo and small group works.

**551. Choreography: Large Groups (2)**

Four hours of activity.

Prerequisite: Physical Education 550.

Introducing large group works, solo and small group work in organizing more complex arrangements of the basic elements of dance composition. Utilizing music and sound as aural contributions to choreography.

**552. Choreography: Form and Content (2)**

Four hours of activity.

Prerequisite: Physical Education 551.

Approaching dance as a fundamental means of communication. Recognizing the relationship between form and content.

**553. Choreography: Recital (2)**

Four hours of activity.

Prerequisite: Physical Education 552.

Choreography of solo and group works utilizing symbiotic relationship of movement, sound, lighting, costuming, and other interdisciplinary media. Presentation of a recital.

**557. Dance Criticism (2)**

Prerequisite: Physical Education 376B.

Artistic aspects of dance in general and specifically modern dance. Professional preparation and function of the dance critic.

**560. Applied Anatomy and Kinesiology (3)**

Prerequisites: Biology 150, 336.

Arthrology, syndesiology and myology, with emphasis on movement analysis. Muscle groups and their functional relationships. Application of simple mechanical principles to movement analysis.

**561. Physiology of Exercise (3)**

Prerequisites: Biology 150, 336.

Effects of physical activities on the physiological functions of the body.

**562. Cardiopulmonary Laboratory (2)**

One lecture and three hours of laboratory.

Prerequisites: Physical Education 362 and 561.

Cardiopulmonary evaluation of human subjects for rehabilitative and preventive cardiology including electrocardiography, blood chemistry, ergometry, central and peripheral vascular assessment, body composition, and lifestyle change.



**563. Biomechanics of Human Movement (2)**

Prerequisite: Biology 150.

Mechanical principles as applied to movement; analysis and application to selected motor skills.

**564. Prevention, Cause, and Basic Care of Sports Injury (3)**

Prerequisites: Physical Education 265, 560, 561, 563.

Sports injury: prevention, causation, and basic management.

**565. Evaluation and Rehabilitation of Sports Injury (3)**

Two lectures and three hours of laboratory.

Prerequisite: Physical Education 564.

Theoretical and practical experience in athletic injury. Evaluation techniques, practical considerations in selecting and applying physical modalities and therapeutic exercises.

**567. Corrective and Orthopedic Physical Education (3)**

Prerequisites: Physical Education 560 and 561.

Etiology, characteristics, and programs for children with corrective and/or physically handicapping conditions will be discussed. This will include evaluating and implementing prescribed activities for individuals with these types of conditions.

**568. Special Physical Education (2)**

Prerequisites: Psychology 101 and Physical Education 371.

Etiologies, characteristics, and education programs for mentally retarded, emotionally disturbed, learning disabled, blind and hearing impaired individuals. Specific programs and activities are discussed relevant to each of disabled groups mentioned.

**570. Psychological Bases of Physical Education (3)**

Prerequisite: Psychology 101.

Psychological parameters related to physical performance and the acquisition of motor skills.

**596. Selected Topics in Physical Education (1-3)**

Selected topics in physical education. May be repeated with new content and approval of instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units applicable to a bachelor's or master's degree.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**Physics****In the College of Sciences****Faculty**

Emeritus: Clark, Craig, Garrison, Kalbfell, Moe, Smith, Snodgrass, Teasdale, Wolter

Chair: Burnett

Professors: Burnett, Davis, Day, Lilly, Momeni, Morris, Nichols, Piserchio, Rehfsuss, Roeder, Shore, Sweedler, Templin

Associate Professors: Cottrell, Oseroff

Lecturers: Berger, Ferguson, Islam, McKinley, Pavis, Shackelford

Adjunct Faculty: Caulfield, Green, Kaufmann

**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 A.B. degree in liberal arts and sciences.

Major in physics with the B.S. degree in applied arts and sciences.

Minor in physics.

**Chemical Physics Major****With the B.S. Degree in Applied Arts and Sciences****Preparation for the Major.** Chemistry 200, 201, 231, and 251; Mathematics 150, 151, 252; Physics 195, 195L, 196, 196L, 197, 197L. (44 units.) Recommended: Mathematics 107.**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 to include Chemistry 410A-410B, 431, 520A and 550; Mathematics 340A; Physics 311, 350A, 354A-354B, 357, 400A and 460.

Recommended: Mathematics 340B, 340C. Individual master plans for each student are filed with Evaluations.

**Physics Major****With the A.B. Degree in Liberal Arts and Sciences**

All candidates for a degree in liberal arts and sciences must complete the requirements listed in the section of this catalog on "Graduation Requirements."

A minor in mathematics is required. It should include Mathematics 150, 151, 152, 340A-340B, and three units from Mathematics 521A, 532 or 534A. Mathematics 302 is acceptable for students preparing for elementary or secondary teaching. Students planning graduate work in physics should take additional mathematics beyond these listed.

**Preparation for the Major.** Chemistry 200, 201; Mathematics 150, 151, 252; Physics 195, 195L, 196, 196L, 197, 197L. (35 units.) Recommended: Mathematics 107.**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 should choose French, German or Russian. 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 physics to include Physics 311, 350A, 354A, 357, 400A, 460, and two courses selected from Physics 313, 354B, 400B and 510.**Physics Major****With the B.S. 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." Individual master plans for each student are filed with Evaluations.



A minor is not required with this major.

Preparation for the major and the minor 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 of Physics; (b) Scientific Instrumentation; (c) Modern Optics; (d) Radiation Physics; (e) Senior Research.

### Basic Requirements for all Students

**Preparation for the Major.** Chemistry 200, 201; Mathematics 150, 151, 252; Physics 195, 195L, 196, 196L, 197, 197L. (35 units.) Recommended: Mathematics 107.

**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 40-43 upper division units to include Mathematics 340A-340B; Physics 311, 313, 350A, 354A, 354B, 357, 400A-400B, 460, and 498A-498B or a minimum of two semesters of 499. Recommended: Mathematics 340C.

### Areas of Specialization

In addition to the basic requirements, the student must complete the requirements in one of the following areas:

#### (a) Foundations of Physics

**Required:** Physics 510, and 532 or 564.

**Recommended:** Physics 350B, 552.

**Strongly recommended:** Physics 532, 564.

#### (b) Scientific Instrumentation

**Required:** Physics 513, 516A.

**Recommended:** Physics 516B.

**Strongly recommended:** Physics 520.

#### (c) Modern Optics

**Required:** Physics 306, 552, 553.

**Recommended:** Physics 516A, 532.

#### (d) Radiation Physics

This option is intended as preparation for students intending to pursue the M.S. degree in radiological health physics.

**Required:** Biology 570, 570L, 571.

**Recommended:** Mathematics 250; Physics 513, 564.

#### (e) Senior Research

Students taking this area of specialization must be sponsored by a member of the faculty.

**Required:** Physics 498A-498B and a minimum of four (4) additional upper division units approved by faculty sponsor.

**Recommended:** Additional Physics 499 in conjunction with 498A-498B.

## Physics Minor

The minor in physics consists of a minimum of 15 units in physics, 11 units of which must be in upper division courses. The department requires that the upper division units for the minor be selected from the courses in one of the areas listed below. Prerequisites: Physics 180A-180B or 195, 195L, 196, 196L, 197, 197L; Mathematics 252.

**Foundations of Physics** (appropriate for Mathematics, Chemistry, Astronomy, Engineering, Geology, Natural Science and all life sciences). Upper division courses selected from Physics 306, 311, 313, 350A, 350B, 354A, 354B, 357, 400A, 400B, 460, 510, 532, 542, 552, 564, 570.

**Scientific Instrumentation** (also appropriate for all science majors above). Physics 311, 313 and 513 must be taken. One or more additional courses to be selected from Physics 516A, 516B, 520.

**Modern Optics** (appropriate for all science and engineering majors). Physics 306 and 553 must be taken. Additional courses may be selected from Physics 311, 313, 354A, 400A, 499, 552.

**Radiation Physics.** In lieu of the prerequisites listed above, a student may substitute Physics 180A-180B and 182A-182B; Mathematics 252. (Suitable for all majors; particularly recommended for life science majors.) Physics 302, 311, and three units of electives.

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.

### LOWER DIVISION COURSES

Maximum credit 15 units for any combination of Physics 107, 115, 180A-180B, 182A-182B, 195, 195L, 196, 196L, 197, 197L.

#### 103. Physics for Poets (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.

Some of the more important phenomena and concepts in physics with practical illustrations and applications. Not open to students with credit for Physics 115 (formerly numbered Physics 115A-115B), 180A-180B, 195, 195L, 196, 196L, 197, 197L.

#### 115. Elementary Physics with Laboratory (4)

Two lectures, one discussion and three hours of laboratory.

Prerequisites: Two years of high school mathematics.

For non-science majors. Foundations of wave motion, behavior of light, energy, mass, evolution of ideas concerning planetary motion. Emphasis on evolution of fundamental concepts. Not open to students with credit in 180A or 195, 195L.

#### 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.

#### 180A-180B. Fundamentals of Physics (3-3) I, II

Prerequisite: Credit or concurrent registration in Mathematics 121 or 150. 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.

#### 195. Principles of Physics (3) I, II

Prerequisite: Credit or concurrent registration in Mathematics 150.

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

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.

#### 196. Principles of Physics (3) I, II

Prerequisites: Physics 195, credit or concurrent registration in Mathematics 151.

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**

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.

**197. Principles of Physics (3) I, II**

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**

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Physics 197.

Experiments in optics, lasers, holography and nuclear counting.

**201. Physics of Sound, Hearing and Speech (4)**

Three lectures and three hours of laboratory.

Prerequisite: Qualification on the Mathematics Placement Examination.

Fundamental nature of sound and applications to hearing and speech.

**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 Communication and Analytical Reasoning and Foundations science components of General Education.

Course devoted to the fundamental physical concepts underlying energy, its conversion, utilization and conservation. Not open to physics majors.

**302. Nuclear Energy (2)**

Prerequisite: Physics 107, or 115, or 180B and 182B, or 197 and 197L.

Nuclear sources of energy, including solar, geothermal, hydrocarbon, and an introduction to nuclear reactors and their environmental impact.

**304. Concepts of Modern Physics (3) I**

Prerequisites: Physics 180B, Mathematics 122.

Modern physics for nonphysics majors, including relativity, introductory quantum theory, and atomic, nuclear, and solid state physics. Not open to physics majors or to students with credit in Physics 354A-354B.

**306. Optics (3)**

Prerequisites: Physics 197, 197L.

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.

**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.

Conventional and operational amplifiers, oscillators, analog to digital conversion, pulse and digital electronics. Emphasis is on applications to modern scientific instrumentation.

**350A-350B. Classical Mechanics (3-3) I, II**

Prerequisites: For 350A, Physics 197, 197L and credit or concurrent registration in Mathematics 340A or 530. For 350B, Physics 350A and credit or concurrent registration in Mathematics 340B or 531.

Newtonian mechanics, wave motion, Lagrange's equations, Hamilton's equations, generalized coordinates, normal coordinates, small oscillations, special theory of relativity.

**354A-354B. Modern Physics (3-3) I, II**

Prerequisites: For 354A, Physics 197, 197L and credit or concurrent registration in Mathematics 340A or 530. For 354B, Physics 354A and credit or concurrent registration in Mathematics 340B or 531.

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: For 400A, Physics 197, 197L and credit or concurrent registration in Mathematics 340A or 530. For 400B, Physics 400A and credit or concurrent registration in Mathematics 340B or 531.

Electrostatics, magnetostatics, electromagnetic induction, Maxwell's equations, radiation and wave propagation.

**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 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 350A, 354B; Mathematics 340B or 531.

The mathematical and physical foundations of the quantum theory in terms of Schrodinger's wave mechanics. Applications to the properties of atoms, quantum chemistry, and nuclei.



**513. Electronic Instrumentation (2) I**

Six hours of laboratory.

Prerequisite: Physics 313.

Transducer principles and applications; theory and design of active filters, modern signal detection and enhancement techniques, instrumentation design. (Formerly numbered Physics 413.)

**516A-516B. Theory of Scientific Instrumentation (3-2)**

Prerequisites: Physics 313; Mathematics 340B or 531. Physics 516A is prerequisite to 516B.

Linear system analysis using Fourier techniques. Introduction to the stochastic treatment of signals and noise, using concepts from probability and statistics. Optimization of detection systems with respect to signal-to-noise ratio. Applications to spectroscopy.

**520. Microprocessor Instrumentation (3)**

Two lectures and three hours of laboratory.

Prerequisite: Credit or concurrent registration in Physics 513.

The electronics of microprocessor-based computer and control systems. Assembly language programming. Interfacing of analog inputs and outputs. The microcomputer as a multipurpose signal processing instrument.

**524. Physical Principles of Remote Sensing (3) I**

Prerequisites: Physics 306, Mathematics 340A.

Physical principles of electromagnetic techniques in remote sensing. Topics include electromagnetic scattering, optical and radar image acquisition problems.

**532. Solid State Physics (3) II**

Prerequisites: Physics 350A, 354B; Mathematics 340B or 531.

Elastic, thermal, electric, magnetic and optical properties of solids. Introduction to the energy band theory of solids, with applications to semiconductors and metals.

**542. Acoustics (3)**

Prerequisite: Physics 350A.

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)**

Prerequisite: Physics 306.

Electromagnetic theory, matrix methods of optics, propagation of Gaussian beams, optical resonators, interaction of radiation and atomic systems, theory of laser oscillation, nonlinear optics, specific laser systems, optical detectors, applications of lasers in physics.

**553. Modern Optics Laboratory (2)**

Six hours of laboratory.

Prerequisite recommended: Credit or concurrent registration in Physics 552.

Experiments in various fields of modern optics such as holography, physics of lasers, Fourier transform spectroscopy, Raman spectroscopy, light modulation techniques, fiber optics, spatial filtering, diffraction grating spectroscopy, radiometry, and nonlinear optics. May be repeated with new content with the approval of the instructor for a maximum of four units.

**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, 400A; Mathematics 340B or 531. Recommended: Mathematics 149 or 520A.

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 six units.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**Political Science**

In the College of Arts and Letters

**Faculty**

Emeritus: Crain, Generales, Joy, Leiffer

Chair: Conniff

Professors: Andrain, Conniff, Feierabend, Funston, Gripp, Hofstetter, Janssen, Johns, Jones, Kahng, Little, Loveman, Miles, Nesvold, Padgett, Schultze, Strand, Terrell

Associate Professors: Anderson, Cutter, Fairlie, Heck, Hobbs, Lewin, Soule

Assistant Professor: Keiser

**Offered by the Department**

Master of Arts degree in political science.

Major in political science with the A.B. degree in liberal arts and sciences.

Minor in political science.

**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 A.B. 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."

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 396W or 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 313.

Field II: Research Methods. Courses numbered 515A-515B.

Field III: American Government and Politics. Courses numbered 320 to 338 and 522 to 537.

Field IV: Public Law. Courses numbered 345 to 354.

Field V: Comparative Politics. Courses numbered 356 to 370 and 555 to 568.

Field VI: International Politics. Courses numbered 375 to 394 and 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 and Research Methods (Fields I and II)

Politics and Public Law (Fields III and IV)

Comparative Politics and International Politics (Fields V and VI)

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.



## LOWER DIVISION COURSES

**101. Introduction to Politics and the American Political System (3)**

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)**

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)**

Prerequisites: Political Science 101 and 102 and qualification on the Mathematics Placement Examination.

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 another statistics course will be awarded a total of four units for the two (or more) courses.

**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.

**495. Internship in Politics (2-6)**

Prerequisites: Three upper division units within Field III and consent of instructor.

Students will be assigned selectively to functional areas of politics, such as political party headquarters, elective public offices and nonpartisan political groups for work under joint supervision of activity heads and the course instructor. Participation will include project and internship conferences. (Formerly numbered Political Science 340.)

**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**

Senior thesis. Analysis of special topics. Admission by permission of instructor.

**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.

## Political Theory (Field I)

**301A-301B. History of Western Political Thought (3-3)**

Prerequisite: 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)**

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.

**303. Socialist Political Thought (3)**

Socialist thought from a historical perspective.

**304. Socialist Political Thought (3)**

Prerequisites: Political Science 101 or 102, and 301B or 302.

Selected topics in socialist thought.

**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 522, will also meet all requirements in American Institutions.

**306. Democracy and Mass Society (3)**

Origin and development of theories of democracy and application of democratic ideas to contemporary political life.

**313. The Theory of Political Inquiry (3)**

Philosophical bases of science with reference to political science. Concepts, concept formation, theory building and verification.

## Research Methods (Field II)

UPPER DIVISION COURSE  
(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.

## American Government and Politics (Field III)

UPPER DIVISION COURSES  
(Intended for Undergraduates)**320. American Institutions (3)**

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 522, 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.

**325. 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.

**326. 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.

**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.

**498. Internship in National Politics (9)**

Prerequisites: Three upper division units within Field III 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)

**522. Urban Politics (3)**

Prerequisite: Political Science 101 or 102.

The processes by which social conflicts in American urban areas are represented and regulated. Urban political culture; ecology; group development and activity; power structures; and reform movements are surveyed. The character of the urban political "problem" and proposed solutions are evaluated. 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.

**523. Community Political Analysis (3)**

Prerequisite: Political Science 101 or 102.

Community power structures. Analysis of policy alternatives; strategies of community development and approach to social planning and organization. Examples are primarily from the American experience, but some comparative materials may be discussed.

**530. Political Parties (3)**

Prerequisite: Political Science 102 or 320.

The political party as a part of the process of government; party organization and activities; nominating and campaign methods; theories and functions of the party system; party responsibility. The functioning of political parties in the American political system. May include a substantial amount of material about foreign political systems.

**531. Interest Groups and Political Movements (3)**

Prerequisite: Political Science 101 or 102.

Pressure group activity, lobbies, mass movements; factors which explain origins and motivations of group behavior; votes, money, information, protest as political resources; theories of pluralism, power elite and mass society; class and ethnic politics. May include a substantial amount of material about foreign political systems.

**536. The American Presidency (3)**

Prerequisites: Political Science 101 and 102.

Analysis of principal institutions, functions and problems of the presidency and federal executive branch. Attention given to presidential leadership, staffing, executive-legislative relations and policy formation.

**537. The Politics of Bureaucracy (3)**

Prerequisites: Political Science 101 and 102.

An analysis of the bureaucracy as an actor in the political system. May include a substantial amount of material about foreign political systems.

**Public Law (Field IV)**

**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.

**350. Jurisprudence (3)**

Prerequisite: Political Science 101 or 102 or three upper division units within Field IV. Theoretical foundations of law; relationship between legal and political philosophy; development of law and legal systems. (Formerly numbered Political Science 550.)

**354. Special Problems in Public Law (3)**

Prerequisites: Political Science 101 and 102, and three upper division units within Field IV. Exploration of selected issues in the field of law.

**Comparative Politics (Field V)**

**UPPER DIVISION COURSES**  
(Intended for Undergraduates)

**356. Governments of Continental Europe (3)**

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.

**358. Comparative Communist Political Systems (3)**

The interrelations between the theory and practice of modern communism as found in representative communist systems.

**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)**

Prerequisite: Political Science 101 or 103.

Internal political systems, governmental structures and the foreign policies of developing nations.

**362. Governments and Politics of East Asia (3)**

The internal political structure and foreign policies of China, Japan and Korea.

**363. Governments and Politics of the Middle East (3)**

The governmental and political structures of representative states in the Middle East including Turkey, Israel and the Arab states.

**364. Political Change in Modern Africa (3)**

Dynamics of social and political change in modern Africa.

**370. Political Violence (3)**

Prerequisite: Political Science 101, 102 or 103.

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.

**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.

**International Politics (Field VI)****UPPER DIVISION COURSES  
(Intended for Undergraduates)****375. International Relations (3)**

Dynamics of conflict and cooperation among national, international and transnational factors; contributing political, economic, and social factors.

**378. The Conduct of American Foreign Relations (3)**

The legal, administrative and political organizations by which American foreign policies are formulated and implemented.

**379. National Security Policy (3)**

Objectives, instruments, and consequences of national security policy. (Formerly numbered Political Science 579.)

**381. 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.

**382. 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.

**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.

**394. Special Problems in International Politics (3)**

Prerequisites: Political Science 101, 102 and three upper division units within Field VI.  
Intensive exploration of selected issues in the field of international politics.

**UPPER DIVISION COURSE  
(Also Acceptable for Advanced Degrees)****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: Barrera

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.

