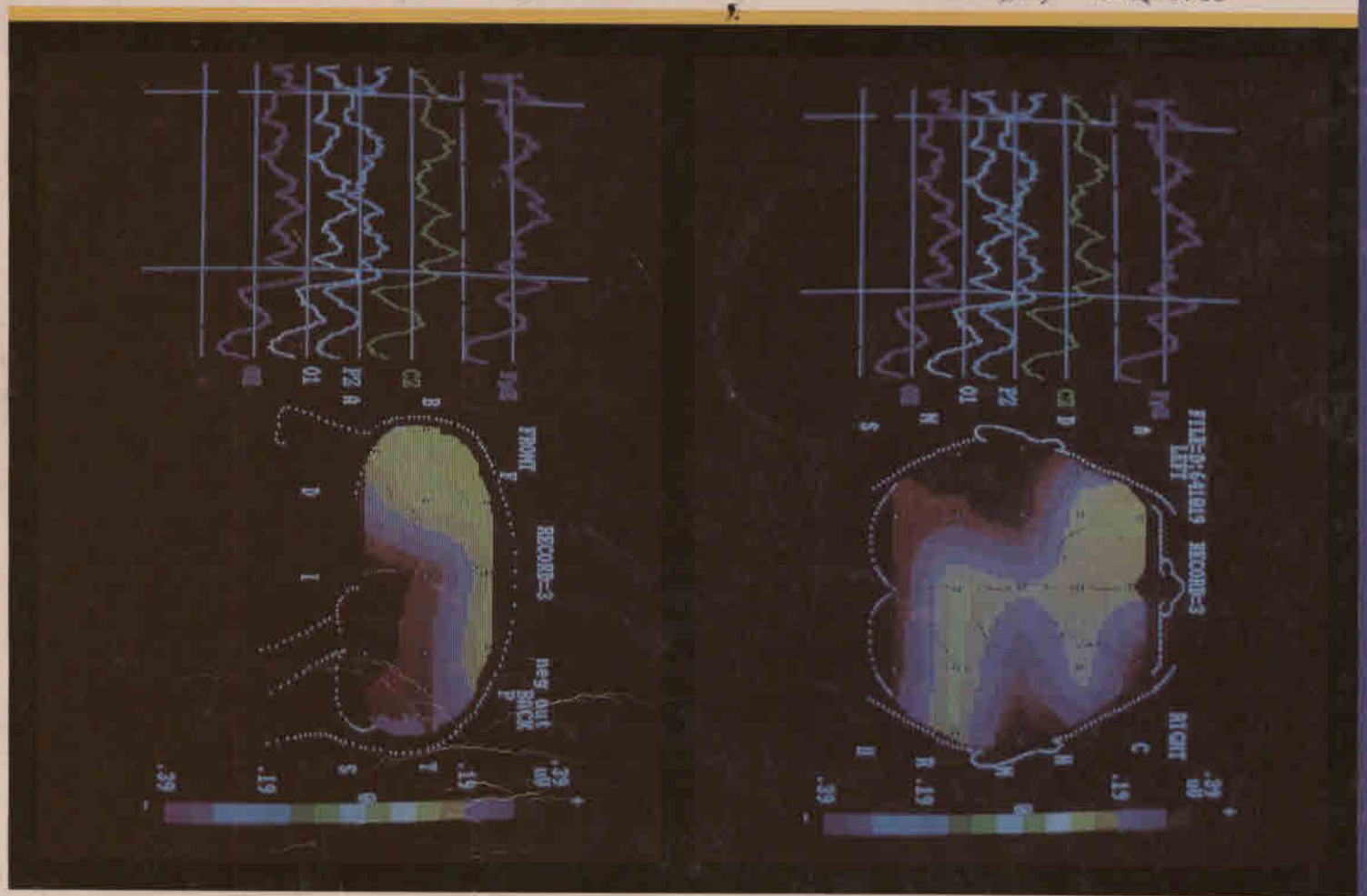
SAN DIEGO STATE UNIVERSITY

General Catalog 1988-89



THE CALIFORNIA STATE UNIVERSITY

CSUS

General Catalog

and

Announcement of Courses

Volume 75

1988-1989

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

Effective July 1, 1988, all SDSU telephones will have a 594 prefix. If you need assistance in reaching a department, please call (619) 594-5200.

Welcome to
San Diego State University!

In this catalog you will read about our course offerings, student services, and graduation requirements, as well as our mission to uphold the more than ninety-year history of providing quality education for all our students.

SDSU had humble beginnings as a teacher's program which held classes over a drugstore in downtown San Diego. Ninety-one students attended classes taught by seven professors. Today, you join more than 35,000 students at California's largest university. You can still study education, but now there are available undergraduate degrees in seventy-one other academic areas and master's degrees in fifty-five. You can also enroll in one of our five joint doctoral programs.

As an SDSU student, you may take pride in attending a university consistently recognized as the leading member of the 19-campus California State University system, and as one of the top comprehensive universities in the western United States. Each of our seven academic colleges has assembled a fine faculty whose excellence is reflected in an enviable list of successes and recognitions. Their classroom teaching is kept current by the most substantial research involvement of any CSU campus. This quality is reflected in the educational opportunity available to you, the student. You can work directly with professors who are at the forefront of their fields.

As a graduate, you will join the ranks of our impressive list of alumni, among them the leaders of San Diego—Mayor Maureen O'Connor, Chamber of Commerce President Lee Grissom, Police Chief Bill Kolender, and a host of other business, civic, and community leaders, scientists, and scholars. As *San Diego Magazine* noted in its October 1987 issue, SDSU graduates are "running the town."

Strive to realize your potential, to exert your best effort during your years at SDSU. You have the opportunity to expand your intellectual powers as you earn a first-rate education. You are preparing for a life in which you can provide for yourself and make a contribution to the world around you using the knowledge you gain at San Diego State University.

We wish you the best of luck.

Thomas B. Day
President

Table of Contents

CURRICULA

Summary of Curricula Offered

ANNOUNCEMENT OF COURSES

ADDENDA

Annual Calendar

CALENDAR 1988

JANUARY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

FEBRUARY

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29					

MARCH

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

APRIL

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

MAY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

JUNE

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

JULY

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					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

AUGUST

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

OCTOBER

S	M	T	W	T	F	S
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2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
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NOVEMBER

S	M	T	W	T	F	S
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6	7	8	9	10	11	12
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4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

CALENDAR 1989

JANUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
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S	M	T	W	T	F	S
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5	6	7	8	9	10	11
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12	13	14	15	16	17	18
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2	3	4	5	6	7	8
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4	5	6	7	8	9	10
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30	31					

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		1	2	3	4	5
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27	28	29	30	31		

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S	M	T	W	T	F	S
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3	4	5	6	7	8	9
10	11	12	13	14	15	16
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24	25	26	27	28	29	30

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S	M	T	W	T	F	S
1	2	3	4	5	6	7
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29	30	31				

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S	M	T	W	T	F	S
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26	27	28	29	30		

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3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Academic Calendar 1988-89

SUMMER SESSIONS 1988

June 6-24	Term A (3 weeks).
June 6-July 15	Term C (6 weeks).
June 27-July 29	Term D (5 weeks).
June 27-August 5	Term E (6 weeks).
July 4	Holiday—Independence Day. Campus closed (no classes).
August 8-26	Term H (3 weeks).

FALL SEMESTER 1988

August 1	Applications for admission or readmission to San Diego State University for the spring semester 1989 accepted. Applications are accepted after August 31 only until enrollment quotas are met.
August 5	Last day to apply for leave of absence for fall semester 1988.
Aug. 8-Sept. 9	Late Registration.
August 15-24	Schedule Adjustment/On-Line Registration.
August 22	Opening date of the academic year for faculty.
August 25-26	Testing and advising days.
August 29	First day of classes.
September 5	Holiday—Labor Day. Campus closed (no classes).
September 12	Last day to drop classes.
September 13	Last day to apply for refunds.
September 19	Last day to add classes, change grading basis, or apply for course "forgiveness."
September 19	Last day to withdraw officially from the University for fall semester 1988.
September 20	Last day to file application for bachelor's degree for December 1988 graduation.
November 1	Applications for admission or readmission to San Diego State University for the fall semester 1989 accepted. Applications are accepted after November 30 (postmarked) only until enrollment quotas are met.
November 24-26	Thanksgiving recess. Campus closed (no classes).
December 8	Last day of classes before final examinations.
December 9	Study and consultation day.
December 10-17	Final examinations.
December 16	Last day to file application for bachelor's degree for May and August 1989 graduation.
December 19	Winter recess begins.
December 22-28	Holiday—Winter recess. Campus closed (no classes).
December 29	Grades due from instructors. (Noon deadline.)
December 29	Last day of fall semester.
January 2, 1989	Holiday—New Year's. Campus closed (no classes).

WINTER SESSION 1989

January 9-27	Winter Session.
January 16	Holiday—Martin Luther King Day. Campus closed (no classes).

SPRING SEMESTER 1989

Jan. 3-Feb. 13	Late Registration.
January 13	Last day to apply for a leave of absence for spring semester 1989.
January 16	Holiday—Martin Luther King Day. Campus closed (no classes).
January 17-25	Schedule Adjustment/On-Line Registration.
January 23	First day, second semester.
January 26-27	Testing and advising days.
January 30	First day of classes.
February 10	Last day to drop classes.
February 13	Last day to apply for refunds.
February 13	Applications for bachelor's degree for December 1989 graduation accepted.
February 17	Last day to add classes, change grading basis, or apply for course "forgiveness."
February 17	Last day to withdraw officially from the University for spring semester 1989.
March 18	Last day of classes before spring recess.
March 20-25	Spring recess.
March 27	Classes resume.
May 1	Applications for bachelor's degree for May and August 1990 graduation accepted.
May 18	Last day of classes before final examinations.
May 19	Study and consultation day.
May 20-27	Final examinations.
May 28	Commencement.
May 29	Holiday—Memorial Day. Campus closed (no classes).
June 2	Grades due from instructors. (Noon deadline.)
June 2	Last day of spring semester.
August 4	Last day to apply for a leave of absence for fall semester 1989.

SUMMER SESSIONS 1989

June 5-23	Term A (3 weeks).
June 5-30	Term B (4 weeks).
June 5-July 14	Term C (6 weeks).
June 26-July 28	Term D (5 weeks).
June 26-August 4	Term E (6 weeks).
June 26-August 18	Term F (8 weeks).
July 4	Holiday—Independence Day. Campus closed (no classes).
July 17-August 25	Term G (6 weeks).
August 4	Last day to apply for a leave of absence for fall semester 1989.
August 7-25	Term H (3 weeks).

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

Schedule of Fees 1988-89

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

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

ADMINISTRATIVE/FINANCIAL HOLDS

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

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

REGISTRATION FEES — ALL STUDENTS:

On basis of units carried.

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	$257.00
6.1 or more units	$401.00

The above fee also includes a Student Activity Fee of $10.00, a Student Union Fee of $31.00, a Facilities Fee of $3.00, an Instructionally Related Activities Fee of $15.00, and a State University Fee of either $198.00 or $342.00, depending on unit load.

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

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

Legal residents of California are not charged tuition.