**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.

**Foreign Language Requirement for the A.B. 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. The usual sequence of course work is Portuguese 101, 301, and 302. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

**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.**

No credit will be given for Portuguese 101, 301, 302 taken out of sequence.

**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.

**211. Conversation and Grammar Review (3)**

Prerequisite: Credit or concurrent registration in Portuguese 101.

Emphasis on spoken language and major grammatical points.



**212. Conversation and Grammar Review (3)**

Prerequisite: Credit or concurrent registration in Portuguese 101 with consent of instructor.  
Continuation of Portuguese 211.

**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 Portuguese are taught in Portuguese unless otherwise stated.

**301. Advanced Oral and Written Composition (3)**

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)**

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

**Faculty**

Emeritus: Carlson, Hunrichs, Kaplan, O., Kidwell, Leukel, Peiffer, Psomas, Sand, Segal, Turner, Voeks

Chair: Litrownik

Professors: Alf, Borges, Bryson, J., Bryson, R., Dicken, Franzini, Gallo, Graf, Graham, Grossberg, Harari, Harrison, Hillix, Kaplan, R., Karen, Kass, Koppman, Leckart, Levine, Litrownik, Lorwin, McDonald, Mollenauer, O'Day, Penn, Plotnik, Radlow, Rodin, Saccuzzo, Sattler, Schulte, Sheposh, Spinetta, Stevens, Yaremko

Associate Professors: Brown, Defran, Fenson, Fragaszy, Hornbeck, Lee, Lynn, McCordick, Price, Scollay, Smith

Assistant Professors: Ingram, Murphy

**Offered by the Department**

Master of Arts degree in psychology.

Master of Science degree in psychology.

Major in psychology with the A.B. degree in liberal arts and sciences.

Minor in psychology.

## Psychology Major

### With the A.B. 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.

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 A.B. 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, 110 or 270, 210 and 260. (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 Psychology 330, 340, 350 and 351. It is expected that students under Plan A will select, with the assistance of their adviser, 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 clinical, industrial and personnel, social, and theoretical-experimental psychology.

**Preparation for the Major.** Psychology 101, 210, 260, and 270. (12 units.) Recommended courses in related fields: Six units in General Education courses in biology; three units in General Education courses 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 Psychology 350, 405, 410; and one of the following: 412, 413, 414, 415, 416, 417, 418 or 419; and ten units selected from courses in consultation with the departmental adviser.

## Psychology Minor

Academic Skills 103 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:

**Experimental:** Psychology 101, 210, and 270 or equivalent; 14 units of upper division psychology to include Psychology 410 and three of the following: Psychology 316, 414, 416, 417, 419, 587. (23 units.)

**Industrial/Organization:** Psychology 101 and 270 or equivalent; 12 units of upper division psychology to include Psychology 320, 405, and two of the following: Psychology 321, 322, 326, 342. (18-19 units.)

**Personality and Social:** Psychology 101 and 210 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, 210, 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.

## LOWER DIVISION COURSES

### 101. Introductory Psychology (3) I, II

Facts, principles, and concepts which are basic to understanding human behavior.

### 110. The Evaluation of Psychological Literature (3)

Designed to increase the nonpsychologist's ability to evaluate psychological and quasi-psychological writings. Topics include methods of generating information, concept of controlled observations, interpretation of data, pitfalls in decision making and aids to critical thinking. Practical experience in evaluation will be obtained through the criticism of current articles and other activities.

### 150. Psychology of Individual Adjustment (3)

Prerequisite: Psychology 101. An examination and interpretation of the factors which go into the making of the person as he adapts himself to the social world about him. The development of the normal personality.

### 210. Principles of Learning and Perception (3) I, II

Prerequisite: Psychology 101.

The nature of psychological inquiry. Emphasis on principles and basic experimental data of learning and perception.

### 260. Introduction to Physiological Psychology (3) I, II

Prerequisite: Psychology 101.

Physiological mechanisms underlying the psychological phenomena of sensation, perception, emotion, motivation, learning and psychosomatic disorders.

### 270. Statistical Methods in Psychology (3) I, II

Prerequisite: Qualification on the Mathematics Placement Examination. Recommended: Psychology 101.

Quantitative methods in psychology. Measures of central tendency and variability, graphic methods and percentiles, linear correlation, applications of the normal probability curve, chi-square, and an introduction to statistical inference. Students with credit or concurrent registration in another statistics course will be awarded a total of four units for the two (or more) courses.

## UPPER DIVISION COURSES (Intended for Undergraduates)

### 300. Honors Course (1-3)

Refer to Honors Program.

### 301-S. Contemporary Problems in Psychology (1) S

Lectures open to the public.

A series of six weekly lectures by visiting psychologists on subjects related to current research problems. Reading and reports required of students enrolled for credit. See Class Schedule for specific content. Maximum credit three units.

### 305. Parapsychology: Fact and/or Fiction (3)

Prerequisite: An introductory course in a social or biological science. Recommended: Psychology 110.

Critical evaluation of the scientific evidence for and against the existence of psychic phenomena. Current testable theories related to such phenomena.

### 310. Cognitive Psychology (3) I, II

Prerequisite: Psychology 101. Recommended: Psychology 210.

Theory and research focusing on information processing approach to human mental processes. Topics include sensation and perception, learning, memory, thinking, understanding, and language.

### 314. 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.

### 316. Operant Behavior (3)

Prerequisite: Psychology 101. Recommended: Psychology 210.

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.

### 320. Personnel and Industrial Psychology (3) I, II

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) I, II

Prerequisite: Psychology 101.

The interplay of men and organizations. Psychological literature of the individual and his motivation to work, working in groups, industrial organizations, communications and conflict in industrial organizations.

### 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

Prerequisite: Psychology 101.

The psychological development of the normal individual from conception through childhood, adolescence, maturity, and old age. Stress is laid upon the interdependence of the various periods of the individual's life.

### 335. Psychology of Later Maturity (3)

Prerequisite: Psychology 101.

The psychological, physiological, and sociological factors influencing behavior in the later years of life.



**340. Social Psychology (3) I, II**

Prerequisite: Psychology 101.

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)**

The history, methods and problems of public opinion and attitude measurement. Emphasis will be placed on the polling of consumers and voters. Students will be given 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**

Prerequisite: Psychology 101.

The causes, symptoms, and modification of behavior disorders with emphasis on neurosis, psychosis, and personality disorder.

**351. Psychology of Personality (3), I, II**

Prerequisite: Psychology 101.

Principles of personality functioning and adaption.

**365. Drugs and Behavior (3)**

Prerequisite: Psychology 101. Recommended: Psychology 260.

The effects of hallucinogens, tranquilizers, stimulants, alcohol and other depressants, on the nervous system, personality, and intellectual functioning.

**375. Computer Methods in Psychology (3)**

Prerequisites: Psychology 101, and credit or concurrent registration in Psychology 270.

Fundamentals of programming in an advanced computer language. Application to statistics and other quantitative topics in psychology.

**386. Theories of Personality (3)**

Prerequisites: Six upper division units in psychology to include one of the following: Psychology 330, 350, or 351.

Theory and review of research in the area of personality.

**405. 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 and critical evaluation of group tests of intelligence, personality, aptitude, interest and achievement.

**410. Introduction to Experimental Psychology (4) I, II**

Two lectures and six hours of laboratory.

Prerequisites: Psychology 210 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. Small animal surgery, histological and pharmacological techniques.

**414. Experimental Psychology: Comparative (4)**

Two lectures and six hours of laboratory.

Prerequisite: Psychology 410.

Experimental literature, assigned and original laboratory projects in the field of comparative psychology.

**415. Experimental Psychology: Personality and Clinical (4) I, II**

Two lectures and six hours of laboratory.

Prerequisite: Psychology 410. Recommended: Psychology 350 or 351 or 386.

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 310.

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.

**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 or 386.

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 Deficiency (3)**

Prerequisite: Psychology 101. Recommended: Psychology 330.

The nature and causes of mental retardation, including the psychological effects of brain injury. Characteristics of the mentally defective.

**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)**

Prerequisite: Six units of psychology, 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: electrophysical, neurophysiological, biochemical, psychopharmacological, and psychological aspects.

**481. Philosophical Issues in Psychology (3)**

Prerequisite: Six units of psychology.

Modern empiricism and the philosophy of science as related to issues in contemporary psychology.

**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)

**551. Clinical Psychology: Theory and Practice (4) I, II**

Two lectures and six hours of laboratory.

Prerequisite: Psychology 350.

Clinical assessment, theory and practice of behavior change, and professional ethics.

**570. Advanced Statistics (3) I**

Prerequisite: Psychology 270.

Further study of quantitative methods in psychology with emphasis on methods of correlation, chi-square, and contingency, and an introduction to the analysis of variance.

**571. Correlational Analysis (3)**

Prerequisite: Psychology 270.

Quantitative methods in psychology with emphasis on methods of correlation, multiple correlation, partial correlation, and factor analysis.

**580. History of Psychology (3)**

Limited to psychology majors with senior standing or graduate students.

The historical background of modern psychology.

**587. Advanced Principles of Learning and Cognition (3)**

Prerequisites: Psychology 210 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 six units.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**Public Administration and Urban Studies**

In the College of Professional Studies and Fine Arts

Public Administration and Urban Studies is a Member of the National Association of Schools of Public Affairs and Administration (NASPAA)

**Faculty**

Emeritus: Bigger, Kitchen, Love

Chair: Rea

Professors: Clapp, Gazell, Gilbreath, Gitchoff, Rea

Associate Professors: Boostrom, Gupta, Henderson, Ross, Sparrow, Stock, Sutton

Assistant Professors: Calavita, Caves, Pugh, Walshok, Waste

**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 A.B. degree in applied arts and sciences.

Emphasis in city planning.

Minor in public administration.

Certificate in public administration (available at Imperial Valley Campus only).

**Public Administration Major****With the A.B. 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.

**Preparation for the Major.** Accountancy 210A-210B or 212, Information Systems 180, Economics 101 and 102; Political Science 102; Public Administration 200, 220; and a three-unit course in statistics. (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 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.

**Emphasis in City Planning**

**Preparation for the Major.** Accountancy 210A-210B or 212, Economics 101 and 102, Information Systems 180, Political Science 102, Public Administration 200, 220, and a three-unit course in statistics. (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 to include Public Administration 301, 312 or 315, 330, 340, 450, 460, 497 or 498; and Public Administration 320, 420, 525, and two courses selected from Public Administration 310, 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 Systems 180, Public Administration 301, 310 or 312 or 315, 330, 450, and two additional courses with the consent of a public administration adviser. Prerequisites for the minor include Economics 101 and 102.

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.

## Public Administration Certificate (Imperial Valley Campus)

To receive the certificate a candidate must complete an approved program of 18 units with a minimum grade point average of 2.5. Up to two public administration courses taken at another institution may be included among the required courses with approval of the program adviser.

Requirements include Public Administration 301, 330; three units selected from Public Administration 340, 341, or 450; and nine units in an area of specialization selected with the approval of the adviser.

### LOWER DIVISION COURSES

#### 200. The Urban Scene (3) I, II

Key issues in public administration, criminal justice administration, and city planning; emphasis on government structure and public decision-making process; organizational behavior, effectiveness of criminal justice policies, zoning, and land use considerations.

#### 220. Administrative Report Writing (3)

Study and practice of various methods used to develop effective writing skills applicable to communication in the public sector. This course will not satisfy the general education requirement in English composition.

### UPPER DIVISION COURSES (Intended for Undergraduates)

#### 301. Concepts and Issues in Public Administration (3)

Theory and practice of governmental administration in differing environments; role of administrators in public policy; issues facing administrators, techniques of administration.

#### 305. Studies in Public Administration (1-3) I, II Cr/NC

Offered only in Extension.

Analysis of selected administrative processes and problems of governmental agencies, their legal and political relations to other agencies and to the public. May be repeated with new content with consent of instructor. Maximum credit three units.

#### 310. Management of Urban Governments (3) I, II

Problems of local units of government in the urban environment. Organization and function of local agencies. Emphasis on California.

#### 312. Management of State Governments (3) I

Administrative and constitutional problems of state management in the American federal system. Emphasis on California.

#### 315. Management of the Federal Government (3) II

Prerequisite: Public Administration 301.

Problems in the administration of the federal government; for example, leadership, specialization, unity of command, oversight.

#### 320. Introduction to Urban Planning (3) I, II

An introduction to community planning: regional, county, and city. Consideration of the Master Plan, including its purposes, contents, and method of adoption.

#### 330. Public Personnel Administration (3) I, II

Analysis of personnel problems. Supervision and management of public employees and public organizations in an age of change.

#### 340. Administrative Behavior (3) I, II

Social, psychological, and behavioral theories of organization; concepts of administrative leadership; organization and the individual; emphasis on governmental organizations.

#### 341. Administrative Management (3) I, II

Areas and problems of administrative research. Management and operations in public organizations including forecasting, resource allocation, planning and administration of programs; preparation of administrative reports. Quantitative models of managerial decision making.

#### 350. Contemporary Urban Issues (3)

Focus on urban areas and urbanism from a public policy perspective; course examines and critiques the physical, economic, social and political dimensions of contemporary American cities utilizing a multidisciplinary approach.

#### 420. Methods of Analysis in City Planning (3) II

Prerequisites: Public Administration 320 and basic statistics course.

Methods of primary data collection and analysis of secondary data sources for problem solving in city planning, techniques associated with urban design and urban development.

#### 450. Fiscal and Budgetary Policy (3) I, II

Prerequisites: Economics 101 and 102, Public Administration 301.

Policies of fiscal administration and budgeting; political implications of the governmental budget process; revenue, debt, and treasury management; the functions of accounting and financial reporting.

#### 460. Administration and Public Policy Development (3) I, II

Process of formulating public policy with emphasis on the role of public agencies.

#### 462. Selected Topics in Public Affairs (3)

Selected topics in the administration of public policy and problems of public administrative organization. May be repeated with new content. Maximum credit six units.

#### 463. Science, Technology and Public Policy (3)

Scientific and technological innovations currently being introduced into public organizations and their impact on the public policy-making process, and effects of government regulations and policy on scientific and technological developments in society.

#### 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. Admission by permission of instructor.

#### 498. Internship in Public Administration (2-6) I, II Cr/NC

Prerequisites: Public Administration 301, 341 and all lower division required courses; credit or concurrent registration in Public Administration 330 or 340 and 450; senior standing and a "B" (3.0) average in the major.

Students will be assigned to various government agencies and will work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences.

#### 499. Special Study (1-3) I, II

Prerequisite: Twelve division units in public administration.

Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 510. Intergovernmental Relations in the United States (3) I

Prerequisite: Public Administration 310 or 312 or 315.

Constitution, political and administrative characteristics of American federalism, including regionalism, interstate compacts, and grants-in-aid.

#### 512. The Metropolitan Area (3)

Prerequisite: Public Administration 310 or 312.

Problems of government and administration arising from population patterns and physical and social structures of metropolitan areas.



**520. Decision Making in the Urban Community (3)**

Prerequisite: Public Administration 310.

Processes of decision making in the management of urban communities.

**525. The U.S. City Planning Process (3) I**

Prerequisite: Public Administration 320 or graduate standing.

Description and critique of traditional city planning process; styles and roles of city planner; city planning values and ethics.

**530. Negotiation and Bargaining in the Public Service (3)**

Prerequisite: Public Administration 301.

Specific issues such as strategies, the effects of threat, the physical setting, use of a third-party observer and theories of advocacy. Emphasis on analyzing simulations of the bargaining process and developing effective negotiation skills.

**531. Governmental Employer-Employee Relations (3)**

Prerequisite: Public Administration 330.

Historical development, legal basis and organizational implications of governmental employer-employee relations; emphasis on California local government.

**540. Public Administrative Systems Analysis (3)**

Prerequisites: Public Administration 301 and a statistics course.

Systems and organization analysis; work standards and units; procedures analysis; administrative planning.

**550. Budgetary and Financial Administration in the Public Sector (3) II**

Prerequisites: Public Administration 301 and 450.

Management trends in public sector financial administration; budgetary procedures and techniques; control and monitoring systems. Cash management, capital projects management, debt administration, disbursement, funds management, and auditing.

**570. Administrative Law (3)**

Prerequisite: Public Administration 301.

The law of public office and public officers, powers of administrative authorities, scope and limits of administrative powers, remedies against administrative action.

**580. Comparative Public Administration (3)**

Prerequisite: Public Administration 301.

Administrative organization and process of selected foreign and American governments. Analysis of the cultural basis of administrative systems.

**GRADUATE COURSES IN PUBLIC ADMINISTRATION AND URBAN STUDIES  
and CITY PLANNING**

Refer to the Graduate Bulletin.

**Recreation****In the College of Professional Studies and Fine Arts****Faculty**

Emeritus: Butler, Hanson

Chair: Dustin

Professors: Dixon, Duncan, Dustin, Gattas, Geba

Associate Professors: Hutchinson, Lamke, Peterson

Assistant Professor: Namba

Lecturers: Levin, Salz

**Offered by the Department**

Major in recreation administration with the A.B. degree in applied arts and sciences.

Emphasis in outdoor recreation.

Emphasis in recreation systems management.

Emphasis in recreation therapy.

Minor in recreation.

**Recreation Administration Major****With the A.B. 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."

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, 204, 205, 284; Biology 100, 100L; Geography 101; Geological Sciences 100, 101. (26 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 42-48 upper division units to include Biology 330; Geography 370, 575; Recreation 351, 464, 485, 486, 498 (6 or 12 units), 565, 575; and nine units selected from Biology 358, 454, 520, 523, 524, 525, 544; Geography 570; Geological Sciences 301; History 340; Political Science 334; Psychology 340; Recreation 496, 548, 549.**Emphasis in Recreation Systems Management****Preparation for the Major.** Information Systems 290; Psychology 101; Recreation 101, 107, 204, 205, 284; Sociology 101; six units selected from Accountancy 100; Economics 101; Finance 140; Information Systems 180. (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 42 upper division units to include Recreation 351, 464, 498 (12 units), 565; and nine units selected from Recreation 340, 460, 470, 475, 485, 548, 549, 575, 580; plus twelve units from Counselor Education 400; Economics 370; Marketing 370, 371, 373; Psychology 321, 340, 342, 347; Public Administration 301, 340, 350, 460; Sociology 325, 508, 514, 557.**Emphasis in Recreation Therapy****Preparation for the Major.** Biology 150; English 100; Information Systems 290; Psychology 101; Recreation 101, 107, 204, 205, 284; Sociology 101. (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 45 upper division units to include Recreation 351, 361, 371, 452, 464, 498 (12 units), 565; Biology 362; and twelve units selected from Counselor Education 400; Drama 310; Psychology 330, 335, 350, 351, 452, 454; Recreation 549, 575, 580; Sociology 513, 514, 516, 523, 526, 527, 528.



## Recreation Minor

The minor in recreation consists of a minimum of 24 units to include Recreation 101, 107, 204, 205, 208, and nine upper division units selected from Recreation 340, 351, 361, 371, 452, 464, 475, 485, 486, 496, 548, 549, 565, 575, 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.

### 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.

#### 110. Principles of Camp Counseling (3) I, II

Principles of camp counseling and campcraft skills. Practical sessions aimed at preparing leaders for all aspects of organized youth camping. Required attendance at two weekend outings.

#### 204. Challenges of Leisure (3) I, II

Prerequisites: Psychology 101 and Sociology 101.

Study of leisure and its impact on contemporary life; issues affecting recreation in today's urbanized society. (Formerly numbered Recreation 104.)

#### 205. Wilderness and the Leisure Experience (3) I, II

Use and abuse of natural resources for recreational purposes. Firsthand study of the effects of increased leisure on wilderness areas. Field experiences required.

#### 208. Recreational Arts (3) I, II

Two lectures and three hours of laboratory.

Prerequisite: Recreation 107.

Development of an appreciation for leadership techniques in special events and the performing arts — music, dance, drama, arts and crafts. Focuses on organization, leadership, and supervision of these activities, rather than on the mastery of performing arts skills.

#### 284. Supervised Field Work (3) I, II 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)

#### 300. Honors Course (1-3) I, II

Refer to Honors Program.

#### 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 time 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

Prerequisite: Satisfactory completion of the Writing Competency requirement, the General Education writing requirement, or advanced placement.

Theory and practice of writing in the field of recreation with application to various settings.

#### 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 Agencies (3)

Prerequisite: Recreation 107.

Interagency relations, personnel policies and procedures, volunteer coordination, supervisory techniques, community organization, public relations and fund raising in public, private and commercial settings.

#### 470. Recreational Travel and Tourism Management (3)

Prerequisite 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)

Analysis of commercial recreation field, including design, development, programming and marketing aspects of various commercial recreation enterprises.

#### 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. (Formerly entitled "Non-Urban Recreation Resources.")

#### 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) 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)**

Management of swimming pools, beaches, lakes and marinas; safety factors; legal requirements; health standards; facilities and programming.

**549. Camp Administration (3)**

Prerequisite: Recreation 110.

Operation of resident, day and travel camps. Staff management, health and safety, finances, food services, maintenance, planning and publicity.

**565. Recreation Systems Administration and Research (3) I, II**

Prerequisite: Recreation 464.

Organizational behavior, budgeting, financing, legal and legislative aspects, contracts, grants and future trends of recreation systems. Methods of investigation, data analysis, and reporting in relation to research needs in recreation. (Formerly numbered Recreation 465.)

**575. Designing Recreation Areas and Facilities (3)**

Prerequisite: Recreation 101.

Design principles and concepts applied to planning and development of park and recreation areas and facilities. (Formerly titled Management of Recreation Areas and Facilities.)

**580. Leisure and the Aging Process (3)**

Concepts of the relationship between leisure and gerontology are examined. Influence of leisure and recreation on work and life satisfaction of older adults.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**Religious Studies**

In the College of Arts and Letters

**Faculty**

Chair: Sparks

Professors: Anderson, Downing, Friedman, Jordan, Sparks

Associate Professor: Khalil

Assistant Professors: Hermansen, Holler

Lecturers: Johnson, Mueller

**Offered by the Department**

Major in religious studies with the A.B. degree in liberal arts and sciences.  
Minor in religious studies.

**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.

**Religious Studies Major****With the A.B. 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.

**Preparation for the Major.** Religious Studies 101, 201; Philosophy 101 or 102. (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.** 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 24 upper division units in religious studies to include either Religious Studies 301 or 305 and at least three units from courses included in each of the three areas listed below, and Religious Studies 498:

**Western Religious Traditions:** Religious Studies 310, 312, 314, 316, 318, 330, 340, 522.

**Eastern Religious Traditions:** Religious Studies 401, 403, 506, 508.

**Religion and Culture:** Three units from Religious Studies 350, 353, 354, 360, 363, 365.

**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, 330, 340, 522.

**Eastern Religions:** Religious Studies 401, 403, 506, 508.

**Religion and Culture:** Religious Studies 350, 353, 354, 360, 363, 365.

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.

**LOWER DIVISION COURSES****101. World Religions (3) I, II**

Major figures, attitudes and teachings of world religions.

**201. Ways of Understanding Religion (3)**

Examples of major approaches to study of religious phenomena, and central issues in methodology.



**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. Honors Course (1-3) I, II**

Refer to Honors Program.

**301. Hebrew Scriptures (3) I, II**

Prerequisite: Three units of religious studies.

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**

Prerequisite: Three units of religious studies. Prerequisite 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.

**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.

**340. Islam (3)**

Prerequisite: Three units of religious studies.

Major doctrines, practices and developments from the time of Mohammed to the present.

**350. Dynamics of Religious Experience (3)**

Prerequisite: Three units of religious studies.

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) II**

Prerequisite: Three units of religious studies.

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)**

Prerequisite: Three units of religious studies.

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)**

Prerequisite: Three units of religious studies.

Relation of the natural sciences to religious questions of nature, humanity and destiny.

**365. Religion and Contemporary Moral Issues (3)**

Prerequisite: Three units of religious studies.

Critical exploration of moral dilemmas (biomedical, social, economic, political) from eastern and western religious perspectives.

**396W. Writing/Research Methods (1) II Cr/NC**

Prerequisite: Six upper division units in religious studies.

Theory and practice of research and writing in field of religious studies. Must be taken in conjunction with an upper division course in religious studies to satisfy upper division writing requirement.

**401. Religions of India (3)**

Prerequisite: Three units of religious studies.

Phenomenological studies in the major religious traditions of India, especially Hinduism and Buddhism.

**403. Religions of the Far East (3)**

Prerequisite: Three units of religious studies.

Phenomenological studies in the major religious traditions of east Asia, especially China and Japan.

**480. Ways of Spiritual Transformation (3)**

Doctrines and practices of metaphysical self-transformation; studies in 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) I**

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.

**508. Spiritual Traditions of East Asia (3)**

Prerequisite: Three units of religious studies.

East Asian religious and philosophical modes of thought, especially those of China and Japan; reading and analysis of primary texts in translation.

**518. The Oracular Tradition (3)**

Prerequisite: Three units of religious studies.

Oracular traditions of East and West, with special attention to the *I Ching* and the *Tarot*.



**522. Religion in America (3)**

Prerequisite: Three units of religious studies.

Selected topics in religion in America, such as Deism, transcendentalism, pragmatism, church-state relations, Jewish identity, etc. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**580. A Major Figure (3) I, II**

Prerequisite: Three units of religious studies.

Life, works and significance of one major figure in a religious tradition. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**581. A Metaphysical Doctrine (3) I, II**

Prerequisite: Three units of religious studies.

Systematic study of a selected theme or problem basic to the teachings of one of the major religious traditions. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**GRADUATE COURSES**  
Refer to the Graduate Bulletin

## Russian

### In the College of Arts and Letters

**Faculty**

Chair: Wulbern

Professors: Dukas, Fetzner, Kozlik

**Offered by the Department of  
German and Russian Languages and Literatures**

Master of Arts degree in Russian.

Major in Russian with the A.B. degree in liberal arts and sciences.

Teaching major in Russian for the single subject teaching credential in foreign languages.

Minor in 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.

**Russian Major****With the A.B. 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."

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 101, 102, 201, 202, 211 and 212. (21 units.)

**Foreign Language Requirement.** The foreign language requirement for graduation is automatically fulfilled through course work 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**

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

This major may be used by students in teacher education as an undergraduate major for the A.B. 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 101, 102, 201, 202, 211, and 212. (21 units.)

**Foreign Language Requirement.** The foreign language requirement for graduation is automatically fulfilled through course work 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 15 units in Russian to include Russian 202 and six units of 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.

### 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.

## Foreign Language Requirement for the A.B. 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 201 or the equivalent level of achievement. The usual sequence of course work is Russian 101, 102, and 201. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

### 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 101, 102, 201, 202, 301, 302 taken out of sequence.

#### 101. First Course in Russian (4½) I, II

Four lectures and one hour of laboratory.

Pronunciation, oral practice, reading in Russian literature, minimum 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.

#### 102. Second Course in Russian (4½) I, II

Four lectures and one hour of laboratory.

Prerequisite: Russian 101 or two years of high school Russian.

Continuation of Russian 101. Not open to students who have completed four years of high school Russian unless the fourth course was completed five or more years ago.

#### 201. Third Course in Russian (4) I

Prerequisite: Russian 102 or three years of high school Russian.

Practical application of the basic principles of the language. Oral practice, reading in Russian of cultural material.

#### 202. Fourth Course in Russian (4) II

Prerequisite: Russian 201.

Continuation of Russian 201.

#### 211. Conversation (2) I

Prerequisite: Russian 102 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 201 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 202 and 212.

Advanced grammar and stylistics; intensive writing practice; reports based on outside reading.

#### 302. Advanced Grammar and Composition (3)

Prerequisites: Russian 202 and 212.

Advanced grammar and stylistics; intensive writing practice; reports based on outside reading.

#### 305A-305B. Survey of Russian Literature (3-3)

Russian literature from its beginnings, with emphasis on the nineteenth and twentieth centuries.

#### 430. Russian Civilization (3) I, II

Prerequisites: Russian 202 and 212.

Development of Russian culture; emphasis on painting, music, architecture, and literature within a social context. Taught in Russian.

#### 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.

Individual study. Maximum credit six units.

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### 555. The Russian Short Story, Drama and Poetry of the Nineteenth Century (3)

Development of the Russian short story, drama and poetry of the nineteenth century. (Formerly numbered Russian 555A-555B.)

#### 561. The Russian Novel of the Nineteenth Century (3)

Development of the Russian novel of the nineteenth century. (Formerly numbered Russian 561A-561B.)

#### 563. Russian Literature of the Twentieth Century (3)

Poetry, prose and drama of the twentieth century.

#### 580. Russian Syntax and Stylistics (3)

Prerequisites: Russian 301 and 302.

The structure of contemporary Russian.

#### 581. Russian Phonetics and Morphology (3)

Prerequisites: Russian 202 and 212.

The sounds and forms of contemporary Russian.

#### 596. Topics in Russian Studies (3) I, II

Prerequisite: Russian 305B (for literary topics) or Russian 302 (for linguistic topics).

Topics in Russian language, literature, or linguistics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

### GRADUATE COURSES Refer to the Graduate Bulletin.



## Social Science

In the College of Arts and Letters

### Faculty

Social Science is administered through the Social Science Committee, composed of faculty members from the Departments of Anthropology, Economics, Geography, History, Political Science and Sociology. Albert O'Brien, Department of History, is coordinator.

### 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 A.B. 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."

**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, 115, 120A-120B; (6) Political Science 101, 102, 103; (7) Sociology 101, 110. 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 History 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, 370, 460, 461, 480, 481, 483.

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:

Afro-American Studies 320, 331, 380, 445, 470, 471A-471B.  
American Indian Studies 303, 400, 440, 450, 460.  
Mexican-American Studies 301, 303, 320, 350A-350B, 370, 460, 461, 480, 481, 483.  
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, 340, 341A-341B, 360, 370, 375, 390, 430, 480.

### Emphasis in Africa and the Middle East

The adviser for this emphasis is Dr. Wade C. Pendleton, Department of Anthropology.

**Preparation for the Major.** History 100, 101, Humanities 157 and/or 158, and three to six units selected from Anthropology 101, 102; Comparative Literature 270A, 270B; Economics 101, 102; Geography 101, 102. (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. 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 History 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 and religious studies. **Required courses:** Anthropology 449 or 474; Geography 335; six units from History 473A, 473B, 574, 475A and 475B; and Political Science 363 or 364. In addition, the following courses are recommended: Anthropology 350, 424, 426, 429; Art 365, 569; Comparative Literature 535; Economics 365, 489; Political Science 361, 381; Religious Studies 340.

### Emphasis in Environment

The advisers for this emphasis are Dr. Warren Johnson, Department of Geography, and Dr. Douglas Strong, Department of History.

**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 110. Additional recommended courses include Biology 140 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 History 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 or 453, Geography 370 or 371, Political Science 334 or 335, and three additional units from this list; and 18 units from at least three departments selected from Anthropology 428; Economics 452, 453, 454, 458, 555; Geography 354, 370, 371, 401, 570, 573, 574, 575, 576; History 340, 540; Political Science 334, 335; Sociology 350, 406, 508, 557. Recommended: Biology 454, 500, 544; Geological Sciences 303; Physics 301.

## Social Science Major

### For the Single Subject Teaching Credential

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education. This major may be used by students in teacher education as an undergraduate major for the A.B. degree in liberal arts and sciences.

**Preparation for the Major.** Three units of statistics selected from Economics 201, Mathematics 250, Political Science 201, Psychology 270, or Sociology 201. Twenty-seven units distributed as follows: Economics 100 or 101; 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 396W or History 430W or Sociology 396W with a grade of C (2.0) or better.

**Major.** A minimum of 30 upper division units distributed as follows:

Six-units from either history or political science selected from History 310A-310B, 410A-410B, 422A-422B, 544A-544B, 545A-545B, 546A-546B, 547A-547B, 548A-548B; or from Political Science 305, 306, 320, 325, 338, 345, 347A-347B, 348, 530, 531, 536, 537.

Nine units from either history or political science selected from History 305A-305B, 407A-407B, 415A-415B, 420, 421, 473A-473B, 475A-475B, 551A-551B; or from Political Science 301A-301B, 302, 356, 358, 359, 361, 363, 364, 375, 378, 381, 566, 568.

Three units of geography selected from Geography 312, 321, 350, 351, 354, 356, 357, 371.

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 Afro-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 anthropology, economics, psychology, or sociology selected from Anthropology 304, 350, 426, 428, 429, 432; Economics 330, 336, 338, 360, 489; Psychology 330, 340, 347, 350, 351, 455; Sociology 325, 350, 400, 404, 422, 424, 506, 514, 535, 536, 537, 547, 557.

### Quantitative Analysis in the Social Sciences Certificate

The Director of the Social Science Research Laboratory is coordinator for this program.

The purpose of this certificate program is to prepare students to be able to carry out social science work which is often required in public agencies and the private sector.

Students must apply for admission to Certificate program before the completion of nine units.

The certificate requires fifteen units, nine to twelve of which must be upper division to include:

Three units selected from Economics 201, Political Science 201, Sociology 201; three units selected from Mathematics 107 or three one-unit sections of 499 (Computer Modules offered by Social Science Research Laboratory) of the student's choice in a social science department; six units selected from Economics 347\*, Geography 585\*, Political Science 515A\*, Sociology 464\*; three units selected from among the four upper division courses listed above or from Economics 541, Geography 582, Political Science 325, Sociology 560.

The nine upper division units must include work from three different departments. Three to six units of equivalent courses may be accepted with the approval of the Certificate Coordinator.

\* Additional prerequisites required for these courses.

#### UPPER DIVISION COURSE (Intended for Undergraduates)

##### 498. Senior Seminar (3)

Advanced reading and independent research on selected topic integrating at least two of the social science disciplines. Usually taught by two instructors representing two of the six social science disciplines of anthropology, economics, geography, history, political science and sociology.

#### GRADUATE COURSES Refer to the Graduate Bulletin.

## School of Social Work

### In the College of Human Services

The undergraduate and graduate programs of the School of Social Work are accredited by the Commission on Accreditation of the Council on Social Work Education.

#### Faculty

Emeritus: Baily, Brennen, Clary, Herman, Kahn, Maxwell, Morgan, Ontell, Reichert, Stumpf, Watson, Witte

Director: Harbert

Associate Director: Valle

Professors: Butler, Davis, Griffin, Harbert, Haworth (Graduate Coordinator), Ishikawa, Kelley, Kukkonen (Coordinator of Field Instruction), Lee, Stanford, Valle

Associate Professors: Ellis, Gallegos, Guidry, Pritchard, Riehman, Roberts-DeGennaro, Rumelhart, Sardinias, Schmidt, Siman (Undergraduate Coordinator)

Assistant Professors: Ajemian, Cohen, Harris, Jones, Lockery, Raymer, Sucato

Lecturers: Bassoff, Marsden, Means, Noel, Peer, Spitzer

#### Offered by the School of Social Work

Master of Social Work degree.

Major in social work with the A.B. degree in liberal arts and sciences.

Major in social work with the A.B. degree in applied arts and sciences.

Minor in social work.

Human Services Paraprofessional Certificate

### Programs and Objectives

The School of Social Work offers a two-year graduate curriculum leading to the Master of Social Work degree under approval granted by the Board of Trustees of The California State University and Colleges in May 1963. The curriculum was developed in close cooperation with the Council on Social Work Education and was fully accredited by its Accreditation Commission in June 1966 and September 1979.

The School of Social Work is committed to ethnic and cultural diversity in its student body, its faculty, the populations it serves and the unique concerns on which it focuses.

The objectives of the School of Social Work at San Diego State University are to prepare students with the essential knowledge, philosophy and basic skills for their responsible practice in the profession of social work. In order to achieve these objectives, the School will assist students to develop a philosophy which recognizes individual human welfare as the purpose and goal of social policy; to acquire attitudes and values that will permit the development and maintenance of professional relationships and professional standards; to develop the discipline and self-awareness essential to the professional social worker; to attain a level of competence necessary for professional practice; to acquire knowledge in methods of research in social work; and to accept responsibility for the continued development of their competence in the practice of social work.

### Social Work Major

#### With the A.B. Degree in Liberal Arts and Sciences or in Applied Arts and Sciences

All candidates for a degree in liberal arts and sciences or 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 primary educational objective of this major is preparation for beginning professional social work practice. In addition, this major serves broad educational purposes based on an understanding of contemporary social welfare programs and prepares for professional social work education at the graduate level. The major prepares for immediate employment in those social work positions which do not require professional social work education on a graduate level.



**Preparation for the Major.** Social Work 110, 120, 130; Biology 100; Economics 100; Health Science 101; Psychology 101; Sociology 101; Psychology 270 or Sociology 201 or Mathematics 119. (27 units.)

**Foreign Language Requirement for Liberal Arts and Sciences only.** 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 pattern 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.

**Recommended:** Biology 336 and 336L, Psychology 330, Sociology 422, and courses from anthropology, literature, history, philosophy, political science, economics, psychology and sociology. Students should consult with their adviser in social work for selection and arrangement of courses.

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

## Social Work Minor

The minor in social work consists of 24 units to include Social Work 110, 120; Psychology 101; Sociology 101; and Social Work 360, 370A, 381, and 496 or 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.

## Human Services Paraprofessional Certificate Program

This certificate is designed primarily for ex-offenders and ex-substance abusers who seek paraprofessional positions in human services. 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 A.B. 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 Coordinator of the Undergraduate Social Work Program.

Awarding of the certificate requires completion of an approved pattern of ten courses (30 units) with a minimum grade point average of 2.0, to include Social Work 350, 360, 370B\*, 381, 382, 489A\*, 489B\* (3 units); Health Science 296; Philosophy 101; and three units of an elective in another professional discipline with consent of coordinator. Course offerings under this program may only be taken in the on-campus program.

For further information, consult the Coordinator, Undergraduate Social Work Program.

\* Prerequisites waived for these courses.

## LOWER DIVISION COURSES

**Note:** All social work courses numbered 110-596 formerly offered under rubric of social welfare.

### 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 field work.

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.

## UPPER DIVISION COURSES (Intended for Undergraduates)

### 350. Cultural Pluralism (3) I, II

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 Foundations section of General Education.

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

Prerequisite: Social Work 370A.

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.

**550. Seminar in Administration and Decision Making in Human Service (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.

Relationship between the development of social policy and its actual implementation through program development and delivery of human services. Administrative actions including decision making, communication with regulatory and legislative bodies, and budget development are considered in the ways that policy is shaped and reflected through social programs.

**596. Experimental Topics (1-4)**

Selected topics in social work. 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.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**Sociology**

In the College of Arts and Letters

**Faculty**

Emeritus: Daniels, Kirby, Klapp, Milne, Somerville, Wendling

Chair: Weeks

Professors: Bloomberg, Cottrell, DeLora, El-Assal, Gillette, Hough, Johnson, Mouratides, Sanders, Sandlin, Schulze, Sorensen, Weeks, Winslow, Wood

Associate Professors: Buck, Chandler, Emerick, Gay, Hohm, Ima, Kennedy, Kirkpatrick, Kolody, Preston, Scheck, Stephenson, Werner

Lecturer: Clanton

**Offered by the Department**

Master of Arts degree in sociology.

Major in sociology with the A.B. degree in liberal arts and sciences.

Minor in sociology.

**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 A.B. 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."

Students majoring in sociology must complete a minor in another field.

**Preparation for the Major.** Sociology 101, 110 and 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.** A minimum of 27 upper division units in sociology to include three units in theory (400, 401 or 403); three units in research methods (460, 464 or 465) (see exception below under social research); three units in social psychology (440); three units in social organization (404, 422, 424 or 432); three units in field internship (480); and 12 units (see exception under social research) selected from one of the following areas of specialization:

**General Sociology:** Sociology 325, 350, 485, 520, 521, 535, 537, 538, 539, 545, 557.

**Family and Intimate Relations:** Sociology 333, 334, 527, 528, 534, 535, 536.

**Health and Social Behavior:** Sociology 350, 523, 526, 528, 534.

**Law and Society:** Sociology 510, 513, 514, 515, 516, 518, 537.

**Social Change:** Sociology 350, 506, 508, 519, 527, 546, 547, 557.

**Social Interaction and Intergroup Relations:** Sociology 325, 333, 334, 485, 534, 546, 547, 557.

**Social Research:** Sociology 460, 464, 465, 560, and any other 500-level course in sociology combined with Sociology 405.