TUITION FOR NONRESIDENT STUDENT (Foreign and Domestic)

Tuition will be charged for all units attempted	per unit	$156.00
(Tuition is payable in addition to registration fees listed above. For fee-paying purposes, zero unit and half-unit courses are counted as one unit. See **Liability for Payment** section for additional important information.)		
Health insurance (mandatory for foreign students)	per year, approximately	269.00

PARKING FEES

Nonreserved parking space, per semester	$72.00
Car pool—see Cashiers Office.	
Less than four-wheeled, self-propelled vehicle (motorcycle, moped)	18.00

MISCELLANEOUS FEES (Fees payable when service is rendered.)

Application for admission or readmission (nonrefundable)	$45.00
Late registration (nonrefundable) (Refer to Class Schedule for dates when this fee will be assessed.)	25.00
Failure to meet administratively required appointment or time limit (late fee)	10.00
Photo-identification card (One-time cost to both new undergraduate and graduate students at time of registration. Valid only when accompanied by current semester validation card.)	3.00
Lost identification card	
Photo I.D. card only	2.00
Registration validation card only	2.00
Photo I.D. card and validation card	4.00
Transcript of record (official or unofficial)	4.00
Second through tenth transcript, prepared at the same time as the first	each 2.00
Additional copies over ten, prepared at the same time	each 1.00
AFROTC deposit (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**	10.00
Evaluation and diploma fee**	10.00
Credential application fee	60.00
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

* Late fee also charged when applicable.

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

MISCELLANEOUS INSTRUCTIONAL COURSE CHARGES

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

Accountancy 312.

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

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

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

Geological Sciences 508.

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

Music 345.

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

CREDIT CARDS

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

LIABILITY FOR PAYMENT

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

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. LATE FEE AND TUITION PAYMENTS ARE SUBJECT TO AN ADDITIONAL LATE FEE.

DISHONORED CHECK OR CHARGE SLIP

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

Advance Registration Payments. You will be disenrolled from all classes received through Advance Registration; it will then be necessary to re-register during Late Registration. You will be notified that this action was taken 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

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

Complete Withdrawal. To be eligible for refund of registration fees, a student withdrawing completely from the University (from *all* classes) MUST file a refund application with the Office of Admissions and Records at the time the withdrawal is requested, not later than 14 days following the commencement of instruction (Refund Deadline). All but $5.00 will be refunded. 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, or a student who paid fees but never obtained *any* 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

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

Tuition paid for a course scheduled to continue for an entire semester may be refunded 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.

Nonreserved space per semester:

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

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. The amount of refund is rounded down to the nearest dollar. No refund is made for amounts of $5.00 or less.

LATE REGISTRATION FEE

This nonrefundable fee pertains to those students who register during Late Registration or pay fees after classes begin. The registration process is not complete until all fees are paid. The Cashiers Office should be consulted for further details.

APPEALS PROCESS — CASHIERS OFFICE

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

SUMMER SESSION FEES

Tuition and fees, undergraduate	(per unit)	$82.00
Graduate, lab, seminars	(per unit)	98.00
Parking fees (nonreserved spaces)	(per week)	2.25

EXTENSION COURSE FEES

Extension/Open University	(approximately per unit)	$68.00

EXEMPTIONS

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

ALAN PATTEE SCHOLARSHIPS

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

Procedure for the Establishment or Abolishment of a Student Activity Fee

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

Organization and Administration

The California State University
Board of Trustees
Office of the Chancellor

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

The California State University

The individual California State Colleges were brought together as a system by the Donahoe Higher Education Act of 1960. In 1972 the system became The California State University and Colleges and in 1982 the system became The California State University. Today, 18 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 system-wide policy, with actual implementation at the campus level taking place through broadly based consultative procedures. The Academic Senate of The California State University, made up of elected representatives of the faculty from each campus, recommends academic policy to the Board of Trustees through the Chancellor.

Academic excellence has been achieved by The California State University through a distinguished faculty, whose primary responsibility is superior teaching. 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. Many of these programs are offered so that students can complete all upper division and graduate requirements by part-time late afternoon and evening study. In addition, a variety of teaching and school service credential programs are available. A limited number of doctoral degrees are offered jointly with the University of California and with private universities in California.

System enrollments total approximately 333,000 students, who are taught by some 19,000 faculty. Last year the system awarded over 50 percent of the bachelor's degrees and 30 percent of the master's degrees granted in California. More than one million persons have been graduated from the nineteen campuses since 1960.

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

The 19 campuses and the Chancellor's Office of The California State University are financed primarily through funding provided by the taxpayers of California. The total State appropriation to the CSU for 1987/88, including capital outlay and employee compensation increases, is $1,552,100,000. The total cost of education for CSU, however, is $1,850,463,853 which provides support for a projected 253,850 full-time equivalent (FTE)* students.

The total cost of education in the CSU is defined as the expenditures for current operations, including payments made to students in the form of financial aid and all fully reimbursed programs contained in state appropriations, but excluding capital outlay appropriations. The average cost of education is determined by dividing the total cost by the total FTEs. The average cost is further differentiated into three categories: State Support (the State appropriation, excluding capital outlay), Student Fee Support, and Support from Other Sources (including Federal Funds).

Thus, excluding costs which relate to capital outlay (i.e., building amortization), the average cost of education per FTE student is $7,290. Of this amount, the average student fee support per FTE is $940. The calculation for this latter amount includes the amount paid by nonresident students.

Source of Funds and Average Costs for 1987/88 CSU Budget

(Projected Enrollment: 253,850 FTE)

	Amount	*Average Cost Per Student (FTE)**	*Percent*
Total Cost of Education	$1,850,463,853**	$7,290	100.0
–State Appropriation	1,445,438,000***	5,694	78.1
–Student Fee Support	238,564,332	940****	12.9
–Support from Other Sources	166,461,521	656	9.0

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

** The total cost of education does not include the amount related to lottery and the capital investment of the CSU. The estimated replacement cost of all the system's permanent facilities and equipment on the 19 campuses is currently valued at $5.3 billion, excluding the cost of land.

*** This figure does not include the capital outlay appropriation of $106,662,000.

**** The average costs paid by a student include the State University Fee, Application Fee, and Nonresident Tuition. Individual students may pay less than $940 depending on whether they are part-time, full-time, resident, or nonresident students.

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Correspondence with Trustees should be sent:

c/o Trustees Secretariat
The California State University
400 Golden Shore, Suite 322
Long Beach, CA 90802-4275

Office of the Chancellor The California State University

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

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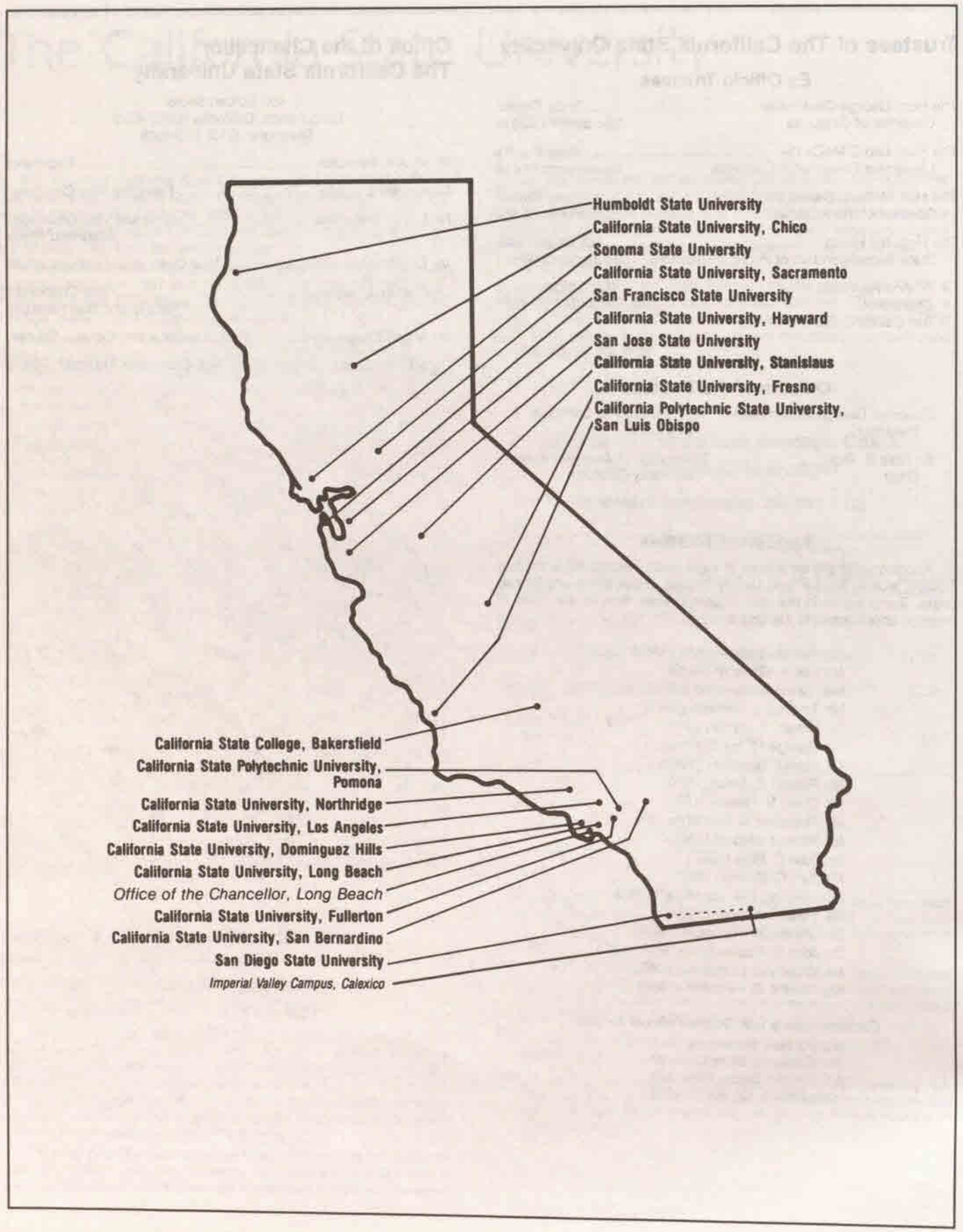

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Bakersfield, California 93311-1099
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(805) 833-2011

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Chico, California 95929
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Carson, California 90747
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Shaw and Cedar Avenues
Fresno, California 93740
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(209) 294-4240

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Fullerton, California 92634
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Hayward, California 94542
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(707) 826-3011

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Long Beach, California 90840
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18111 Nordhoff Street
Northridge, California 91330
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San Jose, California 95192
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(408) 924-1000

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San Luis Obispo, California 93407
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(805) 756-1111

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

California State University, Stanislaus
801 West Monte Vista Avenue
Turlock, California 95380
Dr. John W. Moore, President
(209) 667-3122

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 and, with over 35,000 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.

To accommodate the steadily increasing enrollment, the campus continued to grow in terms of physical facilities as well. It currently encompasses over 3.5 million square feet in 44 academic buildings including, to name but a few, Aztec Center, the first student union building in the CSU system; the Dramatic Arts building with one of the finest theaters in the nation; the Music building, with its Recital Hall; and the 320,000 square foot Malcolm A. Love Library, with its ample reading areas and ideally arranged collections and services. The Health Services facility, Art and Humanities classroom buildings, and additional dormitory and parking facilities make up the more recent additions to the campus. Several renovation projects have improved facilities for the sciences as well. Currently in the planning stages are new buildings to house student services and engineering.

The University now offers bachelor's degrees in 71 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 levels, 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.