## Sociology Minor

The minor in sociology consists of 15-21 units, twelve of which must be upper division units, nine of which must be in one of the following areas (exclusive of prerequisites):

**Theory and Methods:** Prerequisites: Sociology 101\*, 201. Sociology 400, 401, 403, 405, 460, 464, 465.

**Power Relations and Inequality:** Prerequisites: Sociology 101\*, 422, 440. Sociology 325, 333, 424, 537, 546, 547, 557. (Sociology 422 is prerequisite to 537; Sociology 440 is prerequisite to 546.)

**Social Change:** Prerequisites: Sociology 101\*. Sociology 350, 404, 506, 508, 519, 546, 547, 557. (Sociology 440 is prerequisite to 546.)

**Law and Society:** Prerequisites: Sociology 101\*. Sociology 440, 510, 513, 514, 515, 516, 518, 523.

**Health and Social Behavior:** Prerequisites: Sociology 101\*. Sociology 350, 510, 523, 526, 527, 528, 534.

**Sociology of Organizations and Institutions:** Prerequisites: Sociology 101\*. Sociology 422, 432, 440, 485, 520, 521, 538, 539.

**Social Interaction and Intimate Relations:** Prerequisites: Sociology 101\*. Sociology 333, 334, 440, 534, 535, 536.

**Social Research:** Prerequisites: Sociology 101\*, 201\*. Sociology 460, 464, 465, 560.

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.

\* Unless waived by the department.

## LOWER DIVISION COURSES

### 101. Introductory Sociology (3) I, II

This course is prerequisite to all upper division courses in sociology.

Basic Theoretical perspectives, concepts, and methods of sociology applied to analysis of social issues and processes. Selected topics include, e.g., social stratification, social organization, minority-majority relationships, social change, deviant behavior.

### 110. Contemporary Social Problems (3) I, II

Prerequisite: Sociology 101.

Modern social problems recognizing the sociological factors involved. Emphasis on the scientific method of approach. An evaluation of various causes and solutions of problems. Not open to students with credit in Mexican-American Studies 115.

### 201. Elementary Social Statistics (3) I, II

Prerequisites: Sociology 101 and qualification on the Mathematics Placement Examination.

Analysis and presentation of elementary materials in the fields of sociology and social work. Tabular and graphic presentation, analysis of frequency distribution, trends, simple correlation, sampling and reliability techniques. Students with credit or concurrent registration in another statistics course will be awarded a total of four units for the two (or more) courses.

### 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. Honors Course (1-3)

Refer to Honors Program.

### 325. Minority Group Relations (3) I, II

Prerequisite: Sociology 101.

Theories of ethnic prejudice. Analysis of racial and ethnic discrimination. An analytical inquiry into sources of friction and causes of conflict between majority and minority groups.

### 333. Sex Roles In Contemporary Societies (3) I, II

Prerequisite: Sociology 101.

Male-female relationships in occupational, educational and familial settings viewed historically and cross-culturally. Changing concepts of femininity and masculinity. Images of men and women in literature, in the mass media, and in laws and judicial decisions.

### 334. Love, Jealousy, and Envy (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. Psychological approaches to understanding and management of emotions analyzed from a sociological point of view. Some implications for self-understanding are developed.

### 350. Population and Contemporary Issues (3) I, II

Prerequisite: Sociology 101.

Analysis of population processes as they affect and are affected by such contemporary issues as rapid world population growth, famine, ecological pressures, abortion, women's liberation, racial and ethnic relations, and illegal migration.

### 396W. Writing in Sociology (3)

Prerequisite 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. 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.

### 400. History of Social Thought (3) I

Prerequisite: Sociology 101.

Development of social thought prior to the appearance of sociology as a distinct scientific discipline. Major emphasis on European contributions.

### 401. Classical Sociological Theory (3) I, II

Prerequisite: Sociology 101.

Theories of the major early European and American sociologists, including Marx, Weber, Durkheim, Pareto, Cooley, Mead and others.

### 403. Contemporary Sociological Theory (3)

Prerequisite: Sociology 101.

Types and trends of contemporary sociological theory. Selected theoretical works.

### 404. Social Change (3) I, II

Prerequisite: Sociology 101.

Social change at the interpersonal, institutional and societal levels in a comparative perspective. Detailed analysis of modernization.

### 405. Sociological Laboratory II (1)

Three hours of laboratory.

Prerequisite: Must be taken in conjunction with a three-unit upper division course.

The application of experimental, quantitative or qualitative methods to sociological problems and/or the use of experimental, social simulation teaching techniques.

### 422. Social Organization (3) I, II

Prerequisite: Sociology 101.

Major forms of social organization such as institutions, associations, bureaucracy, primary groups and stratification. Study of underlying processes of development, social control and organizational change.

### 424. 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; process of upward and downward social mobility; and relationship of social class to politics, the economy, and other institutions. (Formerly entitled "Social Stratification.")

### 432. Formal Organization (3)

Prerequisite: Sociology 101.

The structure and dynamics of various types of complex formal organization. Their development, internal structure and processes, external relations and function in contemporary society.



**440. Social Psychology: Sociological Approaches (3) I, II**

Prerequisite: Sociology 101.

Survey of the major theoretical frameworks, problems and findings of sociology and social psychology concerning group behavior and group membership, the socialization of the individual, and processes of social interaction.

**460. Quantitative Methods in Social Research (3) II**

Prerequisite: Sociology 201.

The use of parametric and nonparametric techniques in the analysis of social research data; including analysis of variance; covariance; multiple and partial correlational techniques.

**464. Survey and Experimental Research Methods (3) I, II**

Prerequisite: Sociology 201.

Examination of the research process from research design through data processing, analysis and interpretation. Emphasis on quantitative research techniques including sample surveys, questionnaire construction, scaling techniques and experimental designs.

**465. Qualitative Research Methods (3)**

Prerequisite: Sociology 201.

Examination of field research methods including interviewing, observation, participant observation and case studies. Problems in research design, gaining and maintaining rapport, and analysis and interpretation of data.

**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.

**485. Contacts and Careers: A Sociological Perspective (3) I, II**

Prerequisite: Sociology 101.

Sociological examination of how careers are initiated and shaped by the social network. How social networks and careers mutually influence one another. Link between social stratification and career paths.

**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)****506. Modernization of Traditional Societies (3)**

Prerequisite: Sociology 101.

Examines theories of social change relative to industrialization and urbanization of pre-industrial societies. Comparative study of institutional and social-psychological consequences of industrialization, utilizing historical and contemporary study of macrosocial change.

**508. Sociology of the Future (3)**

Prerequisite: Sociology 101.

Examines sociological aspects of alternative futures and the role of contemporary behavior in creating those futures. Analysis of projections in selected areas such as family, technology, work and leisure.

**510. Sociology of Deviance (3) I, II**

Prerequisite: Sociology 101.

Survey of many alleged abnormal phenomena in society as seen in society today in various forms of individual, family, community and world disorganization, such as crime, prostitution, extreme alcoholism, migratory workers, divorce, revolution, war, etc.

**513. Criminology (3) I, II**

Prerequisite: Sociology 101.

The extent and characteristics of crime; consideration of physical, mental, economic and sociological causes of crime

**514. Juvenile Delinquency (3) I, II**

Prerequisite: Sociology 101.

The nature and extent of delinquency; the causative factors involved; methods of control and prevention, with special attention to the protective and remedial measures offered by the school, home, juvenile court, correctional institutions and camps, probation and parole, and recreational agencies.

**515. Societal Processing of Criminals and Delinquents (3)**

Prerequisite: Sociology 101.

Sociological features of social processing of criminals and delinquents in terms of sociological theory, concepts and research.

**516. Sociology of Punishments and Corrections (3)**

Prerequisite: Sociology 101.

Historical, theoretical and empirical analyses of punishment and rehabilitation, analysis of contemporary correctional settings, and examination of prison populations and alternatives to prison.

**518. Women and Crime (3)**

Prerequisite: Sociology 101.

Female criminality in our society and the feminist movements. Examination of social science literature on women and crime and the experience of women with the criminal justice system, the experience of women in prison, crimes against women, and how sexuality has been treated as crime.

**519. Topics in Comparative Societies (3)**

Prerequisite: Sociology 101.

Analysis of contemporary social structure, the process of modernization and current social problems in selected areas of the world. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**520. Industrial Sociology (3) I, II**

Prerequisite: Sociology 101.

Industrial bureaucracies as they relate to social environment. Consequences of various models of organization for managerial, worker, and marginal work roles. Functions of labor unions, and industrial structure and conflict.

**521. Sociology of Occupations and Professions (3) I, II**

Prerequisite: Sociology 101.

Division of labor, status ranking of occupations, authority structures, occupational and professional organization, occupational socialization, problems of identity and role conflict.

**523. The Sociology of Mental Illness (3) I, II**

Prerequisite: Sociology 101.

The social definition, ecology and control of mental illness across various societies. The implications of social differentiation, stratification and urbanization upon the incidence, prevalence and control of mental illness and the use of these empirical problems for sociological research.

**526. Sociology of Health and Illness (3) I, II**

Prerequisite: Sociology 101.

Sociological conception of health, disease, and healing; socialization, roles, conflict and change in medical work settings; health and medical institutions in comparative sociocultural contexts.

**527. Sociology of Aging (3) I, II**

Prerequisite: Sociology 101.

Status and roles of men and women in the second half of the life cycle. Ethnic, sex and class variables in aging. Cross-cultural comparisons of occupational, educational, familial, recreational and political opportunities for the aging.



**528. Sociology of Death (3) I, II**

Prerequisite: Sociology 101.

Examines sociological concepts and theories of the process of dying. Comparative study of death and dying with emphasis on social, psychological and social organization approaches. Consideration of contemporary social-ethical issues surrounding dying in our society.

**534. Sexuality in Modern Society (3) I, II**

Prerequisite: Sociology 101.

Analysis of landmark sex research and pornography in the United States and in selected other societies. Changing norms in premarital, marital and extramarital attitudes and behaviors. Implications for the individual, family and society.

**535. The American Family and Its Alternatives (3) I, II**

Prerequisite: Sociology 101.

Analysis of contemporary dating, engagement, marriage, family, and other intimate relationships in the United States as they are affected by changes in the culture.

**536. The Family in Cross-Cultural Perspective (3)**

Prerequisite: Sociology 101. Recommended: Sociology 535.

Comparative study of selected family systems in the past and present. Family and para-family forms in intentional communities of the 19th century compared with contemporary communal experiments. Ethnic and class differences in family organization. (Not open to students with credit in Family Studies and Consumer Sciences 536.)

**537. Political Sociology (3)**

Prerequisite: Sociology 422.

Social organization of political processes. Power and authority, social class, primary groups, collective behavior, social change and other sociological factors considered in their relationships to political processes.

**538. Sociology of Religion (3)**

Prerequisite: Sociology 101. Recommended: Sociology 401 and 546.

The role of religion in society as cult and institution, including primitive religion, modern sects and churches, ritual, secularization and religious movements.

**539. Sociology of Education (3) I, II**

Prerequisite: Sociology 101.

Social organization of education, teaching as a profession. Class, ethnic and other social factors affecting the educational process. Educational institutions and the community.

**545. Sociology of Mass Communication (3) II**

Prerequisite: Sociology 101. Recommended: Sociology 440 and 546.

Sociological analysis of the processes and effects of mass communications in different social systems, their functions and dysfunctions and their relationships to other social institutions.

**546. Collective Behavior (3)**

Prerequisite: Sociology 440.

The basic processes of social behavior in masses and groups, including crowd behavior, fads, fashions, crazes, panics, rumors; sects and cults; heroes and scapegoats; social movements; effects of mass communication.

**547. Protests, Reforms and Revolutions (3) I, II**

Prerequisite: Sociology 101. Recommended: Sociology 422 and 545.

Revolutionary and reform movements in relationship to the larger society. Conditions leading to development of social movements, emergence of leadership, ideologies, strategies, recruitment of members and social consequences, case studies in depth.

**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.

**558. Urbanization and Modernization in Latin America (3)**

Prerequisite: Sociology 101.

Impact of urbanization and modernization on status, class, and power relations in Latin America. Changes in beliefs, attitudes and values as affected by the processes of urbanization and modernization.

**560. Applied Sociological Research (3) I, II**

Prerequisite: Sociology 464 or 465.

Practical research skills learned while participating in original and applied sociological research projects. Group, rather than individual, research projects.

**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 six units. (Formerly numbered Sociology 511.)

**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, Sender

Chair: Barrera

Professors: Barrera, Case, Christensen, Head, Jiménez-Vera, Lemus, Segade, Silverman

Associate Professors: Higgs, O'Brien, Santaló, Talamantes, Weeter, Young

#### Offered by the Department of

#### Spanish and Portuguese Languages and Literatures

Master of Arts degree in Spanish.

Major in Spanish with the A.B. degree in liberal arts and sciences.

Teaching major in Spanish for the single subject teaching credential in foreign languages.

Minor in Spanish.

Certificate in Translation and Certificate in Court Interpreting.

### 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 A.B. 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."

Students majoring in Spanish must complete a minor in another field approved by the departmental adviser in Spanish.

**Preparation for the Major.** Spanish 101, 102, 201, 202, 211, and 212 or equivalents. See adviser. (21½ units.)

**Foreign Language Requirement.** The foreign language requirement for graduation is automatically fulfilled through course work 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 Spanish to include Spanish 301, 302; and 18 units selected from one of the following areas of specialization:

**Hispanic Literature:** Spanish 305A-305B, 306A-306B; and six units of electives with no more than three units from Spanish 440, 441, 442.

**Spanish Linguistics:** Six units selected from Spanish 305A-305B, 306A-306B; Spanish 448, 449 or 450; and six units of electives.

### Spanish Major

#### For the Single Subject Teaching Credential in Foreign Languages

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

This major may be used by students in teacher education as an undergraduate major for the A.B. 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 101, 102, 201, 202, 211 and 212. (21½ units.)

**Foreign Language Requirement.** The foreign language requirement for graduation is automatically fulfilled through course work 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 301, 302; six units from 305A-305B, 306A-306B; Spanish 448, 450, 561; six units from 440, 441, 442; and three units of upper division electives.

### Spanish Minor

The minor in Spanish consists of a minimum of 15 units in Spanish, 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.

### Translation Certificate and Court Interpreting Certificate

The Department of Spanish and Portuguese Languages and Literatures offers a Certificate in Translation and a Certificate in Court Interpreting. Both certificates require 15 units in Spanish dealing with problems of translation and/or court interpreting and include both translation and interpreting from Spanish to English and from English to Spanish.

Prospective candidates for the certificates should possess a bilingual facility in Spanish and English. All students must complete with a grade of B or better English 305W (or pass the University Upper Division Writing Competency Examination), and Spanish 301, 302 and 450 prior to starting work on either certificate.

After meeting the basic requirements for admission, a student must complete 15 units with a GPA of 3.0 or better chosen from the following courses: Spanish 304, 493, 494, 556, 557, and either 499 or 596 when offered with appropriate certificate-related content. Students working for the Certificate in Court Interpreting must take six units in Spanish 494 as part of the 15-unit program.

Upon completing 15 units from the course work, students must take a departmental examination either for the Certificate in Translation or for the Certificate in Court Interpreting. Upon successful completion of an examination, the student shall be awarded the appropriate certificate.

#### 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.

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 301.

### Foreign Language Requirement for the A.B. 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 201 or the equivalent level of achievement. The usual sequence of course work is Spanish 101, 102, and 201. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.



### 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 101, 102, 201, 202, 301 taken out of sequence.

#### 101. Elementary (4½) I, II

Four lectures and one hour of 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.

#### 102. Elementary (4½) I, II

Four lectures and one hour of laboratory.

Prerequisite: Spanish 101 or two years of high school Spanish.

Continuation of Spanish 101. Not open to students who have completed four years of high school Spanish unless the fourth course was completed five or more years ago.

#### 201. Elementary (4½) I, II, S

Four lectures and one hour of laboratory.

Prerequisite: Spanish 102 or three years of high school Spanish.

Continuation of Spanish 102, with additional outside readings and oral and written reports.

#### 202. Intermediate (4) I, II, S

Prerequisite: Spanish 201 or four years of high school Spanish.

Review of essentials of Spanish grammar. Readings in Spanish of cultural materials, short stories, novels or plays; oral practice, outside readings with oral and written reports.

#### 211. Intermediate Conversation and Writing (2)

Prerequisite: Spanish 102 or three years of high school Spanish.

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 for Spanish 211-Y.

#### 211-Y. Intermediate Conversation and Writing in Mexico (3)

Prerequisite: Spanish 102 or three years of high school Spanish.

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; course arranged in tour fashion in Mexico during winter interim or presummer period. Not open to students with credit for Spanish 211.

#### 212. Intermediate Conversation and Writing (2) I, II, S

Prerequisite: Spanish 201 and 211 or four years of high school Spanish.

Continuation of Spanish 211. May be taken concurrently with Spanish 202.

#### 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 Spanish are taught in Spanish unless otherwise stated.**

#### 301. Advanced Oral and Written Composition (3) I, II, S

Prerequisite: Spanish 202 or five years of high school Spanish.

Advanced Spanish composition. All class discussions conducted in Spanish. Not open to students with credit for Spanish 301-Y.

#### 301-Y. Advanced Conversation and Writing in Mexico (3)

Prerequisite: Spanish 211 or 211-Y and 212 or five years of high school Spanish or near native-level proficiency.

Emphasis on the spoken language with supporting practice in the written language; conversation on assigned social, cultural or literary topics at an advanced level; all class discussion conducted in Spanish; course arranged in tour fashion in Mexico during winter interim or pre-summer period. Not open to students with credit for Spanish 301.

#### 302. Advanced Oral and Written Composition (3) I, II, S

Prerequisite: Spanish 301.

Continuation of Spanish 301, with additional outside reading and oral and written reports. All class discussions conducted in Spanish.

#### 303. Advanced Composition and Style (3)

Prerequisites: Spanish 301 and 302.

Expository writing course, based on study of outstanding works of imaginative literature, and the arts; emphasis on mastery of style and organization.

#### 304. Introduction to Spanish-English/English-Spanish Translation (3) I, II

Prerequisite: Spanish 450.

Problem areas in Spanish-English and English-Spanish translation. Theoretical problems of translation; linguistic obstacles; lexical problems of translation; interpersonal communication, morphology and syntax.

#### 305A-305B. Survey Course in Spanish Literature (3-3)

Prerequisite: Spanish 202.

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 202 and 212.

Reading from representative Spanish-American authors during colonial, revolutionary and modern periods.

#### 440. Spanish Civilization (3)

Prerequisites: Spanish 202 and 212.

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 202 and 212 (except at the Imperial Valley Campus.)

Spanish-American cultures, with emphasis on literature, philosophy and the arts.

#### 442. Mexican Civilization (3)

Prerequisites: Spanish 202 and 212.

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

Prerequisites: Spanish 301 and 302.

Structural, historical and applied Spanish linguistics. (Formerly numbered Spanish 548.)

#### 449. Phonetics and Phonemics (3) I, II, S

Prerequisites: Spanish 301 and 302.

Sounds of Spanish, and Spanish phonemic systems. Problems involved in teaching of Spanish pronunciation to English-speaking students. (Formerly numbered Spanish 549.)

#### 450. Advanced Grammar (3) I, II, S

Prerequisites: Spanish 301 and 302.

Significant systematic features of modern Spanish grammar with analysis of passages from literature. Required for credential applicants. (Formerly numbered Spanish 490.)

#### 460. Golden Age Literature (3) I, II, S

Prerequisites: Spanish 305A-305B.

Major writers and works, concentrating on prose and lyric poetry. (Formerly numbered Spanish 550.)



- 470. Spanish-American Poetry (3) I, II, S**  
Prerequisites: Spanish 306A-306B.  
Spanish-American poetry of the nineteenth and twentieth centuries. (Formerly numbered Spanish 570.)
- 471. Spanish-American Short Story (3) I, II, S**  
Prerequisites: Spanish 306A-306B.  
Principal Spanish-American short story writers. (Formerly numbered Spanish 571.)
- 472. Dramatic Expression in Modern Spanish-American Theatre (3) I, II, S**  
Prerequisites: Spanish 306A-306B.  
Principal Spanish-American dramatists and movements. Use of dialogue as a dramatic expression in Modern Spanish-American theatre with examples from novels. (Formerly numbered Spanish 572.)
- 493. Advanced Spanish-English/English-Spanish Translation (3) I, II**  
Prerequisites: Spanish 304, 450.  
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). (Formerly numbered Spanish 545.)
- 494. Court Interpreting in Spanish-English and English-Spanish (3) I, II**  
Prerequisites: Spanish 304, 450.  
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. (Formerly numbered Spanish 544.)
- 495. Intensive Spanish for Public School Personnel (6) S**  
Prerequisite: Limited to persons working in the field of education (inservice students).  
Beginning through Advanced Spanish according to learner's entrance proficiency level, with accompanying study of Hispanic and Chicano cultures and teaching methods for bilingual education.
- 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.
- 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)

- 510A-510B. Modern Spanish Drama (3-3)**  
Prerequisites: Spanish 305A-305B.  
Semester I: Development of Spanish theater from 1800 to Spanish Civil War. Major literary movements and themes analyzed through study of works of representative dramatists of the period. Semester II: Spanish theater from the Civil War to the present. Theater of the absurd, theater of social justice, underground theater, and new directions in today's Spanish drama.
- 515A-515B. Mexican Literature (3-3)**  
Prerequisites: Spanish 306A-306B.  
Aspects of Mexican culture. Semester I: A rapid survey of Mexican literature from the colonial period to the twentieth century. Semester II: The twentieth century, with emphasis on the contemporary Mexican novel and theater.
- 520. Caribbean Area Countries Literature (3)**  
Prerequisites: Spanish 306A-306B.  
Literature of Caribbean Islands, Central America, Colombia and Venezuela, from colonial period to present. Special emphasis on contemporary era.

- 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. River Plate Literature (3)**  
Prerequisites: Spanish 306A-306B.  
Literature of Argentina, Paraguay and Uruguay from colonial period to present.
- 530. Nineteenth Century Spanish Novel and Short Story (3)**  
Prerequisites: Spanish 305A-305B.  
The development of the novel and short story in Spain in the nineteenth century.
- 532. Twentieth Century Spanish Novel and Short Story (3)**  
Prerequisites: Spanish 305A-305B.  
The development of the novel and short story in Spain to 1936, with emphasis on the novel of the generation of 1898.
- 533. Contemporary Spanish Novel (3)**  
Prerequisites: Spanish 305A-305B.  
The development of the novel and short story in Spain since 1936.
- 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.
- 596. Selected Studies in Spanish (3)**  
Prerequisites: Spanish 301 and 302.  
Topics in Spanish or Spanish-American language, literature, culture and linguistics. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

#### GRADUATE COURSES

Refer to the Graduate Bulletin.



## Speech Communication

In the College of Professional Studies and Fine Arts

### Faculty

Emeritus: Ackley, Adams, Mills, Sanders  
Chair: Weitzel  
Professors: Benjamin, King, Mandel, Samovar, Weitzel  
Associate Professors: Andersen, J., Gaske, Hellweg, Lustig  
Assistant Professor: Beach

### Offered by the Department

Master of Arts degree in speech communication.  
Major in speech communication with the A.B. 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 Speech Communication Department conducts a number of activities such as the Forensics Program as co-curricular laboratories. These activities are an extension of classroom instruction, and credit may be allowed upon approval by the instructor in charge.

## Speech Communication Major

### With the A.B. 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.

**Preparation for the Major.** Speech Communication 105, 111A, 135, 160, and three units of electives (except Speech Communication 103). (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 27 upper division units to include Speech Communication 350, 535 and 592; three units selected from Speech Communication 362, 391, 392, 407, and 508; and 15 units selected from 300- through 500-numbered Speech Communication courses excluding 396W. No more than nine units from the following Speech Communication courses: 300, 301, 309, 361, 400, 496, 499.

## Speech Communication Major

### For the Single Subject Teaching Credential in English/Speech

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under the College of Education.

This major may be used by the students in teacher education as an undergraduate major for the A.B. degree in applied arts and sciences.

**Preparation for the Major.** English 100; Speech Communication 105, 111A, 135, 160, 191, 204. (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 24 upper division units in speech communication to include Speech Communication 362, 391, 392, 508, 530; three units of 309; and six units selected from any combination of Speech Communication 301, 361 and 400.

**Credential requirements.** Eighteen units to include:

1. **Language:** Three units from Linguistics 101, 520, 524 or 550.
2. **Literature:** Nine units from English 250A or 250B; 260A or 260B; or 527 or 528.
3. **Composition:** Six units from English 200 and 500W.

## Speech Communication Minor

The minor in speech communication consists of a minimum of 24 units to include 12 units selected from Speech Communication 111A, 135, 160, 191, 204; 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 350, 354, 380, 580 and 589.

**Communication Forms:** Speech Communication 309, 361, 362, 391, 392, 400, 485 and 508.

**Communication Relationships:** Speech Communication 315, 406, 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.

## LOWER DIVISION COURSES

### 103. Oral Communication (3) I, II

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. Speech Communication 103 recommended in general education. Not open to students with credit in Afro-American Studies 140, Mexican-American Studies 111A.

### 105. Introduction to Speech Communication (3) I, II, S

The status of the discipline, interrelationships among varied specialties within the field, and career opportunities. 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.

### 111A. Fundamentals of Interpretation (3) I, II

Literature and principles of its oral presentation by the interpreter.

### 111B. Intermediate Interpretation (3)

Prerequisite recommended: Speech Communication 111A.

Theory and practice of oral interpretation with emphasis on vocal performance, physical performance, and other aspects of delivery. Practice through recording and live presentation of readings, group speaking, and readers theater. Outside activity required.

### 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

Argument as a form of discourse; organizing, supporting, presenting and refuting arguments in a variety of formats; evaluating argument, including common fallacies in reasoning.

### 161. Intercollegiate Forensics (1) I, II Cr/NC

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 161 and 361.

### 191. Group Discussion (3) I, II

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.

### 204. Advanced Public Speaking (3) I, II

Prerequisite recommended: 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. (Formerly numbered Speech Communication 104.)

### 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. Honors Course (1-3) I, II Cr/NC**  
Refer to Honors Program.
- 301. Management of Speech Activities (1) I, II Cr/NC**  
Two hours of activity.  
Planning, preparation, management and supervision of speech tournaments and other inter-scholastic activities under the supervision of the speech communication staff. Maximum credit two units.
- 309. Workshop in Speech (1-3) Cr/NC**  
Prerequisite: Speech Communication 105.  
Study of some problems in speech communication. Maximum credit six units.
- 315. Nonverbal Communication (3)**  
Prerequisites recommended: Speech Communication 204 or 391 and 135.  
Theory and practice of nonverbal aspects of speech communication, with emphasis on proxemics, kinesics, and paralinguistics.
- 345. Interpersonal Communication Theory and Application (3) I, II**  
Prerequisite: Speech Communication 135.  
Theory and application of effective interpersonal communication principles in both intimate and nonintimate contexts. Addresses theoretical and empirical evidence on communication strategies and behaviors in relationship initiation, development, and termination. Relationship of communication behaviors to relational goals.
- 350. Classical Rhetorical Theory to 1700 (3)**  
Rhetorical theories from their origins to the Renaissance. Emphasis on the theories of Plato, Isocrates, Aristotle, Cicero and Quintilian, and the application of principles to rhetorical discourse.
- 354. Contemporary Rhetorical Theory and Criticism (3) I, II**  
Emphasis on rhetorical criticism and contemporary developments since the Renaissance. The theories of Blair, Campbell, Whately, Richards, Weaver, Burke and others investigated as systems of rhetorical criticism and sources of principles of rhetorical discourse.
- 361. Intercollegiate Forensics (1) I, II Cr/NC**  
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 161 and 361.
- 362. Advanced Argumentation (3) I**  
Prerequisite recommended: Speech Communication 160.  
The approaches to argument and the patterns and problems in argument. Consideration of implications for society. Written and oral reports.
- 380. American Public Address (3) I, II**  
Public discourse from the colonial period to the present.
- 391. Group Communication (3) I, II**  
The theoretical processes of small group communication. Emphasis on the theory of group formation, interaction, procedures and leadership.
- 392. Business and Professional Speech (3)**  
Prerequisite recommended: Speech Communication 204.  
Communication principles in a variety of business and professional contexts, including interviewing, technical and nontechnical oral presentations. Skill in parliamentary procedure also developed.
- 396W. Research and Writing in Speech Communication (3)**  
Prerequisite: Speech Communication 105.  
Rationale for research and research techniques in speech communication. Practice in writing research reports. 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.

**400. Contemporary Forensics Problems (2) I, II Cr/NC**

Prerequisite: Speech Communication 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.

**406. Organizational Communication (3) I, II**

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)**

Prerequisite recommended: Speech Communication 135.

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.

**475. Intercultural Communication (3) I, II**

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: Nine units of speech communication to include Speech Communication 105, and approval of the Director of Internships.

Prearranged and supervised fieldwork or activity extension of academic course work in speech communication. Maximum credit six units, no more than three of which may be taken in any one semester.

**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)

**508. Advanced Interpretation (3) I, II**

Three lecture-demonstrations per week and 32 hours of laboratory per semester.

Prerequisite recommended: Speech Communication 111A.

Analysis of techniques of literary composition as guides to oral interpretation. Achievements of the creative artists as they affect the interpretive artist.

**530. Semantics (3) I, II**

Recognition of various types of linguistic meaning; logical distinctions in discourse; distinction between real and verbal disagreement; recognition and correction of semantic fallacies.

**535. Theories of Human Communication (3) I, II**

Prerequisite recommended: Speech Communication 135.

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)**

Prerequisite: Speech Communication 103 or 204.

Contemporary political communication events and processes, with a focus on speeches, debates, and campaigns.



**589. Ethics of Speech Communication (3)**

Classical and modern ethical concepts applied to oral persuasion.

**590. Empirical Study in Speech Communication (3) I, II**

Philosophy of social science and application to current research in speech communication. Theories and constructs related to communication: analysis of current research literature. (Formerly numbered Speech Communication 537.)

**592. Persuasion (3) I, II**

Prerequisite recommended: Speech Communication 103 or 204.

Persuasion with emphasis on psychological principles. Research project on a significant problem.

**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 six units.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**Telecommunications and Film**

In the College of Professional Studies and Fine Arts

**Faculty**

Emeritus: Jones, Lee

Chair: Anderson

Professors: Anderson, Heighton, Jameson, Johnson, Madsen, Real, Sanders, Steen, Witherspoon, Wylie

Associate Professors: Martin, Meador

Assistant Professors: Blue, Cahill

Lecturers: Mickelson, Van Deerlin

**Offered by the Department**

Master of Arts degree in radio-television.

Major in radio-television, with the A.B. degree in applied arts and sciences.

Major in radio-television, 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.

**Radio-Television Major****With the A.B. 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."

The A.B. degree is designed for students interested in developing a more liberal education as they develop competency in, and understanding of, radio, television and film. The A.B. degree permits flexible programs utilizing courses in and out of the department which will prepare students in such broad areas as design for television and film, media communications theory, broadcast advertising, instructional radio and television, and the like.

A minor is required with this major.

**Preparation for the Major.** Telecommunications and Film 100, 110, 121, 122, 123, and 160. (18 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 24 upper division units in telecommunications and film to include Telecommunications and Film 500 or 505 and 21 units of electives selected with the approval of the department. No more than 27 upper division units in telecommunications and film may be counted toward the 124 units required for graduation.

**Radio-Television Major****With the B.S. 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."

The B.S. degree is designed to prepare students for professions in radio, television and film or for occupations where extensive knowledge of these media is required.

A minor is not required with this major.

**Preparation for the Major.** Telecommunications and Film 100, 110, 120, 121, 122, 123, and 160. Telecommunications and Film 260 and 280 are required for students selecting the production sequence; 260 or 280 is required for students selecting 401 in the management sequence. (21-27 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 to include a core professional sequence, a minimum of six units in an allied professional sequence, and six to twelve units of electives as required.



**Core Professional Sequences.**

**Management:** Telecommunications and Film 310, 400, 500, 505, 540 and six units selected from Telecommunications and Film 401, 530, 535. (21 units.)

**Production:** Telecommunications and Film 401, 510, 550A and nine units selected from Telecommunications and Film 520, 550B, 560, 580. (18 units.)

**Allied Professional Sequences.** (Courses taken in Core Professional Sequences cannot be counted toward the Allied Professional Sequence.)

**Advertising:** Journalism 460, 463, 465, 466, 480; Marketing 370, 371, 372, 373, 470, 472; Psychology 322, 342; Telecommunications and Film 400, 440, 540.

**Communication:** Political Science 326; Psychology 321, 326, 340; Sociology 422, 440, 537; Speech Communication 350, 354, 362, 391, 392, 406, 475, 535, 580, 589, 592.

**Criticism:** Comparative Literature 562; Linguistics 551; Music 351, 355; Philosophy 523, 531, 541, 542; Speech Communication 354, 530.

**Education:** Education 376, 377, 383; Development, Administration and Technology 540, 541, 544; Psychology 330; Telecommunications and Film 570.

**Graphic Art:** Art 340, 341, 440, 441, 590; Industrial Arts 381, 482.

**Industrial Arts:** Industrial Arts 341, 361, 443, 444, 462, 563.

**Information Systems:** Information Systems 380, 480, 482.

**International Media:** Political Science 375, 577; Telecommunications and Film 363, 590.

**Law and Government:** Journalism 502; Political Science 335, 346, 347A, 347B; Telecommunications and Film 505.

**Management:** Management 350, 351, 352, 356, 453; Telecommunications and Film 401, 500.

**Mass Communication:** Journalism 408, 500, 503, 509; Political Science 310, 326; Psychology 326, 342; Sociology 422, 440, 460, 545, 546; Telecommunications and Film 400, 562.

**News:** Journalism 320, 425, 474, 475, 502, 529; Telecommunications and Film 310, 505.

**Performance:** Drama 330, 431, 532; Speech Communication 380, 508, 535; Telecommunications and Film 390, 391.

**Playwriting:** Drama 420; English 527, 572, 581W; Telecommunications and Film 510.

**Production Design and Management:** Art 381, 451, 481, 581; Drama 440, 448, 540, 545A; Psychology 320; Telecommunications and Film 550A, 550B.

**Research Methods:** Telecommunications and Film 400; Management 301, 366; Journalism 509; Psychology 322, 342, 405; Sociology 460, 464.

**Radio-Television Minor**

The minor in radio-television consists of a minimum of 15-24 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, 160 or 315.

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 or 315, 505, 570, 575, 590.

**Telecommunications Management:** Telecommunications and Film 100 or 315, 500, 505, plus 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.

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.

**LOWER DIVISION COURSES****100. Backgrounds in Broadcasting (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.

**101. History of American Film Industry (3) II**

Major forces that shaped and are shaping the American motion picture industry. How the character and direction of the industry has been determined by corporate structure of the motion picture industry. Problems associated with censorship and impact of new technologies.

**110. Telecommunications and Film Writing (3) I, II**

Prerequisite: Satisfaction of the English Placement Test and Writing Competency requirements. Proof of completion of prerequisites required. 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.

**120. Staging and Art for Television and Film (3) I, II**

Two lectures and more than three hours of activity.

Prerequisite: Limited to telecommunications and film majors.

Aesthetic considerations and technical practices in staging, lighting, and graphics for television and film. Practical experience in university sponsored productions.

**121. Audio Production (3) I, II**

Two lectures and more than 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 more than 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 more than 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.

**260. Film Techniques (3) I, II**

Two lectures and three hours of activity.

Prerequisites: Telecommunications and Film 110, 120, 121, 122, with average grade of 2.0 or better.

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, 120, 121, 122, 123, with average grade of 2.0 or better.

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**

Gathering, writing and editing news in special forms required by radio and television. This course not open to students with credit in Journalism 470.

**315. Theory and Criticism of Broadcasting and Film (3)**

Analysis of social, political, economic and aesthetic criticism of broadcasting and film. The function of radio, television and film in the mass communication process. Not open to telecommunications and film majors.

**320. Workshop in Educational Television (3)**

Open to teachers and students interested in instruction by television. The procedures and theories of television production as it pertains to closed-circuit and instructional use of television. The selection and utilization of program content and the method of presenting material through the television medium will be discussed and demonstrated. Not open to students with credit in Development, Administration and Technology 553.

**363. International Cinema (3) I**

Foreign feature films as expression of rational 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.

**390. Broadcast and Film Performance (3) I**

Two lectures and more than three hours of activity. Prerequisites: Drama 110 or Speech Communication 111A, and Drama 130. Preparation and delivery of materials before the microphone and camera. Practical experience in University-sponsored productions.

**391. Acting for TV and Film (3) II**

Two lectures and more than three hours of activity. Prerequisite: Drama 130. Interrelationship between acting and the various media — radio, television, film. Experience in film and television productions. Practical experience in University-sponsored productions.

**400. Broadcast 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. Normally taken concurrently with Telecommunications and Film 560 or 580. Financing, preproduction planning, and postproduction of television and film. (Formerly numbered Telecommunications and Film 501.)

**440. Broadcast Commercial Practices (3) I**

Prerequisite: Twelve units in telecommunications and film. Consideration of the structure and procedures in broadcast advertising organizations, policies, training, and evaluation of research tools.

**495. Workshop in Broadcasting (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) 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. Broadcast Management (3) I, II**

Prerequisite: Telecommunications and Film 100. Administration and organization of radio and television as advertising media, broadcasting research, station organization, promotion and sales, and current developments in radio and television as mass media.

**505. Government and Broadcasting (3) I, II**

Prerequisite: Telecommunications and Film 100. Responsibilities of broadcasters as prescribed by law, governmental policies and regulations, and significant court decisions.

**510. Script Writing for Broadcasting and Film (3) I, II**

Prerequisites: Telecommunications and Film 260 or 280, and satisfaction of the English Placement Test and Writing Competency requirements. Proof of completion of prerequisites required. Development of a single program and series ideas. Scripting of dramatic original and adaptation forms, and the documentary.

**520. Directing Television and Film Drama (3) I, II**

Two lectures and more than three hours of activity. Prerequisite: Credit or concurrent registration in Telecommunications and Film 260 or 280. Planned for prospective directors of plays for television and film. The student will become acquainted with principles, procedures and methods. Practical experience in University-sponsored productions.

**530. Radio Programing (3) II**

Two lectures and more than three hours of scheduled activity. Prerequisites: Telecommunications and Film 100 and 121. Formats, policies, production practices and research in modern programing. Student work is broadcast on KPBS-FM.

**535. Television Programing (3) I, II**

Prerequisite: Telecommunications and Film 100. Structure of television programing. Problems such as ratings, advertisers and scheduling. Social effects and criticism of television programing.

**540. Broadcast Advertising (3) I, II**

Prerequisites: Two courses in broadcasting, journalism or marketing. Theory, procedures, and the role of broadcast advertising, including marketing and media research, campaign planning, media strategy, time purchasing, and evaluation.

**550A. Advanced Lighting and Staging for Television and Film (3) I, II**

Prerequisites: Telecommunications and Film 260 or 280 and consent of instructor. Theory and analysis of production design elements for television and film, including art direction, lighting, scene design and decoration. (Formerly numbered Telecommunications and Film 550.)

**550B. Advanced Lighting and Staging for Television and Film (3) I, II**

One lecture and more than six hours of activity. Prerequisites: Telecommunications and Film 550A and consent of instructor. Practical experience in development of technical and production design elements for television and film, including art direction, lighting, scene design and decoration for dramatic and nondramatic programs. Practical experience in University-sponsored productions. (Formerly numbered Telecommunications and Film 550.)



**560. Advanced Film Production (3) I, II**

One lecture and more than six hours of activity.

Prerequisites: Telecommunications and Film 260, 510, 520 and consent of instructor.

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.

**570. Public Telecommunications (3) I, II**

Prerequisite: Telecommunications and Film 100.

Role of public broadcasting and related technology in the United States. Applications of telecommunication technology for instruction in the home, classroom, and industry.

**575. Technological Trends in Telecommunication (3) I**

Prerequisite: Twelve units in telecommunications and film.

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, 510, 520 and consent of instructor.

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 Broadcasting (3)**

Prerequisite: Telecommunications and Film 100 or 315, 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 six units.

**GRADUATE COURSES**

Refer to the Graduate Bulletin.

**University Studies**

Refer to section on General Studies.

**Women's Studies**

In the College of Arts and Letters

**Faculty**

Chair: Watson

Professors: Boxer (Associate Dean), Zimmerman

Associate Professors: Huckle, Jones, Kohen, Watson

Assistant Professor: Matteo

Lecturer: Phillips

**Offered by Women's Studies**

Major in women's studies.

Minor in women's studies.

**Women's Studies Major**

With the A.B. 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."

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, 365, 370, 375, 390.