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General Information

General Information
Student Services
Financial Aid
Scholarships
Special Programs and Services

General Information

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, HH-114, 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;
4. Data regarding student retention at San Diego State University and, if available, the number and percentage of students completing the program in which the student is enrolled or expresses interest; and
5. The names of associations, agencies, or governmental bodies which accredit, approve, or license the institution and its programs, and the procedures under which any current or prospective student may obtain or review upon request a copy of the documents describing the institution's accreditation, approval, or licensing.

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

Career Placement

Counseling Services and Placement may furnish, upon request, information about the employment of students who graduate from programs or courses of study preparing students for a particular career field. This information includes data concerning the average starting salary and the percentage of previously enrolled students who obtained employment. The information may include data collected from either graduates of the campus or graduates of all campuses in The California State University.

Faculty Office Hours

All faculty members are required to hold regularly scheduled office hours during the week to allow for student consultation. A schedule of those hours is posted outside each faculty member's office door.

Honor Societies

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

Multidisciplinary Academic Honor Societies

Golden Key is a national honor society whose purpose is to recognize and encourage scholastic achievement and excellence in all undergraduate fields of study, to unite with collegiate faculties and administrators in developing and maintaining high standards of education, to provide economic assistance to outstanding members by means of scholastic achievement and altruistic conduct through voluntary service. Golden Key national honor society has 103 active chapters.

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

The faculty adviser is Dr. E. Nicholas Genovese, Department of Classical and Oriental Languages and Literatures.

Mortar Board is a national honor society of college seniors. The society recognizes in its membership the qualities of superior scholastic ability, outstanding and continual leadership, and dedicated service to the University community. The SDSU chapter of Mortar Board had its beginning in 1932 as Cap and Gown. In 1965 the local honorary was recognized as a member of the national organization. Nationwide there are 196 active chapters with a membership in excess of 130,000.

Mortar Board membership means active involvement to benefit the campus and community. Current projects include presentation of an annual emeritus faculty/staff award to recognize individuals whose outstanding work contributed significantly to this university; service as volunteers in the annual KPBS fund drive; participation in Women's Opportunity Week; and the sale of tassels to graduating seniors.

To be considered for election to membership, students must have senior standing for the fall semester with an overall GPA of 3.00 and have participated and excelled in the areas of scholarship, service, and leadership. Admission to Mortar Board is highly competitive and is restricted to no more than 35 students per year.

The senior faculty adviser is Dr. Henry L. Janssen, Department of Political Science. The administrative liaison is Dr. Jane K. Smith, Assistant Vice President for Academic Services (HH-114).

Phi Beta Kappa is a national honor society which recognizes academic excellence in undergraduate students who are usually enrolled in the College of Arts and Letters or the College of Sciences and who are or will be eligible for the Bachelor of Arts or Bachelor of Science degree. To be considered for election, students must have a high overall GPA (3.5 minimum), have completed a minimum of 45 upper division units at SDSU, have completed a course in university-level mathematics, and have attained proficiency in a foreign language at the level of a third semester university course. Significant weight is also given to the breadth and depth of the students' coursework as evidenced by the number, variety, and seriousness of upper division courses taken outside the major, together with the grades earned; no more than 12 units may have been taken Cr/NC. Election is by vote of the faculty members of Nu Chapter (SDSU) of Phi Beta Kappa. For information, contact Dr. Ray T. Smith, Department of History, or Dr. Barbara B. Hemmingsen, Department of Biology.

Phi Eta Sigma was established in 1923 to encourage and reward high scholastic achievement among freshmen in institutions of higher learning. Membership is open to students who achieve at least a 3.50 GPA in either semester of their freshman year.

The faculty adviser is Dr. Henry L. Janssen, Department of Political Science.

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

Membership is based on, but not limited to, the following criteria: Juniors must have completed a minimum of 75 units with a GPA of 3.75; seniors must have completed a minimum of 90 units with a 3.75 GPA overall; graduate students must have completed a minimum of 15 units of graduate work at SDSU and have a GPA of 3.90 or better in graduate work.

The faculty adviser is Dr. Ida K. Rigby, Department of Art.

Disciplinary Honor Societies

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

- Alpha Epsilon Rho (Broadcasting)
- Alpha Kappa Delta (Sociology)
- Alpha Mu Gamma (Foreign and Classical Languages)
- Beta Alpha Psi (Accountancy)
- Chi Epsilon (Civil Engineering)
- Delta Phi Alpha (German)
- Dobro Slovo (Russian)
- Epsilon Pi Tau (Industrial Studies)
- Eta Kappa Nu (Electrical Engineering)
- Eta Sigma Gamma (Health Science)
- Financial Management Association National Honor Society (Finance)
- Kappa Tau Alpha (Journalism)
- Omicron Delta Epsilon (Economics)
- Phi Alpha Theta (History)
- Phi Upsilon Omicron (Family Studies and Consumer Sciences)
- Pi Alpha Alpha (Public Administration)
- Pi Delta Phi (French)
- Pi Lambda Theta (Education)
- Pi Sigma Alpha (Political Science)
- Pi Tau Sigma (Mechanical Engineering)
- Psi Chi (Psychology)
- Sigma Alpha Iota (Music)
- Sigma Delta Pi (Spanish)
- Sigma Gamma Tau (Aerospace Engineering)
- Sigma Iota Epsilon (Management)
- Sigma Pi Sigma (Physics)
- Sigma Theta Tau (Nursing)
- Tau Beta Pi (Engineering)
- Upsilon Pi Epsilon (Information and Decision Systems)

Accreditation

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

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

- Accrediting Council on Education for Journalism/Mass Communication
- American Chemical Society
- American Home Economics Association
- American Speech-Language-Hearing Association Educational Standards Board and Professional Services Board
- California Commission on Teacher Credentialing
- Council on Education for Public Health
- Council on Education of the Deaf
- Council on 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

The College of Business Administration and the School of Accountancy are accredited by the American Assembly of Collegiate Schools of Business at both the undergraduate and graduate levels. The Interior Design area in the Department of Art has been granted provisional status by the Foundation for Interior Design Education Research.

The College of Engineering 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.

In addition, preparation for many other professions is provided. It is suggested that the student refer to the various courses of study listed in the catalog. The bachelor's degree is offered in 71 areas, the master's degree in 55 areas, and the doctorate in 5 areas.

Degrees and Certificates

San Diego State University offers the following degrees and certificates:

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

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

Types of Curricula Offered

San Diego State University offers the following types of curricula:

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

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

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

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

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

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

(4) Preprofessional and nondegree curricula: Programs are offered in predentistry, 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, clinical psychology, ecology, and education.

Student Services

Division of Student Affairs

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

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

Athletic Academic Support Services

The office of Athletic Academic Support Services assesses academic skills, monitors and records academic progress, and provides advising, supervised study halls, and tutoring for SDSU athletes. The office is located in PSFA-145; telephone 265-4743.

Campus Tours (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 career 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 relationship development clinic and a stress management clinic are 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 by registering for job mailings, maintaining an updated individual placement file, utilizing current resources in the library, participating in workshops, and on-campus interviews for employment.

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.

Disabled Student Services (DSS)

Disabled Student Services provides the support services needed by students with physical and learning 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 campus and loan of special equipment. Accessibility information, maps and library study rooms are available. The office provides interpreters and notetakers for deaf students. Readers, notetakers, and in-classroom testing assistance are available to qualified visually impaired, learning disabled, and dexterity limited students. A specialist provides evaluation and support services to learning disabled students. Special programs are scheduled throughout the semester. Students are also provided referral to off-campus agencies. 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 concerns. Medical documentation of disability by physician and/or other appropriate professional is required. For more information contact Disabled Student Services, Campus Lab School 110; telephone 265-6473; TDD: 229-2929.

Educational Opportunity Program (EOP)

The Educational Opportunity Program—EOP—is designed to assist undergraduate low-income students, students from diverse cultural and linguistic backgrounds, and students needing special academic admissions consideration who wish to acquire a university education but have not been able to realize their potential because of economic and/or educational impediments. In cooperation with various state, local, and federal agencies, the program recruits and enrolls students and provides a comprehensive range of personal and academic support activities including pre-enrollment orientation, four-week summer program, coordinated general education course packages for freshmen, personal counseling, and free academic tutoring. Financial aid is distributed 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 full potential. All EOP students entering SDSU are required to attend the EOP orientation program known as EOP-START. Attendance at an Academic Information Day or CONTACT is encouraged, but does *not* meet the EOP orientation requirement. The Educational Opportunity Program office is located at 5172½ College Avenue; telephone 265-6298.

Health Services

Student Health Services, located on the corner of Campanile Drive and Hardy Avenue, provides a full range of quality medical care to regularly registered SDSU students. The staff of over 75 personnel includes physicians board certified in family practice, pediatrics, dermatology, internal medicine, orthopedics, psychiatry, and radiology. Primary care nurse practitioners along with nursing, x-ray, laboratory, and health education staff also offer comprehensive services. The pharmacy located in Student Health Services dispenses most of the medications prescribed by the clinic's providers and some over-the-counter items at substantially reduced cost. The Health Education Department within Student Health Services offers a variety of services ranging from individual counseling to group sessions to campuswide programming focused on reducing lifestyle risk factors and increasing general knowledge of healthy behaviors. Nutrition, family planning, and smoking exemplify some of the targeted concerns.

Student Health Services is open twelve months a year. Clinic hours during fall and spring semesters are Monday through Friday, 8:00 a.m. to 5:00 p.m. During winter session and summer, the clinic closes at 4:15 p.m. The Health Services office is located at the corner of Campanile Drive and Hardy Avenue; telephone 265-5281.

There is no charge at the time of service for medical care provided at Student Health Services. Fees have been prepaid through regular registration fees. Some services, for example annual Pap smears and pharmacy, require a minimal fee. Charges associated with these services are usually dramatically lower than those found elsewhere.

All medical care provided at Student Health Services is **strictly confidential.** No one, on or off campus, has access to medical record

information without written permission from the student.

Some health screening before entering the University is recommended, while some is *required.*

REQUIRED: Proof of Measles and Rubella Immunizations or Immunity

New or readmitted students born on or after January 1, 1957 must demonstrate proof of immunity to measles and rubella (German Measles) by the beginning of their second term of enrollment at SDSU. Those who have not complied with this California State University mandate by this time will be notified of the need to comply *before* receiving registration materials for their second term.

Measles/rubella immunization is now required because both of these diseases continue to cause disability and sometimes death in college-age individuals. Epidemics have occurred on many college campuses during the past few years because a sizeable percentage of students lack immunity to measles and rubella. The aim of immunization is to prevent a serious outbreak and potential fatalities among students in the California State University system.

Students may fulfill the immunization requirement by bringing or sending documented proof of either previous illness or immunization to Student Health Services. An immunization mailer is automatically sent to all new and readmitted students. Students may also receive free measles/rubella immunizations in Student Health Services. For more information, call 265-5281.

Strongly Recommended Health Screening

Immunization from the following diseases may also protect students against potentially severe infections: tetanus, diphtheria, polio, mumps. Like measles, these too can be particularly harmful in the college-age group. These immunizations are available at little or no cost in Student Health Services.

Entering students are also strongly encouraged to have a screening test for tuberculosis (TB). The TB skin test is offered free at Student Health Services.

To help Student Health Services provide more continuous care, students are encouraged to obtain a health history and physical examination from their local medical provider prior to arrival at SDSU. Copies of these records can be brought or mailed to Student Health Services.

Student Health Advisory Board

Students can participate in the clinic activities and offer important feedback about services through membership on the Student Health Advisory Board (SHAB) sponsored by Associated Students. Members not only work with clinic staff on a variety of health education projects, but also act as liaison between the SDSU student body and Student Health Services. SHAB keeps Student Health Services staff focused and current on major student health issues. Membership from all academic majors is encouraged.

Accidents and Student Insurance Coverage

Under Trustee policy, first aid or 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; telephone 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 **health insurance policy** is available and recommended to students having no private medical or accident insurance coverage. The insurance includes hospitalization benefits and specified medical and surgical services. The policy may be purchased by semester or on a yearly basis. An open enrollment period is available the first thirty days of each semester and the policy may be purchased at the Aztec Center ticket office.

Housing and Residential Life

Residence Halls

Accommodations for 2,487 single students are available in eight 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, in a small number of single rooms in Zura Hall, or in four student suites in Villa Alvarado. 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 1987-88, the cost for room and board was approximately $3,430 (14-meal plan, double occupancy) per academic year except for Villa Alvarado, which does *not* include board or utilities, at $2,536 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 (optional only for Villa Alvarado residents).

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 contact 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, the first payment is received as specified, and space is available. 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 seventeen 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.

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 US 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. The International Students Office is located in Scripps Cottage; telephone 265-5258.

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 265-6578.

Student Outreach Services (SOS)

The Student Outreach Services office includes School and College Relations, the recruitment component of the Educational Opportunities Program, and Student Affirmative Action, which provides recruitment 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. The Student Outreach Services office is located in the Campus Laboratory School, room 114. For more information, please call 265-6966.

Student Resource Center (SRC)

The Student Resource Center (SRC) assists students with questions on all aspects of the University and serves as a primary resource for student activity programming. Contact SRC for:

- on-campus status for clubs or organizations;
- weekend use of Aztec Center and all other campus facilities;
- leadership training classes, an annual Institute weekend, and workshops for leaders of clubs, organizations, sororities, fraternities, student government, orientation leaders, and student mentors;
- approval of all on-campus clubs' activities, including fundraising events;
- approval of a seller's permit for on-campus sales.

SRC coordinates all new student orientation programs, the New Hampshire Exchange Program, and the Mentor Program which helps ethnic students adjust to the campus community. SRC staff advise college councils, the Associated Students (student government), and provide the Leadership Library and Student Assessment Center, a notary public, and a parliamentary procedure resource.

SRC also distributes printed materials on academic majors, student service departments, and other programs. Two quarterly newspapers, one for parents and families of SDSU students and one for students featuring a calendar of campus activities, are published. The Student Resource Center is located in the Campus Laboratory School, room 114; telephone 265-5221.

New Student Programs

The Student Resource Center offers programs designed to introduce new students to San Diego State University. All programs include group academic advising, registration assistance, and a campus tour. Academic Information Day is held prior to the advance registration deadline each semester. CONTACT, a campuswide orientation, is held the week before classes begin in the fall. For information, write the Student Resource Center, CL-114, or call 265-5933.

EOP students are required to attend the EOP orientation program known as EOP-START. Attendance at an Academic Information Day or CONTACT is encouraged, but does *not* meet the EOP orientation requirement. Call EOP at 265-6298 for additional information.

Test Office

The Test Office serves both students and faculty through administering tests for the purpose of admissions, class placement, competency for graduation, licenses, credentials and career planning. Test dates for San Diego State University competency and placement tests are listed in the Special Tests section of the current Class Schedule. Test dates and registration procedures for major national examinations are available at the Test Office. Advance reservation and fee payment are required for most tests. Students must contact the Counseling Services and Placement Center to register for assessments assisting with the counseling process and career planning.

A library of tests is maintained in the Test Office. Test scoring and analysis services are provided. The Test Office is located in Library East, Room 406; telephone 265-5216.

Veterans Services

The Veterans Affairs Office is located in room 121 on the first floor of the Administration Building. The office assists veterans and eligible dependents in applying for VA educational benefits. Additionally, the office assists veterans in finding VA Work Study positions. Students interested in applying for advance payment of the first VA education 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.

Financial Aid and Scholarships

Financial Aid

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

San Diego State University makes every effort to advise students of all available financial aid programs. Financial aid is available in the form of loans, grants, and part-time employment for eligible students. Since funds are limited and there are program deadlines, not all eligible applicants are awarded aid.

Information about all state, federal, and institutional aid programs is available from the Financial Aid Office, CL-122, 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, aid applicants must file a *Student Aid Application for California (SAAC)* by March 2 and submit all required supporting documents to the Financial Aid Office by April 15 of the calendar year prior to the academic year for which aid is being requested. An application and supporting documents received after these dates will be processed and funds will be awarded to high-need applicants if funds are available. SAACs may be obtained from high schools and any college financial aid office in California.

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

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:

Estimated Expenses for the 1988-89 Academic Year

	Living off Campus	*Living on Campus*	*Commuting from Home*
Registration fee for materials, service, student activity, student union, facilities	$ 772	$ 772	$ 772
Books and supplies	384	384	384
Room and board	4642	3750	1100
Transportation	576	0	576
Personal	1294	1168	990
Total	$7668	$6074	$3822

In addition to the registration fee, foreign students and out-of-state students will pay tuition of $156.00 per unit in 1988-89. **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 (CSAC), P.O. Box 942845, Sacramento, California 94245-0845. Applications are available in the Financial Aid Office during the annual application period (December to early March). March 2 is the deadline for all aid programs administered by the CSAC.

Scholarships

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

Scholarships and Fellowships Administered by Departments

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

Fellowships for Graduate School

As a general rule, students planning graduate work should inquire about graduate fellowship support from the graduate school to which they are applying. The San Diego State University Scholarship Office receives the annual announcements on most national awards including Fulbright, Ford, Rotary, Rhodes, and Marshall scholarships. Students interested in fellowships of this type are encouraged to discuss their applications with members of the San Diego State University faculty who have themselves in the past received these fellowships. Scores from the Graduate Record Examination, Law School Admission Test, Admission Test for Graduate Schools of Business, Dental Admissions Test, or Medical Colleges Admission Test, as appropriate, are required in applying for most fellowships; therefore students should take the appropriate test early in the fall of their senior year. Information concerning these tests may be obtained from the San Diego State University Test Office, 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 3.50 overall GPA *or* a 3.70 in the last 30 units of university work. Graduate and postbaccalaureate students must have a 3.50 overall GPA for work completed after the bachelor's degree *or*, in the absence of completed postbaccalaureate units, a 3.50 overall undergraduate GPA *or* a 3.70 in the last 30 units of university work. High school seniors must have a 3.50 cumulative GPA (excluding physical education and military science) for all work completed in the first seven semesters.

Applications for the SDSU scholarship program are available in the Scholarship Office, from all department secretaries, and in San Diego County high school and community college counseling offices. You may also write or call the SDSU Scholarship Office, San Diego, CA 92182; telephone 265-6180.

Applications are available each year during one application period, November through February 14. The SDSU scholarship application must be filed or postmarked not later than February 14 for the following academic year. Students need to 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:*** There are ten Freshmen Scholar Awards available only to entering freshmen. The $2500 scholarship is awarded in $500 increments each fall for up to five years of undergraduate study providing the recipient maintains a minimum 3.50 grade point average.

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

COLLEGE OF ARTS AND LETTERS

Classics
- Martha S. Biehl
- Viola Granstaff Memorial

Economics Department
- Alumni, CPE
- * Anonymous, CPE
- * Henry Cramer, CPE
- * Sidney Evans, CPE
- * Henry George, CPE
- Paterson, CPE
- * Walter Weiss, CPE

English and Comparative Literature Department
- George Gross
- D. C. and K. W. Stott Memorial

History Department
- * Andrew Bell Appleby Memorial
- Katherine Ragen 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
- Robert F. Driver Co.
- * Mayor's Bridges to Business
- Pacific Telesis/MBA
- ** San Diego Mortgage Bankers Association
- TRW-Slaney Memorial
- WAFC
- Monica F. Williams Memorial

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

Financial Services
- Robert F. Driver Co.
- Farmers Insurance Group
- ** Professional Insurance Agents CA/NV
- ** San Diego Mortgage Bankers Association

Information and Decision 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

COLLEGE OF EDUCATION
- California PTA
- California Retired Teachers
- Delta Kappa Gamma, Delta Iota Chapter
- Delta Kappa Gamma, Nu Chapter
- ** The Alfred Harcourt Foundation
- **Ellen Harcourt Scholars
- Linkletter Foundation
- Catherine Yuhan Lodge Memorial
- MABA
- Madden
- Pi Lambda Theta Alumnae
- Lauren C. Post Scholarship for Geographic Education
- Richard Servey Memorial
- Vickie Sleiman–Equity in Education
- John Paul Stone Memorial
- Vector
- Gail White Memorial

COLLEGE OF ENGINEERING
- American Association of Cost Engineers
- American Concrete Institute
- American Public Works Association
- American Society of Civil Engineers
- American Society of Heating, Refrigeration and Air-Conditioning Engineers, Inc.
- Association of California Water Agencies
- BSHA/Engineering
- California Council of Civil Engineers
- California Society of Professional Engineers and Land Surveyors
- 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

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

James R. Libby and Associates
Walter M. Lowe Memorial
MESA
Nasland Engineering
National Electrical Contractors Association
S. Falck Nielsen Family
Craig, Bulthius and Nothomb
North Island Professional Engineers Association
Pacific Telesis
** Rohr Industries
San Diego Rock Producers
Society of Military Engineers
Cheng-Mo Sun Memorial
Testing Engineers of San Diego
Unit Masonry Association of San Diego
Robert Young Engineering

COLLEGE OF HEALTH AND HUMAN SERVICES

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

Health Science Department
Dental Health Internship

School of Nursing
Allstate Foundation
Katherine R. Foley Memorial
Fraternal Order of Eagles, Ladies Auxiliary
Mary Quam Hawkins
Dorothea Lambert Memorial
Lottie E. Olberg Trust
Frances Shimp Tidwell Memorial

School of Public Health
Morton Schweitzer Memorial
California PTA

School of Social Work
Ernest Witte Memorial

COLLEGE OF PROFESSIONAL STUDIES AND FINE ARTS

Art Department
BSHA/Art
** Frances Boyd Ellsworth
California China Painters Art Association
** Patricia Clapp Memorial
M. K. Hill
** Isabel Kraft Sculpture
Virginia Thornsen Memorial

Drama Department
Jeweldean Brodie
Sybil Elisa Jones Memorial
Gordon Lusk Memorial
* Marion Ross
Hunton Sellman
Henry Stanton Memorial

School of Family Studies and Consumer Sciences
Thair Milne
Victoria Smart Memorial
Georgia Tait Stooke

Industrial Arts Department
James "Chris" Nichols Memorial

Journalism Department
* Clayton H. Brace Memorial–Broadcast Journalism
James Copley Foundation
Faculty and Alumnae
Dr. James Julian Memorial
Harold Keen Journalism
KFMB
** McGraw-Hill Broadcasting
Lee Neill Memorial
Jane Nelson Memorial
** Mindy Gates O'Mary Memorial
Reggie Smith Memorial
Paula Sullivan Memorial

Military Science
M. Lorin Kemp Memorial: ROTC

Music Department
Elsie Hiland Fox Memorial
M.H. Golden Memorial
Lois Greeno Memorial
Joseph E. Johnson
Kiwanis Club
Lieber-Flower
Jan Lowenbach, Graduate – Musicology
Alvin Morrison Memorial
Music Department
Opera Theatre
Bessie S. Purdy Memorial
Edith Savage
SPEBSQSA
Paul C. Stauffer Memorial
Symphony Orchestra
University Band
Marvin Yerkey Memorial