**Group II:** (Prerequisite: Three upper division units in women's studies.) Women's Studies 415, 421, 422, 453, 480, 485.

**Women's Studies Minor**

The minor in women's studies consists of a minimum of 18 units in women's studies to include Women's Studies 101 or 330, and 201 or 205; the remaining 12 units must be upper division and include at least one course from three of the following groups:

**Group A:** Courses which investigate the experience of women in varying cultures, subcultures and historical eras — Women's Studies 310, 335, 340, 341A-341B, 415.

**Group B:** Courses which examine biological, psychological and sociological influences on women's personality and behavior — Women's Studies 320, 325, 360, 365, 390, 421, 422.

**Group C:** Courses which explore artistic expression by and about women — Women's Studies 351, 352, 356, 453.

**Group D:** Courses which examine the roles of women in political and economic life — Women's Studies 370, 375, 480, 485.

Students planning graduate work in women's studies should include Women's Studies 590 and 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.

**LOWER DIVISION COURSES**

Women's studies courses are open to all students.

**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. Sexism and the Social Sciences (3) I, II**

Images of women and men and their roles in society viewed through a feminist critique of conventional concepts and modes of thought in disciplines dealing with human interaction; also proposing alternative strategies for research.

**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**

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**

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**

Theories of the psychological development of women; investigation of biological and cultural factors influencing personality and behavior.

**330. The Women's Movement Today (3) I, II**

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. (Formerly numbered Women's Studies 430.)

**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 History (3)**

Social, cultural, economic, political and ideological aspects of women's history, with emphasis on impact of modernization on roles of women in family and society in Western civilization.

**341A-341B. Women in American History (3-3)**

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. The year course meets the graduation requirements 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**

Definitions of women in society as reflected in literature and literary criticism.

**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.

**360. Women's Sexuality (3)**

Current research and theories on the psychological, social, and psychophysiological aspects of women's sexuality; examination of the relationships among social expectations, sexual customs and traditions, and sexual behavior, responses, identity.

**365. Women and Health (3)**

Relationship among social institutions and women as producers and consumers in the health care system. Topics include established and alternative medical institutions, physical and mental health, reproduction and related issues.

**370. Women and the Law (3) I, II**

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)**

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)**

The educational process and female role socialization; research into personnel policies and curriculum. New learning methods and environments, e.g., women's studies programs, child care centers, and "free" schools.

**415. 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.

**421. 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.

**422. Women, Madness and Sanity (3) I**

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.

**453. Women Writers (3) II**

Prerequisite: Three upper division units in women's studies.  
Women writers as literary artists and social critics.

**480. Women and Political Systems (3)**

Prerequisite: Three upper division units in women's studies.  
Comparative analysis of the place of women in various political theories, political and economic systems, and the processes which determine political power.

**485. Economics of Women and Work (3)**

Prerequisite: Three upper division units in women's studies.  
Economic factors which affect women's lives. Topics will include economic analyses of marriage, divorce, fertility and child care; 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 Experience (3) I, II**

Prerequisites: Three upper division units in women's studies and consent of instructor.

Observation and analysis of public and private agencies in the San Diego area which deal primarily with women.

**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)**

**590. Feminist Thought (3)**

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)**

Prerequisites: Six upper division units in women's studies and consent of instructor.

Directed research in women's studies. Field of investigation will vary with instructor. Methods of investigation, development of bibliography, presentation of paper based on original research. See Class Schedule for specific content.

**597. Research Project (3) I, II**

Prerequisites: Six upper division units in women's studies and permission of adviser.

Individual research project. May be taken in place of Women's Studies 595, Seminar in Women's Studies.





# Addenda

Faculty and Administration  
Index

*Opposite page:* Model Education Center, College of Education.



## Faculty and Administration 1984 - 1985

- DAY, THOMAS B. (1978) ..... President, Professor of Physics  
B.S., University of Notre Dame; Ph.D., Cornell University.
- ABBOTT, MITCHEL 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.
- ACKERLY, ROBERT S., JR. (1963) ..... Professor of Teacher Education  
B.A., College of Wooster; A.M., Colgate University; Ed.D., Indiana University.
- ADAMS, ELSIE B. (1971) ..... Professor of English and Comparative Literature  
B.S., M.A., Ph.D., University of Oklahoma.
- AGUADO, EDWARD (1982) ..... Assistant Professor of Geography  
B.A., M.A., University of California, Los Angeles; Ph.D., University of Wisconsin.
- AJEMIAN, JAMES A. (1970) ..... Assistant Professor of Social Work  
A.B., Harvard University; M.S., Columbia University; Ph.D., University of Michigan.
- ALF, EDWARD F., JR. (1963) ..... Professor of Psychology  
A.B., San Diego State University; Ph.D., University of Washington.
- ALLEN, BROCKENBROUGH S. (1982) ..... Assistant Professor of Development, Administration and Technology  
A.B., M.A., University of California, Berkeley; Ph.D., University of Southern California.
- ALLEN, ELIZABETH J. (1971) ..... Associate Professor of Communicative Disorders  
A.B., Seattle Pacific College; M.A., Ph.D., Louisiana State University.
- 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  
A.B., California State; M.S., San Diego State University.
- AMBLE, KJELL (1962) ..... Professor of Drama  
A.B., Denison University; M.A., Ph.D., Northwestern University.
- ANDERSEN, JANIS F. (1981) ..... Associate Professor of Speech Communication  
B.A., M.A., Bradley University; Ed.D., West Virginia University.
- ANDERSON, ALLAN W. (1962) ..... Professor of Religious Studies  
A.B., Washington Missionary College; M.A., Trinity College; Ph.D., Columbia University.
- ANDERSON, DWIGHT G. (1969) ..... Associate 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  
A.B., Whittier College; M.A., Ph.D., University of California.
- ANGIONE, RONALD J. (1969) ..... Professor of Astronomy  
A.B., M.S., San Diego State University; Ph.D., University of Texas.
- ANINGER, THOMAS (1967) ..... Assistant Professor of English and Comparative Literature  
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.
- ANTHONY, SALLY M. (1965) ..... Professor of Development, Administration and Technology  
A.B., University of California, Los Angeles; Ed.M., Ed.D., Rutgers University.
- ARCHER, ANITA LOUISE (1970) ..... Associate Professor of Special Education  
M.A., Ph.D., University of Washington.
- ARCHIBALD, J. DAVID (1983) ..... Associate Professor of Biology  
B.S., Kent State University; Ph.D., University of California, Berkeley.
- ARIAS, ARMANDO, JR. (1984) ..... Associate Dean for Academic Affairs, Imperial Valley Campus  
Lecturer in Sociology  
B.A., M.A., Ph.D., University of California, San Diego.
- ASSAF, NANCY C. (1976) ..... North County Center Senior Assistant Librarian  
A.B., University of Colorado; M.A. (L.S.), University of Denver; M.S., San Diego 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, MICHAEL D. (1970) ..... Professor of Biology  
A.B., M.Sc., University of British Columbia; Ph.D., Oregon State University.
- AUFSESSER, 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) ..... Associate Professor of Geography, Imperial Valley Campus  
B.A., University of Minnesota; M.L.S., Texas Women'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.
- BABIOT, GEORGE (1956) ..... Professor of Economics  
A.B., Hastings College; M.A., University of Nebraska; Ph.D., University of Oregon.
- BACON, ELIZABETH A. (1975) ..... Director, Disabled Students 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 Studies  
B.A., M.A., San Diego State University; Ed.D., Arizona State University.
- BAILEY, GERALD D. (1964) ..... Professor of Industrial Studies  
A.B., M.A., Central Washington State College; Ed.D., University of Missouri.
- BAKER, JAMES R. (1956, except 1961-62) ..... Professor of English and Comparative Literature  
A.B., M.A., Ph.D., University of Denver.
- BAKER, RICHARD J. (1978) ..... Associate Professor of Art  
B.F.A., Kansas City Art Institute; M.F.A., University of Cincinnati.
- BALDWIN, ELMER D. (1963) ..... Professor of Education, Imperial Valley Campus  
A.B., College of the Pacific; M.A., University of Connecticut; Ed.D., Washington State University.
- BALKWELL, CAROLYN K. (1981) ..... Associate 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.
- BALLEW, VAN B. (1981) ..... Professor of Accountancy  
B.B.A., Ph.D., University of Houston.
- BANKS, JAMES H. (1976) ..... Associate Professor of Civil Engineering  
B.E., Vanderbilt University; M.S., Ph.D., University of California, Berkeley.
- BARBER, WILLIAM F. (1959) ..... Associate Dean for Graduate Studies, College of Business Administration;  
Professor of Marketing  
B.B.A., M.B.A., Ph.D., University of Washington.
- BARCKLEY, ROBERT E. (1955) ..... Professor of Economics  
B.S., University of North Dakota; M.S., Columbia University; Ph.D., University of Illinois.
- BARCLAY, A. BERNICE (1962) ..... Associate Librarian  
A.B., San Diego State University; M.A.L.S., University of Denver.
- BARDONI-HARLIG, KATHLEEN (1983) ..... Lecturer in Linguistics  
B.A., M.A., California State University, Northridge; Ph.D., University of Chicago.
- BAR-LEV, ZEV (1979) ..... Associate 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  
A.B., University of California, Santa Barbara; M.S., San Diego State University; Ph.D., University of Oregon.
- 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  
A.B., Hendrix College; M.S., University of Arkansas Medical Center; Ph.D., University of Texas.
- 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.
- BARTEL, BRADLEY N. (1975) ..... Associate Dean, Graduate Division and Research;  
Professor of Anthropology  
A.B., Brooklyn College; Ph.D., University of Missouri.
- BARTHOLOMEW, FRANCIS M., JR. (1967) ..... Assistant Professor of History  
A.B., University of California; M.A., Ph.D., Princeton University.
- BASILE, DONALD D. (1976) ..... Director, Academic Skills Center; Professor of Academic Skills  
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- BAXTER, WILLIAM L. (1963) ..... Professor of Biology  
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JOHN R. ADAMS, Ph.D., Chairman, Division of Humanities; Professor of English	1928-1968
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ARTHUR J. O. ANDERSON, Ph.D., Professor of Anthropology	1961-1975
EVANS L. ANDERSON, Ed.D., Professor of Education	1954-1981
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MARTIN P. CAPP, M.S., Dean, School of Engineering	1953-1975
HILDING B. CARLSON, Ph.D., Professor of Psychology	1948-1969
MARY F. CAVE, M.A., Associate Professor of Physical Education	1946-1977
LEONARD E. CHADWICK, B.S., Associate Professor of Economics	1949-1973
S. YUN CHAN, Ph.D., Professor of Electrical Engineering	1965-1979
ELIZABETH E. CHATER, M.A., Professor of English	1964-1977
HELEN S. CLARK, B.A., Assistant Professor of Mathematics	1952-1967
ORRIN H. CLARK, Ph.D., Professor of Physics	1960-1974
VIRGINIA L. CLARY, M.S.W., Associate Professor of Social Work	1970-1979
ALBERT A. COLOMBO, M.A., Assistant Professor of Geography	1967-1982
CECELIA T. COVENY, M.P.H., Professor of Nursing	1957-1977
ROBERT L. CRAIG, M.S., Assistant Professor of Physics	1960-1973
MELVIN CRAIN, Ph.D., Professor of Political Science	1959-1983
JAMES E. CROUCH, Ph.D., Professor of Zoology	1932-1973
CLYDE E. CRUM, Ed.D., Professor of Secondary Education	1955-1982
MORRIS J. DANIELS, Ph.D., Professor of Sociology	1956-1981
RICHARD D. DARLEY, Ph.D., Professor of Marketing	1961-1980



JOHN H. DIRKS, M.F.A., Professor of Art	1947-1976
LOWELL J. DODDS, M.B.A., Professor of Accounting	1957-1975
HELEN L. DORRIS, M.S., Professor of Family Studies and Consumer Sciences	1952-1982
JOHN EAGLE, Ed.D., Professor of Mathematics	1946-1974
SUE W. EARNEST, Ph.D., Professor of Speech Pathology and Audiology	1947-1973
DONALD I. EIDEMILLER, Ph.D., Professor of Geography	1956-1983
SUZETTE ELGIN, Ph.D., Associate Professor of Linguistics	1972-1981
ROSALIE C. ELLIOTT, Ph.D., Professor of Elementary Education	1968-1982
PAUL H. EZELL, Ph.D., Professor of Anthropology	1956-1977
STANFORD FELLERS, Ed.D., Associate Professor of Health Science and Safety	1966-1979
DALE B. FERREL, M.B.A., Professor of Accounting	1957-1977
CLARENCE E. FISHBURN, Ed.D., Professor of Secondary Education	1955-1982
HORACE H. FISHER, Ph.D., Associate Professor of Finance	1955-1977
J. SHERRICK FISHER, Ph.D., Professor of Elementary Education	1953-1977
RICHARD C. FLYE, M.A., Assistant Professor of Music	1950-1982
ROBERT B. FORMAN, Ed.D., Professor of Music	1963-1984
ABRAHAM M. FRIEDMAN, Ph.D., Associate Professor of Physical Education	1963-1983
KURT FRIEDRICH, Ed.D., Professor of Secondary Education	1949-1977
GLEN E. FULKERSON, Ed.D., Professor of Secondary Education	1954-1981
JOHN D. GARRISON, Ph.D., Professor of Physics	1956-1983
MINOS D. GENERALES, Degree in Law and Political Science, Professor of Political Science	1949-1977
JEANNE S. GHILBERT, M.A., Assistant Professor of French and Italian	1965-1982
E. DANA GIBSON, Ph.D., Professor of Information Systems	1947-1971
CLAYTON M. GJERDE, Ph.D., Dean of Continuing Education; Professor of Secondary Education	1948-1974
PATRICK J. GROFF, Ed.D., Professor of Elementary Education	1955-1981
GEORGE C. GROSS, Ph.D., Professor of English and Comparative Literature	1961-1984
SIDNEY L. GULICK, Ph.D., Dean of Arts and Sciences; Professor of English	1945-1969
ISABELLA S. HAMMACK, M.A., Associate Professor of Education	1936-1957
ROBERT F. HANSON, Rec.D., Professor of Recreation	1962-1983
DONALD F. HARDER, Ed.D., Counselor, Counseling Services	1960-1983
JAMES E. HARMON, Ph.D., Associate Professor of Political Science, Imperial Valley Campus	1964-1981
W. WALLACE HARNED, Ph.D., Professor of Accounting	1962-1978
LEROY A. HARPER, Ed.D., Professor of Health Science	1959-1979
NEIL J. HARRINGTON, Ed.D., Professor of Chemistry	1948-1977
VINCENT C. HARRIS, Ph.D., Professor of Mathematics	1950-1976
A. RAYMOND HARVEY, Ph.D., Professor of Mathematics	1949-1983
DOROTHY R. HARVEY, M.A., Assistant Professor of Botany	1924-1961
HARRIET HASKELL, Ph.D., Professor of English	1940-1971 (except 1943-1945)
ELSIE HERMAN, M.A., Associate Professor of Social Work	1969-1982
WINIFRED H. HIGGINS, Ph.D., Professor of Art	1964-1983
WAYNE O. HILL, Ed.D., Professor of Elementary Education	1955-1983
STANLEY B. HODGE, M.A., Associate Professor of Art	1968-1981
HOWARD B. HOLT, Ed.D., Professor of Educational Administration	1961-1983
GRACE V. HOOVER, B.S.L.S., Associate Librarian	1956-1981
DAVID K. HOSTETLER, Ed.D., Counselor	1966-1982
GORDON S. HOWARD, Ph.D., Professor of Drama	1968-1983
CHARLES M. HUFFER, Ph.D., Professor of Astronomy	1961-1968
EDWARD W. HUFFMAN, Ph.D., Professor of Zoology	1955-1980
HARRY E. HULS, Ph.D., Professor of Elementary Education	1961-1983
WILLIAM A. HUNRICHS, Ph.D., Professor of Psychology	1957-1984
JAMES J. HUNTER, JR., Ph.D., Professor of Secondary Education	1946-1971
LYMAN C. HURD, III, M.M., Professor of Music	1958-1979
MURIEL B. INGHAM, Ph.D., Professor of English	1967-1981
FRANK J. IRGANG, Ph.D., Professor of Industrial Studies	1956-1982
ROBERT W. ISENSEE, Ph.D., Professor of Chemistry	1948-1982
EVERETT GEE JACKSON, M.A., Professor of Art	1930-1963
KENNETH K. JONES, JR., M.A., Professor of Telecommunications and Film	1948-1983
LIONEL JOSEPH, Ph.D., Professor of Chemistry	1947-1971
NED V. JOY, Ph.D., Dean of the College; Professor of Political Science	1953-1982
JAMES L. JULIAN, Ph.D., Professor of Journalism	1951-1975
MARION J. KAHN, M.S., Professor of Social Work	1967-1983
DAVID C. KALBFELL, Ph.D., Lecturer in Physics	1948-1972
OSCAR J. KAPLAN, Ph.D., Professor of Psychology	1946-1983
FREDERICK W. KASCH, Ed.D., Professor of Physical Education	1948-1981
BENJAMIN J. KASTON, Ph.D., Professor of Zoology	1964-1973
BEATRICE L. KELLY, Ph.D., Professor of Microbiology	1967-1983
CHESTER B. KENNEDY, Ph.D., Professor of English	1937-1969
LOUIS A. KENNEY, Ph.D., University Librarian	1961-1981
WILLIAM M. KIDWELL, Ed.D., Director of Placement and Financial Aid; Professor of Psychology	1949-1970