Physical Education Department
* Adult Fitness Program
George William Ellis
* 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
Recreation Faculty

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
B.J. Kaston Memorial

Chemistry
Dudley Robinson Memorial

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

Geological Sciences Department
* Baylor Brooks
Rollin and Caroline Eckis
* Geology Scholarship Fund
* Awona Harrington Memorial
Michael Ptasek Memorial

Mathematical Sciences Department
NCR Corporation

Physics Department
Optics-Physics
Physics Summer Research
Skolil Fund

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
Aztec Shops
** Clair Burgener Foundation
Computer Sciences Corporation
Coors Veterans
Delta Kappa Gamma, Theta Gamma Chapter
Clara Escudero Fund
** Fleet Foundation
Amelia Fontaine Memorial
Johanna Muench Fox Memorial
William Fox Memorial
General Dynamics
** Golden Key
Arthur C. Harris
Raymond and Margaret Houck Memorial
** International Students
** Kaiser Permanente
Mary Melton Kantor Memorial
Philip Kantor Memorial
Kappa Beta Nu
Kiwanis Club Univ-SD
William and Edna Lasalle Memorial
Lipinsky Family
Maurice Masserini
Mortar Board Alumnae of San Diego
** James O'Hara II Memorial
Parents Program
** Phi Kappa Phi
** 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
** Frank Scott Memorial
Robert Patterson Sheilds Memorial
Mark Skinner Memorial
** Skolil, Smith/Physical Science
** Slim Solheid Memorial
Frank G. Tait
Terry Lynn Thompson Memorial
Wilmia Tyler Trott Memorial
Westervelt Memorial
Mr. and Mrs. John Zweck Memorial

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

Imperial Valley Campus Scholarships

The Imperial Valley Campus awarded $4,000 in scholarships for the 1987-88 academic year. Scholarships have been established by Imperial Valley Campus Chapter, SDSU Alumni & Associates; Soroptomists International, Calexico; Holtville Rotary; American Business Women Association; Delta Kappa Gamma; San Diego Campus Scholarship; Phi Delta Kappa; and Imperial Valley Campus faculty and staff contributions. Information and applications for these scholarships are available from the Office of Student Affairs.

Special Programs and Services

Academic Skills Center

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

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

Alumni & Associates

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

The Alumni & Associates is a dynamic, moving organization whose purpose is to promote the welfare of the University. It offers a number of programs and services designed to meet the variety of needs and interests of its alumni, including library privileges, reduced admission to many cultural activities, and Extended Studies mini-courses, workshops and conferences.

The Alumni & Associates also supports the University's annual fund drive to raise private funds for innovative educational programs beyond the basic curriculum and to meet numerous needs of the University community.

In addition, the Alumni & Associates sponsors an Annual Awards Program every spring honoring alumni and friends of the University, provides scholarships for students, and serves as a sounding board regarding University programs and policies.

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

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

Associated Students of San Diego State University

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

Aztec Center, the focal point of AS activities, is a model student union facility. It houses conference rooms, lounges, shops and service centers for use by students, faculty and staff, as well as the offices of AS staff and the student government. The Aztec Center is funded through a student union fee, as well as income generated by many programs and services.

The AS operates, in conjunction with other universities in the area, the world's largest instructional waterfront facility. Mission Bay Aquatic Center offers physical education courses and recreational instruction in aquatic sports.

The Leisure Connection provides leisure and craft instruction, studio space and recreational equipment rental. TLC also organizes recreational sports and outings and coordinates a campus games program.

Other programs include child care, the Open Air Theatre, and cultural activities. For more information call 265-6551.

Audiology Diagnostic Center

The Audiology Diagnostic Center in the College of Health and Human Services is a service of the Department of Communicative Disorders. The center provides diagnostic information regarding hearing loss, hearing aid evaluations, earmolds and earprotectors for faculty, students, staff and the community, including Hispanic and Asian clients and their families. A minimal fee is charged for audiological services. The center operates throughout the school year. Referrals may be made through health professionals, agencies, school districts or as self-referrals; for information call 265-6477.

Aztec Shops

(Bookstore, Food Services, other vendors)

Aztec Shops, Ltd. is a California nonprofit corporation which has existed since 1931 to serve San Diego State University. It owns and operates services such as the Campus Store, Food Services, and copy centers. Aztec Shops is governed by a board of directors composed of faculty, students, and staff of SDSU.

The Campus Store provides required textbooks, assigned class materials, reference works, supplies, and a selection of over 30,000 general book titles. Art supplies may be found at Art, Etc., located in the Art Building. The Copy Center, located behind the Campus Store, provides photocopying, binding, supplemental class materials, and typewriter and computer rentals. The Campus Store is open on weekdays and Saturdays when classes are in session. Aztec Shops also operates a Campus Store on the Imperial Valley and North County campuses.

Food Services includes Commons East, West Commons, Monty's Den, Little Pete, Dining Commons, the Faculty/Staff Centre, the Hotdogger, Catering, Aunt Mary's, and the Bagelteria. Each location specializes in different foods to offer a wide variety to the campus community. Commons East and Aunt Mary's are open weekends to accommodate those on campus.

Meal tickets are available to any enrolled student. Options include 14- and 10-meal plans. Meal tickets enable the holder to eat in Dining Commons, West Commons, Commons East, and Monty's Den.

Aztec Shops is dedicated to providing quality services to the students, faculty, and staff of SDSU. Any questions may be directed to our office on the second floor of Commons East.

Campus Children's Center

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

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

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

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

The hours of operation are 7:45 a.m. to 5:00 p.m. for the preschool center (children 28 months through 5 years) and 8:45 a.m. to 3:00 p.m. for the infant center (children 6 months through 27 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.

Media Technology Services

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

Distribution provides support in the selection and use of instructional materials and the distribution and maintenance of audiovisual equipment. Services include booking and scheduling of films and videotapes for classroom use. Films and videotapes may be shown by means of classroom projection or over the campus 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.

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. Graphic 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.

Navy Officer Programs

Positions are available for juniors and seniors in the areas of aviation, engineering, business/personnel management, surface warfare, and medical 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 $32,000 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 $32,000 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.

Parking and Transportation

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, 36, 43, 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.

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.

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 that 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 help develop and administer 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 1,000 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 acquires and provides space for grant and contract activity and leases property to the University and other campus auxiliaries;

Provides funds for the support of the University programs, such as the Summer Faculty Fellowship Program and the Grant-in-Aid for Research Program for faculty;

Administration of activities such as the June Burnett Institute for Children, Youth, and Families, and The Fred J. Hansen Institute for World Peace.

The Foundation, as a nonprofit corporation, is governed by a Board of Directors in accordance with its Articles of Incorporation and Bylaws. The principal function of the directors is to establish policies and guide the corporation in achieving its objectives.

San Diego State University Press

As the scholarly press for San Diego State University, the San Diego State University Press publishes works of original research, as well as other meritorious academic works that will further the intellectual mission of the University. Although high quality, nonfiction manuscripts from any source will be considered, the current focus of the Press is in three areas: Latin America and the United States-Mexico Border; popular culture; 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 literary magazine *Fiction International,* and *The Journal of Sport Literature.*

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.

Speech, Language, and Hearing Clinics

The Communications Clinic in the College of Health and Human Services is staffed by students and supervised by faculty of the Department of Communicative Disorders. It provides assessment and remediation services for SDSU students, staff, and faculty for minimal fees. Fees charged for services to individuals from the community may be adjusted in cases of financial need. Comprehensive diagnostic and treatment programs are available for children and adults who may present such communicative difficulties as delayed speech/language development, voice, fluency or articulation disorders, aphasia, cleft palate, cerebral palsy, or hearing impairment. Bilingual/multicultural services are available for Hispanic and Asian clients and their families. Because of staff limitations not all who apply can be admitted. Referrals may be made through agencies, hospitals, school programs, health professionals, or as self-referrals. For information call 265-6477.

Student Government
(Associated Students of SDSU)

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

The AS Council is the voice of the SDSU student body. Composed of one representative per 1500 students and three executive officers, the Council is responsible for the AS' $6.5 million annual budget and for formulating policy. Elections held each semester allow for the selection of individuals to fill one-year terms on the Council. Meetings of the AS Council are weekly open sessions.

Other student government activities include monitoring academic policies; appointments to educational or campus-related committees; lobbying to provide student input to city, county, state and federal governments; and representing SDSU's interests with the California State Student Association.

Travel/Study Programs

Japan Semester Academic Program

The Japan semester academic program, administered by the College of Arts and Letters, offers students the opportunity to study in Kyoto, Japan during the fall semester of each academic year while paying regular SDSU fees. In addition, students are encouraged to sign up for Humanities 496: Japanese Life and Culture through the College of Extended Studies (Open University). There is an additional charge for this course. To be eligible for the program, students must be in good standing with the University and have at least a 2.0 overall GPA. Courses selected are primarily drawn from the "Foundations" and "Explorations" sections of the General Education requirements. San Diego State University faculty teach these courses in Japan. For more information, contact the office of the Assistant Dean for Student Affairs in the College of Arts and Letters, SH-132.

London Semester Academic Program

The London semester academic program, operated by the College of Arts and Letters, offers students the opportunity to take a semester's work in courses in the humanities, social sciences, and fine arts in London while paying normal SDSU fees. To be eligible, students must be in good standing with the University and normally will come from the ranks of sophomores, juniors, and seniors. Courses selected for a balanced program are drawn from regular San Diego State University offerings, many of which fulfill General Education and other degree requirements. Electives particularly germane to the site are also offered. The program is currently available in the spring semester only. For further information, contact the office of the Assistant Dean for Student Affairs and Special Instructional Programs in the College of Arts and Letters, SH-132.

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 Center before the last Friday in February for the fall semester and by the last Friday in September for the spring semester.

University Computing Services

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

A large-scale Control Data Corporation CYBER 170-750 mainframe computer running the Network Operating System is a primary on-campus source of computer power. Additional instructional computing capacity is provided by an ELXSI 6400 parallel processor; a VAX-11/780 superminicomputer running the Virtual Memory System; a Harris HCX-7 minicomputer running an AT&T System V UNIX system; and a Prime 9750 minicomputer running the PRIMOS operating system. Very large computer programs and/or data bases may also be processed on the Systemwide Computing Services CYBER 170/760 or an ELXSI 6400 mainframe computer in Los Angeles. A CRAY X-MP/48 Supercomputer located at the San Diego Supercomputer Center is available for approved projects. A coaxial cable network creates an integrated broadband network for data communications. It enables computer terminals and microcomputers throughout the campus to communicate directly with all centrally operated computers.

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

Instructional microcomputer users are supported by Apple II, Macintosh, and IBM PC systems located in Computing Services laboratories throughout the campus. These systems are configured to run most Apple DOS, Macfinder, and MS-DOS software products.

Computing Services staff provide systems programming support and consulting services for faculty and staff; lab assistants assigned to the terminal labs provide minimal consulting services for students.

University Library

Administration

University Librarian: Bosseau
Assistant University Librarians: Kinney, Palsson, Ulrich

Library Faculty

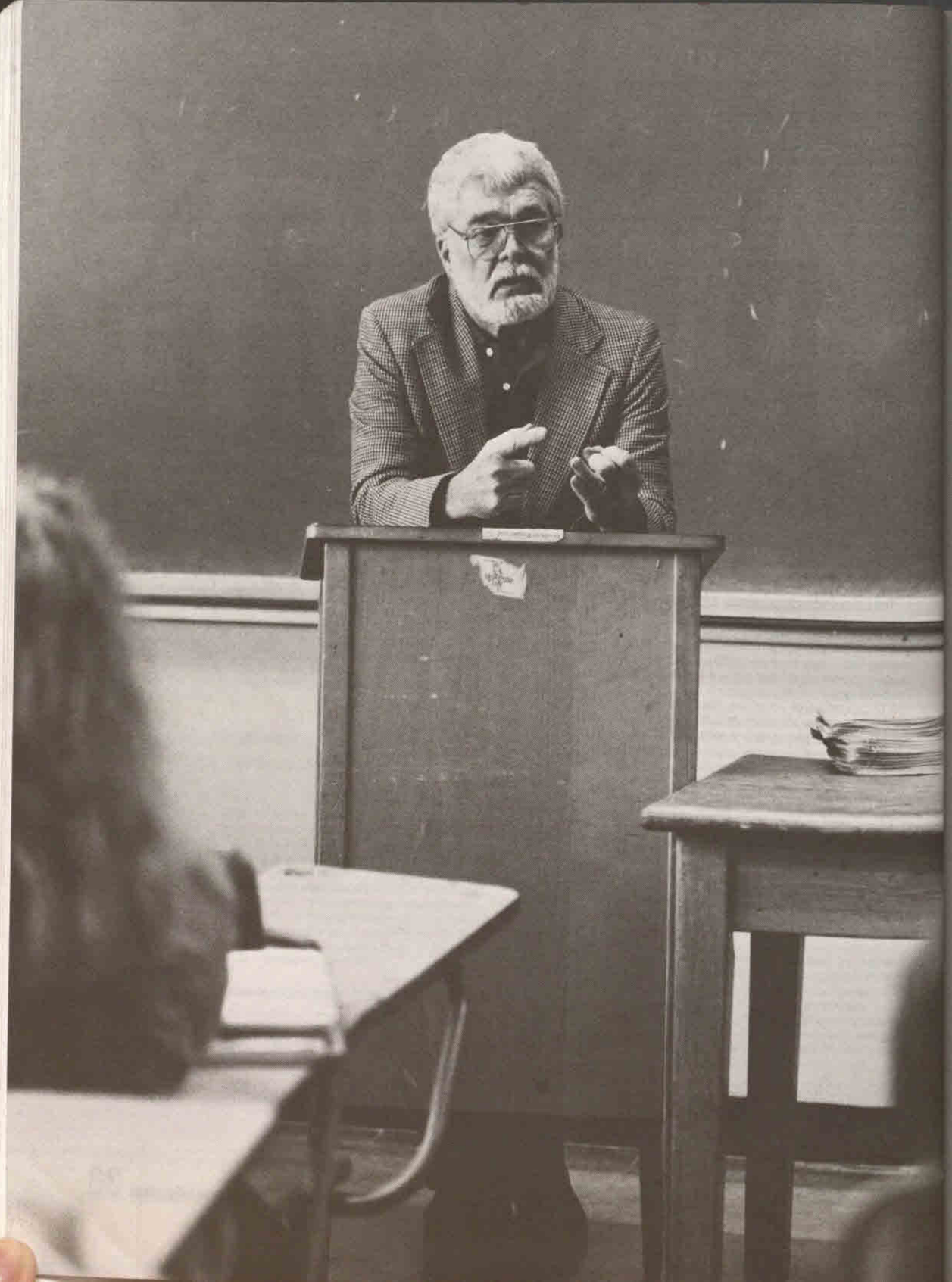
Emeritus: Barclay, Granrud, Greene, Hoover, Johns, Kenney, Kinsey, Lamb, McAmis, Murdock, Neyndorff, Posner, Samples, Sandelin, Schalles, Shira, Szabo
Librarians: Chan, Coleman, Dintrone, Leerhoff, Pease, Sonntag
Associate Librarians: Cargille, Fikes, Fitt, Goyne, Gwinup, Harkanyi, Harris, Martinez, Turhollow, Wilson, Woo
Senior Assistant Librarians: Baber, Carande, Crisley, C., Crisley, P., Fields, Goodwin, Muroi, Perkins, Rogers, West, White

General Information

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

The Library has automated acquisitions, cataloging, circulation, and serials control systems. Computer-based bibliographic search services are offered in over 100 data bases. The Library provides for interlibrary loan through a direct link with several thousand other libraries using the computer and telecommunications facilities of the OCLC bibliographic utility. Instruction in the use of Library resources is offered in conjunction with specific courses, clinics, and a comprehensive workbook program.

The Library's holdings include 928,000 volumes (monographs and bound periodicals); 494,000 government documents; 2.8 million microforms; 56,000 reels of microfilm; 150,000 maps; 5,200 phonograph records; 22,749 curriculum items; and 300 linear feet of archival papers. The Library receives 9,900 periodical and serial titles, excluding government publications. It is a depository for United States and California government publications and receives all United Nations and Organization of American States publications. The Library is designed to eventually accommodate three thousand reader stations and to provide shelving for one million volumes.



Academic Organization

Colleges

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

Imperial Valley Campus

North County

College of Arts and Letters

Administration

Dean: Marilyn J. Boxer
Associate Dean: Richard Y. Funston
Associate Dean: Paul J. Strand
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.), History (M.A.), Latin American Studies (M.A.), Liberal Arts (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.).

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, History, Humanities, Italian, Japanese, Judaic Studies, Latin American Studies, Linguistics, Mexican American Studies, Middle East Studies, Philosophy, Political Science, Portuguese, Religious Studies, Russian, Sociology, Spanish, Women's Studies.

Preprofessional Curriculum

Prelegal

Certificate Programs

Applied Linguistics and English as a Second Language (ESL), Children's Literature, Creative Writing (Advanced), Geographic Information Systems, Public History, Quantitative Analysis in the Social Sciences, Spanish Translation, Technical and Scientific Writing, United States-Mexico Border Studies.

Research Centers

Asian/Pacific American Studies Consortium
Ray T. Smith, Director

The Asian/Pacific American Studies Consortium is an association of faculty, staff, and students. The purpose of the Consortium is to develop an Asian/Pacific American Archives 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 Institute for Public and Community History. The Institute, sponsored by the College of Arts and Letters, will acquire permanent collections of organizational records and personal memorabilia donated by local Asian and Pacific American communities.

The Consortium maintains connections with campus organizations including the Center for Asian Studies, the Asian-American Student Alliance, and the San Diego State University Foundation. General liaison is maintained with the University Library.

Asian Studies
Dan D. McLeod

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.

Donald I. Eidemiller Weather Station
Edward Aguado, Director

The Donald I. Eidemiller Weather Station serves as a teaching and research resource. It cooperates closely with the National Weather Service (NWS) through the mutual exchange of information. The station receives surface, upper-air, and forecast weather maps via satellite from the NWS along with pertinent teletype information. The daily weather maps are permanently stored or copied onto microfiche. The station also archives monthly and annual data published by the National Climatic Data Center and has been observing and recording local weather information for more than thirty years.

European Studies Center
Leon Rosenstein, Director

The European Studies Center coordinates and supports teaching and research related to the European area. It supervises the major and the minor in European studies for the 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.

International Population Center
John R. Weeks, Director

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

InterPop provides a variety of services including (1) the preparation, submission, and administration of research proposals for population-related research; (2) the dissemination of preliminary research findings in a Working Papers series; (3) the short-term training of personnel who are associated with population-related programs; (4) the provision of population technical assistance to such programs; and (5) the coordination of graduate programs for students interested in pursuing a master's degree in a population-related area.

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

Japan Studies Institute
Alvin D. Coox, 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 internships and student and faculty exchanges between San Diego State University and Japanese institutions of higher learning; tuition-free exchange arrangements exist at present with six 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, cultural events, and workshops offered by the University. The Institute also supports the development of Japanese holdings in the University Library and Media Technology Services. The Institute operates under the jurisdiction of the College of Arts and Letters.

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 Center for Public Economics, located in Montezuma School ACE Rooms 124 and 126.

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 and is funding the Center as one of eleven "National Resource Centers for Latin America," in consortium with the Center for Iberian and Latin American Studies at the University of California, San Diego. In conjunction with this award, the Center administers programs that focus on: (1) the initiation of a problem-oriented approach to Latin American studies through the creation of courses dealing with urbanization and modernization of the area; (2) the development of innovative methods of instruction in Spanish and Portuguese; (3) the provision of informative and in-service training programs for elementary and secondary school teachers; and (4) the provision of services for the general public through the sponsorship of conferences, workshops, 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, SH-146.

Lipinsky Institute for Judaic Studies
Amyra Grossbard-Shechtman, Acting Director

The Lipinsky Institute for Judaic Studies, located in the College of Arts and Letters, serves to coordinate and support teaching and research in modern Jewish history and contemporary Jewish and Israeli affairs. Established with contributions from the San Diego community, the Institute provides financial support for an annual visiting professor from Israel and the annual Galinson-Glickman symposium in Judaic studies and the Robert Siegel Memorial Lecture. It also complements regular course offerings through sponsorship of lectures, development of library resources, and fostering of research, and conducts other activities that will promote the advancement of Judaic studies in the University.

Institute for Public and Community History
Philip F. Flemion, Director

The Institute for Public and Community History is charged with the provision of archival, cultural resource management, instructional, and community outreach services in areas of endeavor that concern the practical application of historical methods and materials. For the most part, these activities focus on the development of the greater San Diego area during the twentieth century. The Institute is an agency of the College of Arts and Letters but its programs and resources are intended to serve the entire University community. The Institute's policies are formulated by an Advisory Board which is composed of faculty members from several colleges appointed by the Dean of Arts and Letters.

The Institute's Archive of San Diego History houses several thousand feet of manuscript materials as well as photographic, television

news film, and oral history collections. The documentary materials include the personal papers of prominent San Diegans and the records of business, labor, professional, cultural, religious, and social service organizations. The Institute also operates the South Coastal Information Center which is one of the eleven regional centers that have been designated as official repositories for archaeological site data for the State of California. The Information Center maintains a library of over 11,000 site records and survey reports for San Diego County. On a regular basis, Center personnel abstract information from incoming archaeological site studies and make that data available to qualified investigators.

These research collections serve to enhance the educational experiences of advanced students majoring in a variety of disciplines. They also provide hands-on learning opportunities for students enrolled in the master's degree program in public history as well as other graduate degrees. The Institute's community outreach programs include research projects such as an oral history of the San Diego Zoological Society and educational activities including the San Diego-Tijuana International History Fair which serves nearly 4,000 junior and senior high school students in San Diego County each year.

Center for Public Economics

George Babilot, Director

The Center for Public Economics is a facility of the Department of Economics to encourage research by students and faculty in all phases of nonmarket economic decision making, encompassing the following areas: (1) the functioning of federal, state and local fiscal systems, including the provision for and financing of public goods at each level; (2) the economic factors involved in environmental changes, in particular, their bearing on urban and local economic problems; (3) the economic dimensions of social decision making. The Center is designed to complement the curricular and degree programs in the Department of Economics and to be of service to related disciplines. It maintains research materials and facilities to assist research and publications in the area of public economics. The Center also maintains a computer accessed San Diego Regional Data Bank and subscribes to national and regional economic data services. Fiscal matters are coordinated through the San Diego State University Foundation. Financial support in the form of student assistance is available for faculty research projects on subjects in public economics. The Center funds a number of student scholarships which are administered through the Scholarship Office. The Center is located in Montezuma School ACE Room 126.