ENGBERT J. C. KIEWIET DE JONGE, Ph.D., Professor of Geography	1963-1983
JAMES S. KINDER, Ph.D., Professor of Education	1953-1966
BONNIE B. KING, M.A., Assistant Professor of English, Imperial Valley Campus	1970-1984
MARGARET E. KINSEY, M.A., Circulation Librarian	1961-1972
BERNARD C. KIRBY, Ph.D., Professor of Sociology	1954-1974
JAMES D. KITCHEN, Ph.D., Professor of Public Administration and Urban Studies	1957-1981
ANGELA M. KITZINGER, Ph.D., Professor of Health Science and Safety	1945-1969
CORINNE F. KLANN, M.A., Assistant Professor of Elementary Education	1962-1983
ORRIN E. KLAPP, Ph.D., Professor of Sociology	1948-1973
ADRIAN J. KOCHANSKI, Ph.D., Professor of Public Administration	1969-1983
HARRIET G. KOPP, Ph.D., Professor of Communicative Disorders	1970-1983
ETHEL E. LAIHO, M.S., Associate Professor of Nursing	1964-1982
ARTHUR A. LAMBERT, Ph.D., Professor of Music	1960-1983
JEAN LANDIS, M.S., Assistant Professor of Physical Education	1968-1979
ROBERT G. LANGENBACH, Ed.D., Professor of Information Systems	1959-1981
MARGARET H. LaPRAY, Ph.D., Professor of Elementary Education	1969-1977
ROSEMARY Z. LAUER, Ph.D., Professor of Philosophy	1969-1979
RICHARD H. LAWSON, Ph.D., Professor of German	1957-1984 (except 1976-1984)
VINCENT R. LEARNED, Ph.D., Professor of Electrical and Computer Engineering	1968-1981
EVANGELINE M. LeBARRON, B.A., B.S., Professor of Information Systems	1946-1975 (except 1948-1949)
ROBERT E. LEE, M.A., Professor of Telecommunications and Film	1961-1983
DONALD B. LEIFFER, Ph.D., Professor of Political Science	1948-1971
FRANCIS P. LEUKEL, Ph.D., Professor of Psychology	1956-1983
CHARLES LIENERT, Ed.D., Professor of Educational Administration	1954-1977
EVELYN LOCKMAN, M.A., Professor of Physical Education	1948-1977
MARTHA LONGENECKER, M.F.A., Professor of Art	1955-1981
DAVID M. LOOMIS, M.M., Associate Professor of Music	1961-1983
ORLANDO J. LuPONE, Ph.D., Professor of Elementary Education	1964-1974
GRETCHEN MacDONALD, Ph.D., Associate Professor of Study Skills	1966-1981
RICHARD MADDEN, Ph.D., Professor of Education	1939-1966 (except 1961-1964)
DAVID D. MALCOLM, Ph.D., Professor of Counselor Education	1953-1983
THELMA D. MANJOS, Ph.D., Professor of Counselor Education	1969-1975
RICHARD L. MANN, M.S.E.E., Professor of Electrical and Computer Engineering	1968-1982
ERNEST L. MARCHAND, Ph.D., Professor of English	1946-1968
MARY F. MARTIN, M.S., Assistant Professor of Family Studies and Consumer Sciences	1958-1980
JEAN M. MAXWELL, M.S.S., Professor of Social Work	1963-1978
R. WAYNE McALLISTER, M.A., Assistant Professor of Educational Technology and Librarianship	1966-1983
LESSLEY C. McAMIS, B.A., Documents Librarian	1959-1971
WILLIAM McBLAIR, Ph.D., Professor of Biology	1948-1982
JOSEPH O. McCLINTIC, Ph.D., Professor of Economics	1946-1974
ROBERT B. McEuen, Ph.D., Professor of Geology	1969-1979
WIRT McLONEY, Ed.D., Professor of Industrial Studies	1949-1974
JAMES D. McMULLEN, Ed.D., Professor of Industrial Studies	1958-1984
DORIS A. MEEK, Ed.D., Professor of Secondary Education	1968-1981
CLAUDE F. MERZBACHER, Ed.D., Professor of Natural Science	1947-1978
LEONARD N. MESSIER, Ph.D., Professor of French	1946-1979
JACK MILLS, Ph.D., Professor of Speech Communication	1957-1984
DAVID S. MILNE, Ph.D., Professor of Sociology	1946-1976
THAIR S. MILNE, M.A., Associate Professor of Family Studies and Consumer Sciences	1968-1979
CHESNEY R. MOE, Ph.D., Professor of Physics	1931-1972
JEAN T. MOE, M.A., Associate Professor of Music	1966-1983
CHARLES MORGAN, M.S., Professor of Mechanical Engineering	1949-1984
RUTH H. MORGAN, D.S.W., Professor of Social Work	1968-1976
DOROTHY V. MOSES, M.S., Professor of Nursing	1958-1979
DORIS G. MURDOCK, B.S.L.S., Catalog Librarian	1960-1972
MARGARET M. MURPHY, Ed.D., Professor of Physical Education	1955-1981
ROBERT R. NARDELLI, Ph.D., Professor of Elementary Education	1953-1983
ABRAHAM NASATIR, Ph.D., Professor of History	1928-1974
SHERWOOD M. NELSON, Ph.D., Professor of Philosophy	1956-1982
HANS NEYENDORFF, Doctorandus, Senior Assistant Librarian	1962-1983
CALVERT E. NORLAND, M.S., Professor of Zoology	1947-1976
NELSON F. NORMAN, Ph.D., Professor of History	1960-1983
NEVA E. NYE, M.Litt., Professor of Nursing	1953-1970
VERN E. ODMARK, Ph.D., Professor of Accounting	1952-1982
ALBERT W. OLSEN, Ed.D., Professor of Physical Education	1957-1983
ANDREW C. OLSON, JR., Ph.D., Professor of Zoology	1946-1980
ROBERT ONTELL, D.S.W., Professor of Social Work	1965-1979
NATHALIA CRANE O'REILLY, Special Study at Barnard College, University of Madrid, and Sorbonne, Assistant Professor of English and Comparative Literature	1958-1983



PETER O'REILLY, Professor of Philosophy	1968-1983
HERBERT C. PEIFFER, Ph.D., Dean of Students; Professor of Psychology	1937-1972
WILLIAM A. PERKINS, Ph.D., Professor of English and Comparative Literature	1955-1984
GERALD A. PERSON, Ph.D., Professor of Secondary Education	1957-1981
MANVILLE R. PETTEYS, Ed.D., Director of Community Services; Professor of Education	1957-1977
PAUL L. PFAFF, Ph.D., Professor of Speech Pathology and Audiology	1931-1971
GEORGE L. PHILLIPS, Ph.D., Professor of English	1947-1973
ALBERT CHAD PIERSON, Ph.D., Professor of Management	1954-1983
MARVIN H. PLATZ, Ed.D., Professor of Secondary Education	1955-1983
E. KINGSLEY POVENMIRE, M.F.A., Professor of Drama	1946-1971
DON W. POWELL, M.F.A., Professor of Drama	1953-1982
DUDLEY A. PRESTON, Ph.D., Associate Professor of Botany	1948-1977
HELEN L. PROUTY, Ph.D., Professor of Secondary Education	1950-1976
THEMISTOCLES PSOMAS, Ph.D., Associate Professor of Psychology	1952-1982
FREDRICK T. QUIETT, M.S., J.D., Professor of Civil Engineering	1957-1981
DANIEL L. RADER, Ph.D., Professor of History	1954-1983
KATHERINE RAGEN, Ph.D., Professor of History	1947-1974
M. V. RAMA RAO, Ph.D., Professor of Mechanical Engineering	1957-1982
AARON P. RASMUSSEN, Ph.D., Associate Professor of Industrial Studies	1971-1980
FRANK J. RATTY, Ph.D., Professor of Biology	1954-1984
MARY WORDEN REDDING, Ph.D., Associate Professor of English and Comparative Literature	1967-1983
KURT REICHERT, Ph.D., Professor of Social Work	1970-1981
ROBERT W. RICHARDSON, Ph.D., Professor of Geography	1939-1972 (except 1946-1947)
LIONEL U. RIDOUT, Ph.D., Professor of History	1946-1976 (except 1949-1950)
LESTER G. RIGGS, Ph.D., Professor of Mathematics	1950-1978 (except 1951-1952)
ELLIS E. ROBERTS, Ph.D., Professor of Geology	1949-1979
DUDLEY H. ROBINSON, Ph.D., Professor of Chemistry	1928-1973
JOSEPH A. RODNEY, Ed.D., Dean, Imperial Valley Campus; Professor of Education	1957-1976
SPENCER L. ROGERS, Ph.D., Professor of Anthropology	1930-1971
KRAMER ROHFLEISCH, Ph.D., Professor of History	1947-1974
MARJORIE C. ROHFLEISCH, M.A., Associate Professor of Music	1966-1975
NORMAN ROST, M.M., Professor of Music	1951-1977
ROBERT D. ROWE, Ph.D., Professor of Chemistry	1946-1971
HARRY RUJA, Ph.D., Professor of Philosophy	1947-1979
GORDON SAMPLES, A.B., B.S., Associate Librarian	1950-1983
MARGARET C. SAND, Ph.D., Associate Professor of Psychology	1964-1983
MARY LEE SANDELIN, M.L.S., Senior Assistant Librarian	1968-1983
GEORGE W. SANDERLIN, Ph.D., Professor of English and Comparative Literature	1954-1983
FREDERICK C. SANDERS, Ph.D., Associate Professor of Speech Communication	1967-1981
GLENN A. SANDSTROM, Ph.D., Professor of English and Comparative Literature	1956-1983
RICHARD L. SANNER, Ed.D., Media Specialist	1965-1981
FRANCES I. SCHALLES, A.B., Education and Curriculum Materials Librarian	1950-1968
WALTER D. SCHMIER, J.D., Associate Professor of Business Law	1967-1975
MANFRED H. SCHRUPP, Ph.D., Dean, School of Education, Professor of Secondary Education	1948-1974
WILLIAM H. SCHUTTE, M.S., Professor of Physical Education	1947-1975
MARION L. SCHWOB, M.S., Associate Professor of Physical Education	1934-1960
FRANK L. SCOTT, Ph.D., Professor of Physical Education	1947-1977
EVALYN F. SEGAL, Ph.D., Professor of Psychology	1973-1983
HUNTON D. SELLMAN, M.S., Professor of Drama	1946-1971
FLORENCE H. SENDER, M.A., Associate Professor of Spanish	1964-1973
RICHARD E. SERVEY, Ph.D., Professor of Elementary Education	1961-1983
ALLAN E. SHIELDS, Ph.D., Professor of Philosophy	1949-1977 (except 1969-1970)
CLAUDE F. SHOUSE, Ph.D., Professor of English	1946-1972
CHARLES M. SHULL, JR., Ph.D., Professor of Natural Science	1969-1983
WILLIAM H. SHUTTS, Ph.D., Professor of Aerospace Engineering	1958-1977
ARTHUR SINGER, JR., Ph.D., Professor of Special Education	1959-1983
DONALD L. SKAAR, M.S., Professor of Electrical and Computer Engineering	1960-1981
CLIFFORD E. SMITH, Ph.D., Professor of Astronomy	1937-1969
DEANE F. SMITH, M.Mus., Associate Professor of Music	1939-1970
HAYDEN R. SMITH, Ph.D., Professor of Secondary Education	1957-1981
J. DAYTON SMITH, M.M., Professor of Music	1955-1979
LOUIS E. SMITH, JR., Ph.D., Professor of Physics	1946-1979
MERVIN S. SNIDER, M.A., Professor of Music	1953-1983
HERSCHEL R. SNODGRASS, Ph.D., Professor of Physics	1967-1978
ROSE M. SOMERVILLE, Ed.D., Professor of Family Studies and Consumer Sciences	1967-1977
GEORGE N. SORENSON, M.A., Professor of Art	1946-1976
JOHN A. SPANGLER, Ph.D., Professor of Chemistry	1946-1981
WILLIAM E. SPAULDING, JR., Ph.D., Professor of Information Systems	1970-1984
MARJORIE J. SPENCER, M.A., Associate Professor of Art, Imperial Valley Campus	1969-1978

CHARLES C. SPORTSMAN, M.S., Associate Professor of Physical Education	1947-1968
CHRISTINE SPRINGSTON, M.A., Professor of Music	1930-1966
ALEXANDER L. SRBICH, Ph.D., Professor of Management	1959-1983
HAMILTON L. STONE, B.S., Associate Professor of Mechanical Engineering	1947-1971
SANFORD H. STONE, M.S., Professor of Civil Engineering	1956-1984
ALVENA S. STORM, M.A., Professor of Geography	1926-1966
MORROW F. STOUGH, Ph.D., Professor of Education	1950-1976 (except 1966-1971)
ZOE E. STOUT, Ph.D., Associate Professor of Family Studies and Consumer Sciences	1965-1977
MARGUERITE R. STRAND, Ph.D., Counselor, Professor of Secondary Education	1955-1977
LURA LYNN STRAUB, M.C.S., Professor of Information Systems	1948-1978
JACK E. A. STUMPF, Ph.D., Professor of Social Work	1965-1983
EDWARD D. S. SULLIVAN, Ph.D., Assistant Professor of English and Comparative Literature	1967-1983
JEAN D. SWIGGETT, M.F.A., Professor of Art	1946-1977
ANDREW SZABO, Ph.D., Collection Development Librarian	1955-1978
JAMES W. TAYLOR, Ph.D., Professor of Geography	1950-1980
KENNETH M. TAYLOR, Ph.D., Professor of Biology	1949-1978
JOHN G. TEASDALE, Ph.D., Professor of Physics	1956-1982
WILLIAM L. TERRY, Ed.D., Professor of Physical Education	1946-1974
JOHN R. THEOBALD, Ph.D., Professor of English	1946-1969
BEATRICE A. THOMAS, M.A., Professor of Nursing	1954-1977
BLAKEMORE E. THOMAS, Ph.D., Professor of Geology	1956-1977
RICHARD L. THREET, Ph.D., Professor of Geological Sciences	1961-1981
JAMES N. TIDWELL, Ph.D., Professor of Linguistics	1947-1976
DOROTHY J. TOLLEFSEN, M.A., Professor of Physical Education	1946-1972
LEILA de IRIZARRY TOSSAS, Ed.D., Professor of Elementary Education	1961-1977
RUSSELL L. TRIMMER, Ph.D., Professor of Special Education	1955-1976
JACQUELINE D. TUNBERG, Ph.D., Associate Professor of English and Comparative Literature	1966-1983
MARJORIE S. TURNER, Ph.D., Professor of Economics	1954-1977
MERLE B. TURNER, Ph.D., Professor of Psychology	1950-1974
LUISA M. VERGANI, Dottorato in Lettere, Professor of Italian	1969-1983
VIRGINIA W. VOEKS, Ph.D., Professor of Psychology	1949-1971
HENRY A. WALCH, JR., Ph.D., Professor of Biology	1955-1984
HILDE K. WALKER, M.A., Assistant Professor of German	1931-1951
CURTIS R. WALLING, E.E., Professor of Electrical and Electronic Engineering	1931-1969
JOHN T. WARBURTON, Ed.D., Associate Professor of Educational Administration	1968-1982
MARGERY B. WARMER, Ph.D., Professor of Family Studies and Consumer Sciences	1956-1976
ELIZABETH V. WATSON, M.S., Associate Professor of Social Work	1968-1977
CHARLES R. WEBB, Ph.D., Professor of History	1949-1972 (except 1965)
HALE L. WEDBERG, Ph.D., Professor of Botany	1959-1983
AUBREY WENDLING, Ph.D., Professor of Sociology	1954-1982
WILLIAM H. WETHERILL, Ph.D., Professor of Educational Administration	1968-1982
ALFRED E. WHITE, Ed.D., Assistant to Dean of the College; Professor of Education	1946-1964
FREDERICK C. WHITNEY, Ph.D., Associate Professor of Journalism	1970-1979
ARNE N. WICK, Ph.D., Professor of Chemistry	1958-1974
HEIKO J. WIJNHOLDS, Jur.D. (Econ.), Professor of Finance	1967-1980
BETTY JANE WILHELM, M.A., Assistant Professor of Physical Education	1961-1980
MARGARET F. WILLERDING, Ph.D., Professor of Mathematics	1956-1976
GLORIA R. WILLIAMSON, M.A., Associate Professor of Physical Education	1961-1979
ARTHUR C. WIMER, M.A., Professor of Journalism	1950-1971
ERNEST F. WITTE, Ph.D., Dean of the School of Social Work; Professor of Social Work	1963-1969
ERNEST M. WOLF, Ph.D., Professor of German	1947-1976
GERHARD WOLTER, M.S., Professor of Physics	1957-1975
WILLIAM H. WRIGHT, Ph.D., Professor of Accounting	1921-1962
JOHN M. YARBOROUGH, Ph.D., Director of Housing; Professor of Education	1959-1972
GEORGE ZIEGENFUSS, Ed.D., Professor of Physical Education	1948-1980



## Part-time Faculty 1984 - 1985

### ARTS AND LETTERS

- Abbott, Donald R., M.A., History  
 Agatucci, Cora S., M.A., Academic Skills  
 Albanese, Arthur N., Jr., M.A., Academic Skills  
 Allister, Shirley L., M.A., Academic Skills  
 Alpert, Leon S., M.A., Economics  
 Baker, Francoise D., M.A., French and Italian Languages and Literatures  
 Barkley, Christine D., M.A., English and Comparative Literature  
 Barrera, Marion K., M.A., Spanish and Portuguese Languages and Literatures  
 Bassler, James D., Ph.D., Economics  
 Bearden, Margaret, M.A., History  
 Beveridge, Kriss, M.A., Academic Skills  
 Biehl, Patricia L., M.A., English and Comparative Literature  
 Borgens, Helen A., M.A., English and Comparative Literature  
 Bowen, Susan J., M.A., Women's Studies  
 Brown, Gary R., M.A., Academic Skills  
 Brown, Scott J., M.S., Economics  
 Brown, Victoria L., M.A., Women's Studies  
 Burkett-Evans, Jennifer B., M.A., Spanish and Portuguese Languages and Literatures  
 Butler, Evelyn A., M.A., English and Comparative Literature  
 Butler, Raymond J., M.A., Economics  
 Carella, Kathleen R., M.A., Academic Skills  
 Carrier, Gregory P., M.A., English and Comparative Literature  
 Condo, Candis L., M.A., English and Comparative Literature  
 Curtis, Marvin V., M.A., Afro-American Studies  
 Day, Barbara A., Ph.D., History  
 DiGennaro, Judith C., J.D., Women's Studies  
 Dintrone, Patricia L., Ph.D., History  
 Dolansky, Marie, Ed.D., Academic Skills  
 Duarte, Gisella A., M.A., Spanish and Portuguese Languages and Literatures  
 Duemer, Joseph M., M.F.A., English and Comparative Literature  
 Duran, David J., B.A., Academic Skills  
 Eaton, Gerald G., Ph.D., Sociology  
 Ellman, Dennis M., M.F.A., English and Comparative Literature  
 Emery, Laura C., Ph.D., English and Comparative Literature  
 Fallows, Randall J., M.A., English and Comparative Literature  
 Feldstein, Philip, M.A., Academic Skills  
 Finn, Candice P., M.A., English and Comparative Literature  
 Finn, Richard D., M.A., English and Comparative Literature  
 Fish, Hedda A., M.A., English and Comparative Literature  
 Fixico, Michelene E., M.A., American Indian Studies  
 Fixmer, Clyde H., Ph.D., English and Comparative Literature  
 Flagg, Virginia G., Ph.D., Economics  
 Freeman, Roderick A., Ph.D., Philosophy  
 Freilicher, Melvyn S., M.A., English and Comparative Literature  
 Galloway, Fredrick J., M.A., Economics  
 Garcilazo, Jeffrey M., M.A., Mexican-American Studies  
 Glass, Candace S., M.F.A., English and Comparative Literature  
 Goldberg, Jacob, Ph.D., Arts and Letters, General  
 Gowen, Brent D., M.A., English and Comparative Literature  
 Green, Leslie A., Ph.D., French and Italian Languages and Literatures  
 Greenburg, Reva P., Ph.D., History, Women's Studies  
 Greene, Myron, M.A., History  
 Gregg, John A., M.A., English and Comparative Literature  
 Gregory, Sinda, M.A., English and Comparative Literature  
 Hall, Dana M., M.F.A., English and Comparative Literature  
 Haskovec, Marie, Ph.D., Academic Skills  
 Hawkins, Penelope J., B.A., Classics  
 Hepp, Beatrice D., Laurea, French and Italian Languages and Literatures  
 Hernandez, Carmen M., M.A., Spanish and Portuguese Languages and Literatures  
 Hirsch, Susanne D., Ph.D., French and Italian Languages and Literatures  
 Indermill, Lawana G., M.A., English and Comparative Literature  
 Ingham, Charles A., B.A., English and Comparative Literature  
 Jaffe, Maggie S., M.A., English and Comparative Literature  
 Jensen, Susan L., M.A., Academic Skills  
 Johnson, Willard, Ph.D., Religious Studies  
 Jones, Robert L., M.F.A., English and Comparative Literature  
 Jonsson, Edith, Ph.D., French and Italian Languages and Literatures  
 Kangas, Eric A., M.S., Academic Skills  
 Keeseey, Miriam, B.A., Academic Skills  
 Kehrenberg, Graziella, Laurea, French and Italian Languages and Literatures  
 Kleiber, Nancy L., Ph.D., Women's Studies  
 Krekorian, Michael H., M.F.A., English and Comparative Literature  
 Kulkarni, Vijayalakshmi, Ph.D., Economics  
 Mack, James B., Ph.D., English and Comparative Literature  
 Mackey, Linda C., J.D., Women's Studies  
 Makoff, Lester M., M.S., Academic Skills  
 Maraschiello, Antonio, Laurea, French and Italian Languages and Literatures  
 McCarty, Nancy, M.A., Spanish and Portuguese Languages and Literatures  
 McKanna, Clare V., M.A., History  
 Mendis, Janine P., Ph.D., Spanish and Portuguese Languages and Literatures  
 Morales, Rick A., M.A., Sociology  
 Moser, Robert J., Ph.D., Sociology  
 Mueller, Howard R., Ph.D., Religious Studies  
 Mustafa, Chowdhury B., M.A., Economics  
 Nower, Joyce, Ph.D., Academic Skills  
 Ornatowski, Cezary M., M.A., English and Comparative Literature  
 Paynter, E. L., History  
 Perkins, Carol O., M.A., Women's Studies