Institute for Regional Studies of the Californias

Paul Ganster, Director

The Institute for Regional Studies of the Californias (IRSC) provides the University with a neutral forum for the investigation, discussion, and dissemination of information about the United States-Mexico border region. The Institute focuses on the three-state region of California, Baja California, and Baja California Sur and is also concerned with Mexico and important issues in the US-Mexico relationship. Created in 1983, the Institute has undertaken multidisciplinary research projects on common regional concerns including transborder environmental issues, policy perspectives on the California-Mexico relationship, and the ***maquiladora*** industry. The Institute also maintains a research collection on the border region and takes an active role in Latin America and Mexico-related professional organizations. IRSC publishes the ***Mexico Policy News*** for PROFMEX (The Consortium of US Research Projects for Mexico) and the Conference on Latin American History ***Newsletter.*** IRSC also publishes papers and monographs on border-related issues and topics.

Other Institute activities include conducting binational symposia, improving communication between public and private sector representatives on both sides of the border, serving as a clearinghouse for information on transborder events, issues, and institutions, and encouraging the effective use of educational resources among the region's universities. The Institute serves as a major link between SDSU and Mexican institutions and currently directs a faculty exchange program with El Colegio de Mexico in Mexico City. IRSC has underway, with the Center for Latin American Studies, a major project on border business that includes development of courses for the university along with seminars, workshops, and short courses for the private sector. The Institute is located in Nasatir Hall, Room 103.

Center for Research in Economic Development

Yiannis P. Venieris, Director

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

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 research, SSRL offers a wide range of services to University faculty, staff, and students, as well as to the broader San Diego community. Services and operations are organized along the following lines:

Research Services offers a complete range of public opinion polling and survey research services, including sample design and execution, polling fieldwork, coding and data reduction, and data archiving and retrieval.

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

College of Business Administration

Administration

Dean: Allan R. Bailey
Associate Dean, Academic Affairs: Thomas M. D. Warschauer
Associate Dean, External Relations: Harold K. Brown
Director, Graduate Programs: William F. Barber
Director, Undergraduate Programs: 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.

Master's Degrees

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

Bachelor's Degrees

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

Minors

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

Certificate Programs

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

Credential Programs

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

Research 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: Ann I. Morey
Associate Dean: John D. Chamley
Assistant Dean: Martin Block

General Information

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

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

Center for Economic Education
Kathleen Mikitka, Director

The Center for Economic Education is a unit within the College of Education. The Center is affiliated with the California Council on Economic Education and the Joint Council on Economic Education and has the mission to provide the following services and functions: (1) in-service training for teachers at both the elementary and secondary levels; (2) curriculum development and consultation with school district personnel; (3) development and distribution of media and materials on economic education; (4) research in economic education; (5) consultation with other university faculty as requested; and (6) workshops, speakers, and materials on economic education for adult constituencies from business, labor, social, and professional organizations. The service area for the Center encompasses both San Diego and Imperial counties.

Center for Instructional Technology Research and Training
Allison Rossett, Director

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

Center for Policy Studies in Education

The Center for Policy Studies in Language and Cross-Cultural Education is a unit within the College of Education. The Center houses projects funded by federal, state, and private sources. Current projects include the National Origin Desegregation/Lau Center, the Multifunctional Bilingual Support Service Center, and the Social Equity Technical Assistance Center. These centers focus on issues of social equity, conduct research on questions related to educational policy, and provide technical assistance to districts throughout southern California.

Center for the Study of International Education
Larry J. Shaw, Director

The Center for the Study of International Education is a unit of the College of Education. It promotes faculty and graduate student research, explores study abroad and exchange possibilities for faculty and students, and disseminates information about international education to interested persons in the San Diego area. It also seeks to complement regular course offerings through sponsorship of lectures, conferences, and the development of bibliographic resources.

The Center seeks to foster not only a network of interested faculty within the College of Education, but also encourages faculty involvement from other colleges on campus as well as from other organizations and universities in the San Diego area.

Center for Rehabilitation Studies and Services
Fred R. McFarlane, Director

The Center 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 administers projects funded by local, state and federal agencies. The Center's facilities are located in the Alvarado area in proximity to the campus.

College of Engineering

Administration

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

General Information

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

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

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

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

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

Accreditation and Academic Association

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

Registration of Engineers

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

Cooperative Education

Many engineering students need to work part time while going to school full time or part time. One option available to the students is to participate in a cooperative education program. Cooperative Education is a type of internship which enables students to supplement their academic programs with supervised professional experience in business, industry, or a governmental agency. What distinguishes the work experience identified as Cooperative Education is the formal agreement between the employer and the University that the job be academically related, appropriately supervised and evaluated, involve sufficient time (at least 20 hours of work per week for an academic term), and that the student be paid. College of Engineering students are eligible when they have declared their major, completed 30 total college units at SDSU (15 for transfer students), achieved at least a 2.5 GPA, and are recommended by their faculty adviser.

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.

Master's Degrees

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

Bachelor's Degrees

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

Minor

Engineering

Research Centers

Energy Engineering Institute
Halil Güven, Director

The Energy Engineering Institute has supported educational and research activities in energy related areas since 1985. Undergraduate and graduate students from the mechanical engineering and electrical and computer engineering departments are involved in obtaining solutions to problems presented by industrial sponsors.

Computer-Aided Manufacturing Center
George Mansfield, Director

Established in 1987, the Center's activities focus on relevant research and meaningful education in state-of-the-art manufacturing engineering. Students and faculty are involved in projects using computerized milling machines, vision systems, computers, training robots, tooling, and instrumentation.

College of Health and Human Services

Administration

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

General Information

The mission of the College of Health and Human Services is to offer excellence, uniqueness, and opportunity in professional education in health and human service disciplines. The College of Health and 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 Health and 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 continuing education for professionals already in the field.

Health and Human Services Courses

The College of Health and Human Services sponsors General Studies courses 101, 220, 302 and 502. The purpose of these courses is to provide an opportunity for interdisciplinary study for students entering health and 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 Health and 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

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

Credential Programs

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

Research Centers

Clinical Training Center

Maria Roberts-DeGennaro, Director

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

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

The Assistive Device Assessment Program of the Clinical Training Center provides language and cognitive assessments related to augmentative/assistive devices and systems. The Assistive Device Assessment Program is a multidisciplinary service which is oriented to the communicative, educational, physical, social, environmental and vocational needs of individuals who have disabilities.

These and all other Clinical Training Center programs are used as vehicles for both experiential and didactic teaching. Lower division, upper division, and graduate students observe the clinical activities directly and/or on videotape as part of their preparation for professional practice. Additional information about the Clinical Training Center programs is available at 265-6121.

University Center on Aging

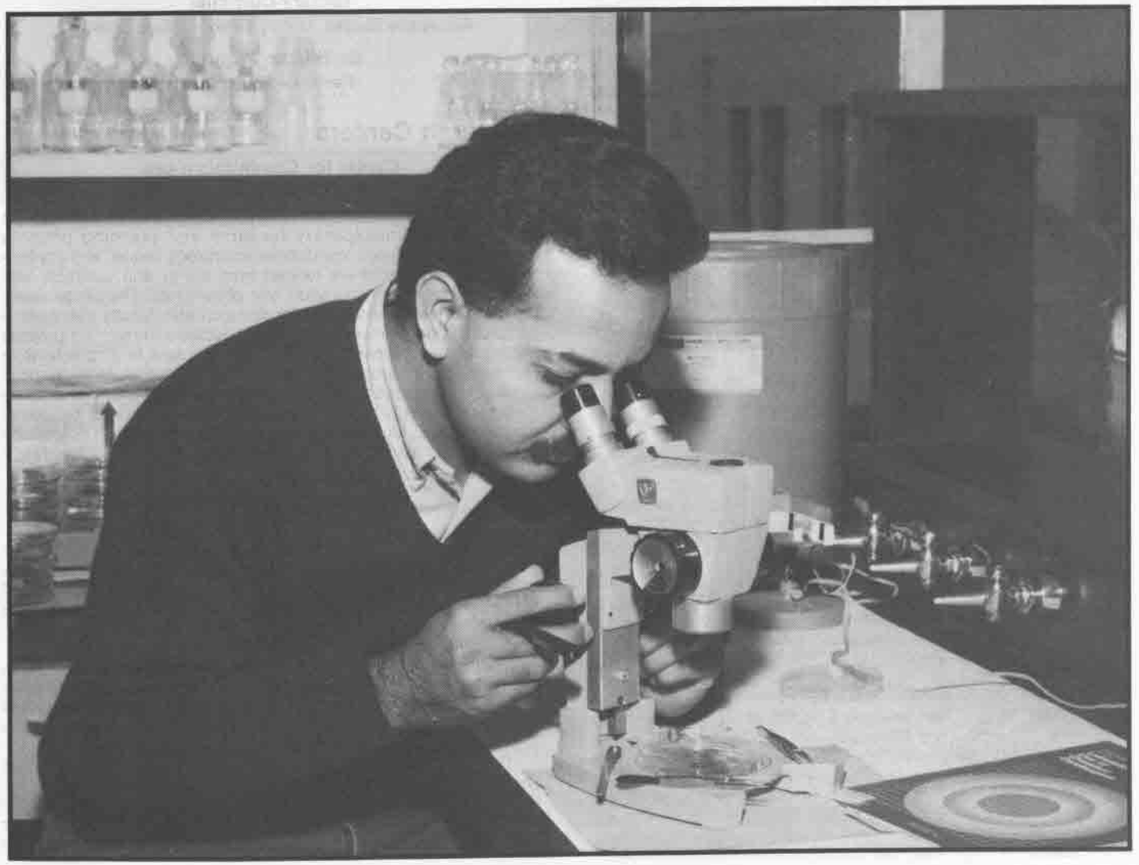
E. Percil Stanford, Director

The University Center on Aging is a multidisciplinary organization located in the College of Health and Human Services. The Center is active in such areas of aging as (1) supporting interdisciplinary educational and curriculum efforts; (2) undertaking research 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 Communicative Disorders, Physical Education, Psychology, Public Health, Social Work, Health Science, Sociology, Family Studies and Consumer Sciences, Anthropology, Recreation, Nursing, and Biology. Students wishing to organize a series of courses to meet their needs in the area of gerontology are encouraged to contact the Center Director or staff for more specific information on course offerings.

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

Other major activities of the Center are administering a National Institute on Minority Aging, a summer Elderhostel program, and RAVE (Retired Active Volunteers in Education). The Center serves as a central point for the development and dissemination of minority aging data nationally.



College of Professional Studies and Fine Arts

Administration

Dean:
Associate Dean for Faculty Affairs: Jesse T. Dixon
Associate Dean for Budget and Planning: Darrell L. Pugh
Assistant Dean for Curriculum: Anne-Charlotte Harvey
Assistant Dean for Student Affairs: Carole A. Robasciotti
Director, Special Projects: Elena Mier y Teran

General Information

Composed 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 and an adult fitness program – 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.S.), Industrial Arts (M.A.), Mass Communication (M.S.), Music (M.A., M.M.), Nutritional Sciences (M.S.), Physical Education (M.A.), Public Administration (M.P.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, Naval Science, Physical Education, Public Administration, Radio-Television, Recreation, Speech Communication.

Military Curricula

Aerospace Studies, Military Science, Naval Science

Certificate Program

Family Life Education

Research Centers

Center for Communications

John P. Witherspoon, Director

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

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 is governed by a Board of Directors which, in turn, is advised by a group of thirteen individuals from park and recreation and related fields. The Advisory Council has been instrumental in providing valuable information to the Board concerning the needs and direction of the leisure services field.