- Pincett, Giselle A., M.A., French and Italian Languages and Literatures  
 Poirier, Vanda, B.A., Spanish and Portuguese Languages and Literatures  
 Ponce, Margarita V., Ph.D., Spanish and Portuguese Languages and Literatures  
 Potts, Stephen W., Ph.D., Academic Skills  
 Rasmussen, Paul K., M.A., Economics  
 Ringrose, Kathryn M., Ph.D., History  
 Rockland, Steven G., M.S., Economics  
 Rodriguez, Elena F., M.A., Sociology  
 Rowden, Tonita H., M.A., English and Comparative Literature  
 Ruja, Harry, Ph.D., Philosophy  
 Salazar, America, M.A., Spanish and Portuguese Languages and Literatures  
 Sanchez, Virginia A., M.A., Spanish and Portuguese Languages and Literatures  
 Shabatay, Virginia R., M.A., English  
 Shahrokhi, Shahrokh, Ph.D., Economics  
 Shekern, Peggy L., M.A., English and Comparative Literature  
 Silverman, Vilma N., M.A., Spanish and Portuguese Languages and Literatures  
 Somerville, Rose M., Ed.D., Sociology  
 Spaulding, Robert F., M.S., Economics  
 Spirito, Donald P., B.A., Economics  
 Squires, Dale E., Ph.D., Economics  
 Strecker, Louise H., M.A., English and Comparative Literature  
 Stuart, Angelina E., M.A., Spanish and Portuguese Languages and Literatures  
 Velasco, Alfredo F., Ph.D., Mexican-American Studies  
 Wahl, Eugene R., M.A., Economics  
 Wawrytko, Sandra A., Ph.D., Philosophy  
 Weldele-Temoche, Edda M., M.A., Spanish and Portuguese Languages and Literatures  
 West, Michael D., M.F.A., English and Comparative Literature  
 Widmer, Eleanor R., Ph.D., English and Comparative Literature  
 Ziai, Behrooz M., Ph.D., Academic Skills  
 Zobel, Bonnie J., M.F.A., English and Comparative Literature  
 Zolynas, Dorothy A., M.A., English and Comparative Literature

### BUSINESS ADMINISTRATION

- Bekele, Zenebu, Finance  
 Belden, Robert A., J.D., Management  
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 Cutsinger, Shannon L., M.S., Finance  
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 Fisher, Horace H., Ph.D., Finance  
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 Harrington, Don L., J.D., Finance  
 Heramb, Brent R., J.D., Accountancy  
 Holbrook, Douglas D., Ph.D., Finance  
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 Kerrigan, Harry D., Ph.D., Management  
 Krepshaw, Leonard J., M.B.A., Accountancy  
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 Lambert, Barrett L., M.B.A., Accountancy  
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 Lindsay, Mark W., J.D., Accountancy  
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 McCain, Kenneth F., M.B.A., Finance  
 McDevitt, Dennis M., L.L.M., Accountancy  
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 Muse, Charles W., B.A., Finance  
 Nebeker, Delbert M., Ph.D., Management  
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 O'Rourke, Jeffrey C., M.B.A., Finance  
 Pacco, Richard C., M.S., Finance  
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 Rodenrys, John J., M.S., Management  
 Sannwald, William W., M.B.A., Marketing  
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 Solomon, Norman S., M.S., Accountancy  
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 Swartz, Beth F., M.S., Accountancy  
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### EDUCATION

- Acuna, Celia, M.A., Policy Studies in Language and Cross-Cultural Education  
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 Barry, Lawrence, Ph.D., Development, Administration and Technology  
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 Doyle, Dennis M., M.A., Policy Studies in Language and Cross-Cultural Education  
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 Kearsley, Greg P., Ph.D., Development, Administration and Technology  
 Kelso, Brady P., B.A., Teacher Education



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 Lehw, Charmon, M.A., Development, Administration and Technology  
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 Lungren, Linda, D.M.Ed., Teacher Education  
 Malcolm, David, Counselor Education  
 McAllister, Thomas W., M.A., Development, Administration and Technology  
 McLean, Marguerite A., M.A., Special Education  
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 McNary, Nancy W., M.A., Teacher Education  
 Meerson, Mary Lou J., M.A., Teacher Education  
 Mendoza, Jeanne M., M.S., Special Education  
 Mitchell, Ralph, M.A., Development, Administration and Technology  
 Mollet, David L., Ph.D., Teacher Education  
 Morris, William P., Ph.D., Teacher Education  
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 Neal, Judy, M.A., Development, Administration and Technology  
 Norman, Brenda, M.S., Development, Administration and Technology  
 Northcutt, Linda B., M.A., Policy Studies in Language and Cross-Cultural Education  
 Ochi, Janet K., M.A., Policy Studies in Language and Cross-Cultural Education  
 Olson, Gary S., Ed.D., Development, Administration and Technology  
 Omar, Donald R., Ph.D., Policy Studies in Language and Cross-Cultural Education  
 Palmquist, Joanne C., M.S., Counselor Education  
 Perkowski, Sharon M., M.S., Counselor Education  
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 Plank, Carmen C., M.A., Policy Studies in Language and Cross-Cultural Education  
 Popp, Sharon, M.A., Special Education  
 Rivera, John, M.A., Policy Studies in Language and Cross-Cultural Education  
 Robersshaw, Phyllis L., M.A., Teacher Education  
 Rodecker, Stephen B., M.A., Teacher Education  
 Romanowski, Pauline M., M.A., Teacher Education  
 Sachs, Marcia C., Counselor Education  
 Samples, Joni K., Ed.D., Special Education  
 Savage, Mary R., Ed.D., Counselor Education  
 Shelton, Donald J., Ed.D., Development, Administration and Technology  
 Solis, Barbara L., M.S., Development, Administration and Technology  
 Stein, Robert, M.A., Development, Administration and Technology  
 Steinbarth, James J., M.S., Development, Administration and Technology  
 Streshly, William A., Ph.D., Development, Administration and Technology  
 Teall, Carol J., Ed.D., Development, Administration and Technology  
 Teunissen, J. Renee, Counselor Education  
 Tran, My-Luong T., Ph.D., Policy Studies in Language and Cross-Cultural Education; Teacher Education  
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## ENGINEERING

Allen, Ross R., Ph.D., Mechanical Engineering  
 Bakhr, Keshoolal, Ph.D., Electrical Engineering  
 Cox, Malvin M., B.S., Electrical Engineering  
 Danon, Jose R., Ph.D., Civil Engineering  
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 Goudarzian, Behyar, B.S., Electrical Engineering  
 Griffin, Raymond, M.E., Mechanical Engineering  
 Groves, Gordon W., Ph.D., Mechanical Engineering  
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 Haskins, James F., M.S., Aerospace Engineering  
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 Rosenbaum, Eugene S., M.S., Aerospace Engineering  
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 Wright, Craig A., B.S., Mechanical Engineering  
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## HUMAN SERVICES

Adichie, James N., Ph.D., Public Health  
 Adler, Jacqueline B., M.A., Communicative Disorders  
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 Evans, Michael S., M.S.W., Social Work  
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 Fong, Terri A., M.S.W., Social Work  
 Goldberger, Diane K., M.N., Nursing  
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 Holbrook, Troy L., Ph.D., Public Health  
 Isaacs, Hope L., Ph.D., Public Health  
 Jordan, Victoria, M.S.N., Nursing  
 Kahn, Marion, M.S.W., Social Work  
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 Kolombatovic, Page F., B.A., Communicative Disorders  
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 Kreisworth, Virginia S., Ph.D., Health Science  
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 Lischke, Nancy L., M.A., Nursing  
 Long, Linda M., M.S.N., Nursing  
 Macchello, Ronda M., M.S., Communicative Disorders  
 Meyer, Virginia B., M.A., Health Science  
 Miller, David L., Ph.D., Communicative Disorders  
 Moffatt, Maureen W., M.N., Nursing  
 Packard, Thomas R., D.S.W., Social Work  
 Patton, Lynette A., M.S.N., Nursing  
 Peer, Robert W., Ph.D., Social Work  
 Pfeffer, Iris A., M.S.W., Social Work  
 Richardson, Elvera R., Ph.D., Nursing  
 Riddle, Patricia K., Ph.D., Health Science  
 Riegel, Barbara J., M.N., Nursing  
 Rowe, Linda J., M.S., Communicative Disorders  
 Sandlin, Robert E., Ph.D., Communicative Disorders  
 Schroeder, Linda L., M.A., Communicative Disorders  
 Segal, Alexander, Ph.D., Public Health  
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## PROFESSIONAL STUDIES AND FINE ARTS

Baade, Roberta, Ph.D., Speech Communication  
 Babunakis, Michael, M.A., Public Administration  
 Barkett, Ronald S., M.A., Public Administration  
 Belliaeff, Marjorie A., M.A., Music  
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 Biggs, Gunnar, Music  
 Bishop, Bruce E., M.A., Speech Communication  
 Bishop-Lohorn, Michiko, B.M., Music  
 Blackwood, Gordon J., B.A., Athletics  
 Bouley, Lisa H., A.B., Speech Communication

Bouterse, Curtis C., B.A., Music  
 Bradford, Rochelle L., B.A., Art  
 Brewster, Letty B., B.S., Industrial Arts  
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 Darrow, David R., B.F.A., Art  
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 Evans-O'Connor, Kellie, M.A., Music  
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 Gray, Justin G., A.B., Drama  
 Gray, Steven W., Ph.D., Physical Education  
 Greer, Carolyn T., M.A., Physical Education  
 Griffin, Elizabeth, M.S., Physical Education  
 Hamada, Gary T., B.A., Art  
 Hansen, Kate P., M.A., Speech Communication  
 Harris, Richard H., M.A., Journalism  
 Hart, Terry E., M.P.A., Public Administration  
 Hill, Gloria, M.S., Music  
 Hoefer, William B.S., Physical Education  
 Holly, Dianne J., M.A., Drama  
 Holshue, Lucinda A., M.F.A., Drama  
 Howard, Douglas A., M.Ed., Physical Education  
 Isaacs, Jean M., M.F.A., Physical Education  
 Jones-White, Ola V., M.M., Music  
 Keleher, Melissa A., M.B.A., Journalism  
 Kjoller, Kenneth J., B.S., Industrial Arts  
 Klein, John H., Athletics  
 Kondratek, Gary B., B.S., Athletics  
 Krause, Frederick A., B.S., Athletics  
 Kruming, Martin A., A.B., Journalism  
 Lalicker, Susan E., B.A., Physical Education  
 Lasher, Jack C., M.A., Music  
 Learn, Clarence R., B.A., Journalism  
 Lee, Jong, A.B., Physical Education  
 Legg, Glen D., B.S., Athletics  
 Love, Syd, M.A., Journalism  
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Lussa, Sue A., M.S., Journalism  
 Lybarger, Alvin E., Ed.D., Industrial Arts  
 MacCormack, Gerald E., M.S., Physical Education  
 Mackenzie, Mary R., M.S., Music  
 Manson, Norman, M.A., Journalism  
 Marshall, Kathleen E., M.F.A., Art  
 Masar, John P., M.A., Art  
 Mattera, Peter A., A.A., Athletics  
 McGrory, John R., M.P.A., Public Administration  
 McKenzie, Randie E., M.Ed., Physical Education  
 McTighe, John J., M.P.A., Public Administration  
 Meyer, Henry H., Ph.D., Public Administration  
 Michel, Dennis P., M.A., Music  
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 Moe, Jean T., Ph.D., Music  
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 Murray, M., Athletics  
 Nakamura Kotaro, M.A., Art  
 Narendron, Trichur C., B.A., Music  
 Nichols, Timothy N., M.A., Music  
 Nicholson, Joseph C., M.A., Art  
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 Niezurawski, Kathleen, B.A., Journalism  
 Oatman, Christine E., M.F.A., Art  
 Oppenheimer, Sharon R., M.A., Drama  
 Pagel, K., Athletics  
 Pedersen, D. Kent, J.D., Public Administration  
 Peterman, Lewis E., Jr., M.A., Music  
 Redondo, Sixto A., Athletics  
 Resnick, Arthur I., Music  
 Riddle, January, M.A., Journalism  
 Rincon, Patricia A., M.F.A., Physical Education  
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 Rodgers, William L., M.S., Industrial Arts  
 Rose, Kathleen, B.A., Speech Communication  
 Rotter, James C., M.A., Music  
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 Sauvajot, John B., M.S., Public Administration  
 Schamu, Sara J., B.A., Art  
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 Schwabe, S. P., Athletics  
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 Smith, Tammy W., B.S., Journalism  
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 Spradley, L., Athletics  
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 VanWay, Nolan, B.S., Drama  
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# SCIENCES

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 Johnson, Dennis L., M.D., Biology  
 Johnson, Laverne, Ph.D., Psychology  
 Kent, Donald B., Ph.D., Sciences, General  
 Kentula, Mary E., Ph.D., Biology  
 Kolins, Dale K., B.S., Biology  
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 Kovach, William S., Ph.D., Astronomy  
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 Lehr, Patricia P., Ph.D., Psychology  
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 Long, Darrell D., B.S., Mathematical Sciences  
 MacDonald, Lynette C., M.S., Biology  
 Malik, Aslam A., M.S., Chemistry  
 Mayer, Herbert G., M.A., Mathematical Sciences  
 McKinley, Arnold F., M.S., Physics  
 Meckstroth, Phillis J., M.S., Mathematical Sciences  
 Metten, Shaleen, M.S., Biology  
 Mikolon, Arthur G., Jr., B.S., Biology  
 Murray, John L., B.S., Physics  
 Pavis, George P., B.S., Physics  
 Polchik, Allan L., Ph.D., Psychology  
 Redmond, Raymond B., M.S., Biology  
 Rehse, Mark A., M.S., Sciences, General  
 Riechers, George H., Ph.D., Sciences, General  
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 Sievers, John R., M.S., Astronomy  
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 Teegarden, Tom P., M.S., Mathematical Sciences  
 Tenhunen, John D., Ph.D., Sciences, General  
 Terry, Ann M., M.S., Geological Sciences  
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# IMPERIAL VALLEY CAMPUS

Akers, Scott R., M.A.  
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 Bowen, Von, M.S.  
 Bustamante, Evangelina, M.A.  
 Butler, Mark C., Ph.D.  
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 Dolanar, David, M.P.A.  
 Doshier, Mark B., R.M.N.  
 Fields, Max E., Ph.D.  
 Fuentes, Susan, M.A.  
 Harmon, Roberta, B.A.  
 Johnson, Laverne, Ph.D.  
 Larsson, Harold, M.A.  
 Latta, Raymond F., Ph.D.

Lazer, Linda S., B.A.  
 Livingston, Nancy, Ed.D.  
 Lohr, Arthur D., B.S.  
 Maddox, Harold, B.A.  
 Meza, Antonio M.  
 Murphy, Dana W., Ph.D.  
 Murray, David D., M.A.  
 Paul, Elise, C., M.S.  
 Perry, Gene, M.B.A.  
 Puddy, William, M.A.  
 Ramirez, Arthur, Ph.D.  
 Rousseau, William, M.A.  
 Shaver, Barbara M., Ph.D.  
 Shinn, Mary, M.Ed.  
 Stampfl, Barry G., M.A.  
 Stevenson, James M., Ph.D.  
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### ARTS AND LETTERS

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### EDUCATION

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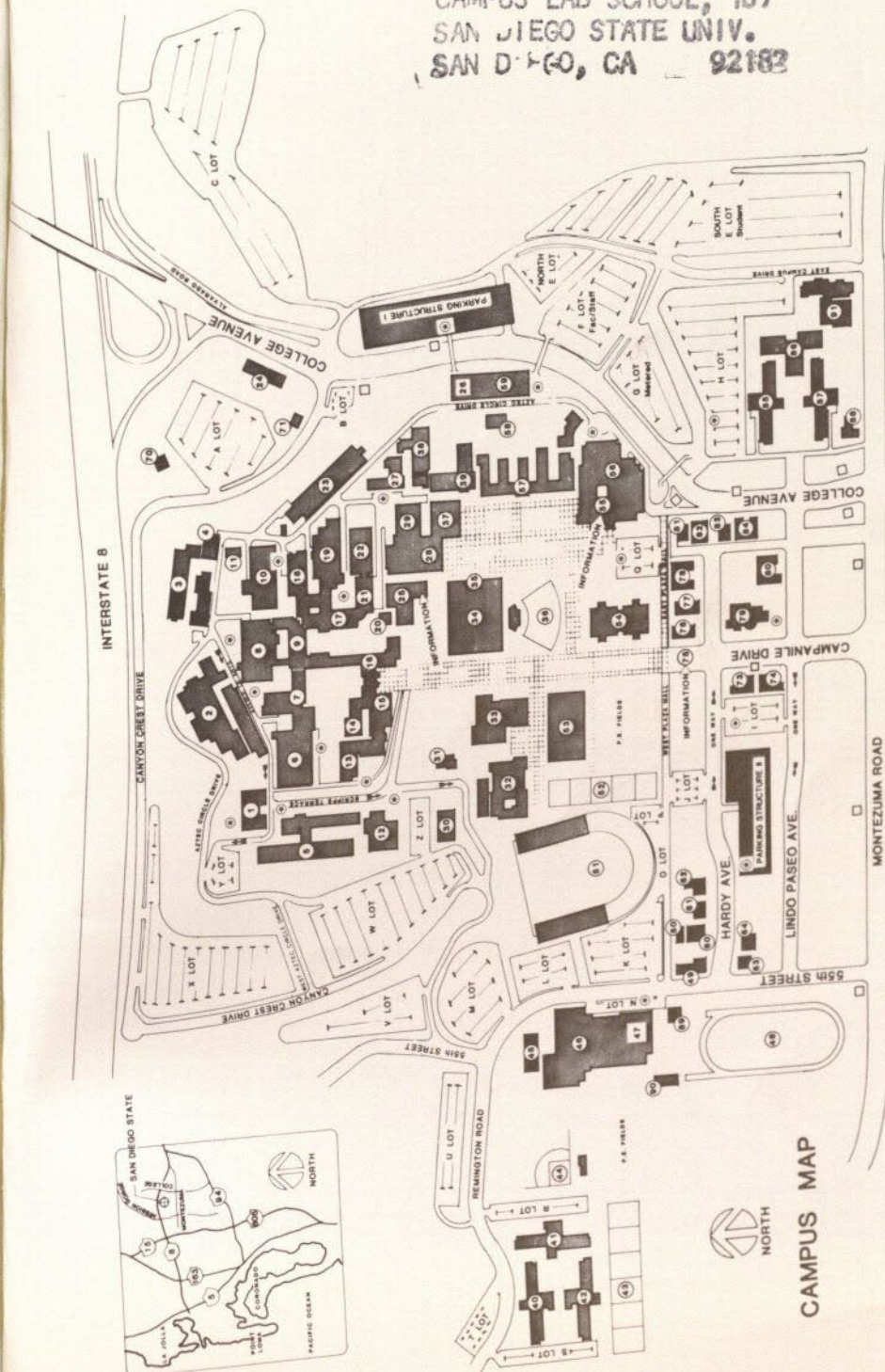
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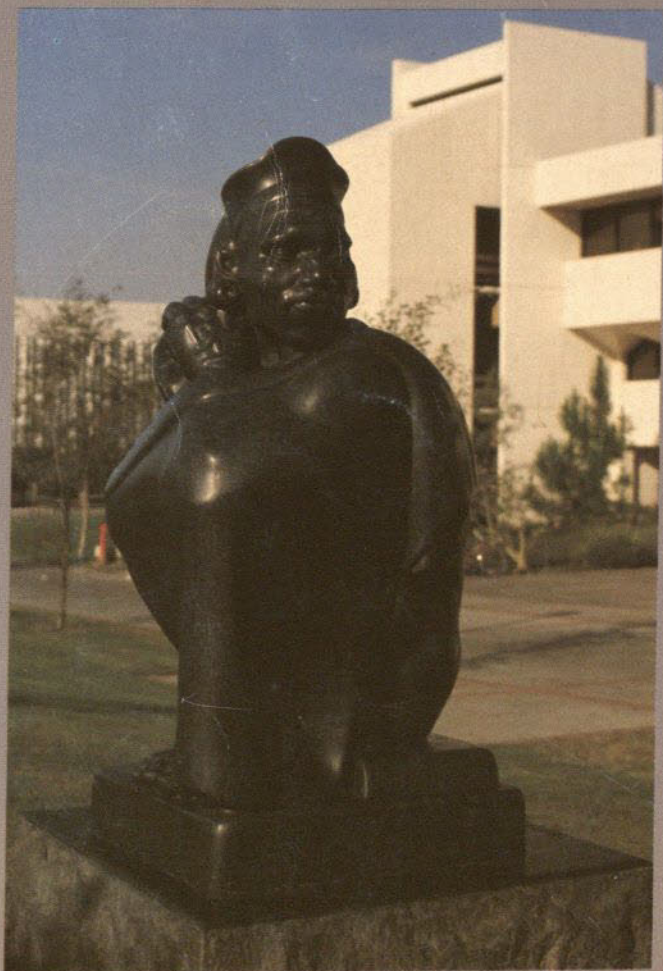
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