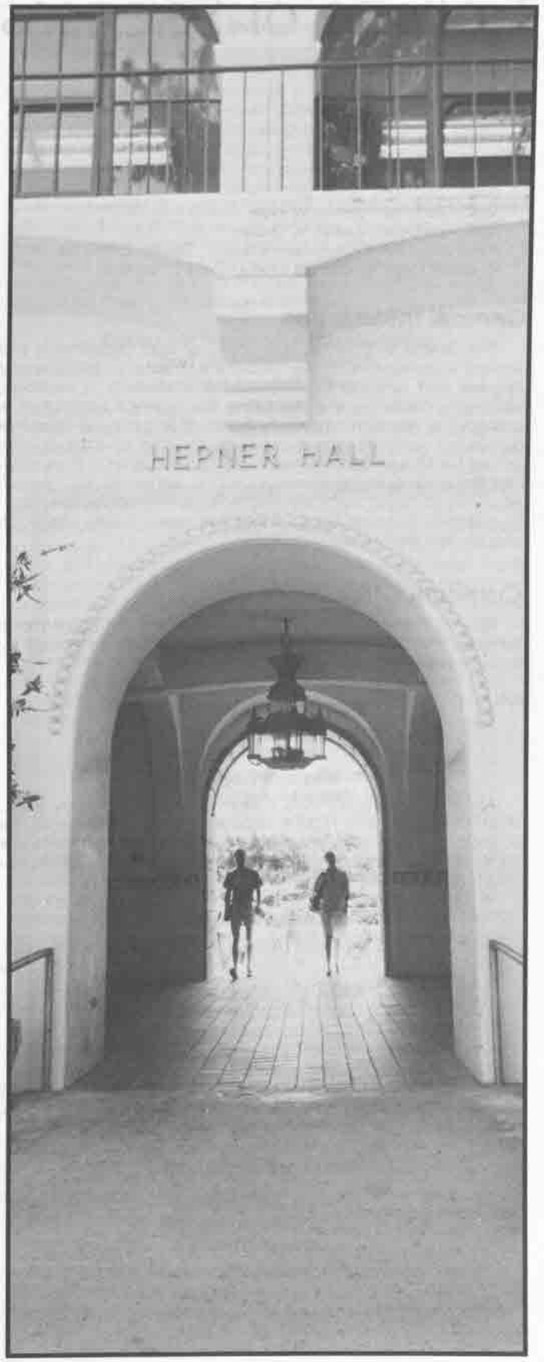
The Institute administers a variety of service programs within San Diego County. Camp Able, an aquatic-based camp for disabled children and adults, operates ten weeks during the summer at Silver Strand State Beach. Camp Aztec, a full-service resident summer camp for children 9 to 14, operates near Lake Cuyamaca at Camp Wolahi. The city of Santee contracts with the Institute for a nonfee-based program at school sites for children 6 to 16. And the Spring Valley Park and Recreation District (San Diego County) contracts for recreation services from the Institute for all its residents.

The Institute continues to publish monographs focusing on important issues relative to leisure services delivery. These are available to the public, as well as park and recreation practitioners. Research projects under the direction of the Institute focus on local, state, national, and international problems related to leisure and park/recreation services.

Institute of Public and Urban Affairs

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, Jr.
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

General Information

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

Biology, Chemistry, Clinical Psychology, Ecology

Master's Degrees

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

Bachelor's Degrees

Astronomy (B.S.), Biology (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

Introductory Mathematics, Recombinant DNA Technology, Single Subject Mathematics.

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 has supported research in paleontology, geology and related sciences since 1972. The Center maintains a research library containing journals, reprints, textbooks, and copies of master's theses and senior theses completed in the Geological Sciences. In addition, the Center houses a collection of fossil and recent vertebrates, invertebrates, and plants. Research space is available for students, faculty, and visiting scholars. Small grants, other funds, and equipment are available to students and faculty for research projects. The Center also publishes reports of various types containing geological information related to the southern California and northern Baja regions.

Center for Artificial Intelligence and Neural Networks

Chen-Han Sung, Director

The Center for Artificial Intelligence and Neural Networks (CAINN) is an interdisciplinary research organization established to conduct, coordinate and support basic, exploratory and applied research as well as to promote graduate education in the area of artificial intelligence and neural networks. The current emphasis is on intelligent systems design and implementation, expert systems and neural network systems, image processing, machine intelligence, machine vision, natural language, pattern recognition, robotic intelligence, speech processing and recognition. Research space and equipment are available for graduate students, faculty, and visiting scholars working for the Center. Technical reports are published by the Center periodically. The Center is administered by the director. Additional information may be obtained at the CAINN office.

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

John D. Tenhunen, Director

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

The field sites are the 4400-acre Sky Oaks Biological Research Station in Chihuahua Valley north of Warner Springs, the 4460-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, experimental tree plantation, and weather stations. It is adjacent to the Anza Borrego State Park, Cleveland National Forest, BLM lands, and private land. The proximity of these lands provides many research and teaching opportunities. This site offers a diversity of community types, including red shank-chamise chaparral, mixed chaparral, oak woodlands, grasslands, riparian communities, and pines. Most of the chaparral is old, having been burned in the 1927 fire, but aged communities of 2 and 85 years also exist on the property. 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, and a 10-acre tree population. 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 generally 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 at 265-5976. Reports describing the ecology and development of the Santa Margarita and Sky Oaks sites are available from the director.

Center for Energy Studies

Alan R. Sweedler, Director

The San Diego State University Center for Energy Studies (CES) facilitates, promotes and supports research and academic programs relating to energy, with particular emphasis on energy matters of concern to the San Diego and local southwest region. The Center encourages interdisciplinary research and instructional programs in the broad areas of energy modeling, technology assessment of energy systems, local energy policy planning and data collection relating to energy usage in the San Diego area. 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

James H. Mathewson, Director

The Center for Marine Studies provides a focus for oceanography and marine studies at SDSU. The Center assists departments within the University in the development of instructional, research, and public service aspects of ocean-oriented programs and provides special supporting services including advising students, assistance to faculty and students in research, preparation of manuscripts, operation of the SDSU Marine Laboratories and boats at Mission Bay and at Carlsbad, and liaison with other institutions and the community. The Center is operated as a special unit of the College of Sciences and is administered by a director and an executive committee consisting of faculty members elected from participating departments. Additional information about marine studies is available from the Center for Marine Studies office at 6505 Alvarado Road, Room 206, or from the office of the Dean of the College of Sciences.

Center for Research in Mathematics and Science Education

Sandra P. Marshall, Director

The Center for Research in Mathematics and Science Education (CRMSE) is an interdisciplinary consortium of interested faculty from mathematics, psychology, and the sciences; qualified faculty from areas outside the College of Sciences are also eligible for membership in CRMSE. The Center is administered by the director and a three-member executive committee consisting of faculty elected by the membership. Through its activities, CRMSE initiates, encourages, and supports scholarly inquiry in the area of mathematics and science education. CRMSE is intended to assist faculty and students in research projects and to support faculty members in the preparation of manuscripts for publication and grant proposals for external funding. The Center also provides information and guidance to students intending to pursue graduate degrees or careers in mathematics or science education. CRMSE works closely with local, state, and national groups concerned with mathematics and science education. The Center is located at 6475 Alvarado Road, Suite 206; telephone 265-5090.

Molecular Biology Institute

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

The Molecular Biology Institute was established to serve interested departments of the biological and physical sciences in the coordination, support and enhancement of research and instruction in the molecular biological sciences. Interests and activities of the MBI encompass all approaches which aim to explain biology at the molecular level. Currently, full members of the Institute are drawn from the Departments of Biology and Chemistry and participate in the respective Ph.D. programs. Associate members are drawn from a variety of disciplines that are cognate with the molecular biological sciences. The Institute is also constituted as the University unit authorized to administer the master's degree program with an emphasis in molecular biology. The research programs of the MBI members are supported by a variety of agencies including the National Institutes of Health, the National Science Foundation, NASA, the American Heart Association, the American Diabetes Association, the Muscular Dystrophy Association, Sea Grant (NOAA), the Department of Energy, the US Department of Agriculture, and the California Metabolic Research Foundation. Additional information is available from the MBI office, CG-403; telephone 265-2822.

Paleobiology Council

Richard D. Estes, Director

The Paleobiology Council is an interdisciplinary research and teaching group concerned with exploration of the fossil record. It is composed of faculty members from the Departments of Biology and Geological Sciences and the San Diego Natural History Museum.

Students interested in pursuing an interdisciplinary Special Major leading to an M.A. in Paleobiology may do so under the direction of the committee.

Survey Research

Oscar Kaplan, Director

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

Systems Ecology Research Group

James R. Reynolds, Director

The Systems Ecology Research Group (SERG) is an interdisciplinary research group established to conduct basic research and promote graduate education in ecosystem science. Group expertise exists in general ecology, physiological plant ecology, hydrology, meteorology, soil science, community ecology, demography, image processing, remote sensing, and mathematical and simulation modeling. At present, major emphasis is on integrated research projects in chaparral, desert, and arctic tundra ecosystems. Processes emphasized include plant production, water relations, phenology, herbivory, soil processes and nutrient cycling, and the effects of global increases in atmospheric CO_2 on plants and unmanaged ecosystems. Simulation models are used to integrate the results of ecosystem level projects. Funding agencies for research projects include the National Science Foundation, the U.S. Department of Agriculture, the U.S. Forest Service, and the U.S. Department of Energy. Additional information may be obtained at the SERG office, second floor, Physical Sciences, or by calling 265-5976.

Imperial Valley Campus

Administration

Dean: David Ballesteros
Associate Dean: Armando Arias, Jr. (on leave, 1987-88)
Interim Associate Dean: Dana W. Murphy
Assistant Dean for Student Affairs: Cynthia D. Flores
Director of Library Services: Reynaldo Ayala
Academic Specialist: Kathleen Russum
Business Manager: Emma Arguelles Odegard

Faculty

Emeritus: Baldwin, Erzen, Franklin, Harmon, J., King, Lovely, Rodney, Spencer

Professors: Ayala, Smith, Wilson

Associate Professors: Dunn, Polich, Polkinhorn, Reyes, Ryan, Simon, Varela-Ibarra

Assistant Professors: DeVillar, Hill, Stampfl

Lecturers: Blek, Blumberg, Bowen, Briggs, Cochran, Coons, Galaz-Fontes, Gonzalez, Harmon, R., Larsson, Lazer, Lear, Livingston, Meadows, Merino, Murray, Natwick, Nunn, Perry, Puddy, Ramage, Ramirez, Rood, Roth, Ruiz, Shaver, Shinn, Villarino, Zertuche

General Information

The Imperial Valley Campus is a two-year upper-division campus of San Diego State University serving the desert area of southeastern California. It is accredited as an integral division of SDSU and operates under the same academic calendar. Established in 1959 by an act of the State legislature, the campus is located in the Imperial Valley on the Mexican border in the city of Calexico. Offering only the last two years of undergraduate education as well as a fifth year credential program for teacher preparation and occasional M.A. programs, the campus accepts transfer students, from community colleges or other colleges, who have at least 56 units. As a small campus with a low student/faculty ratio, the Imperial Valley Campus offers students the advantages of small classes and individual contact with the faculty. Instructional television (ITFS) provides students in Calexico the opportunity to participate in some classes broadcast live from the main campus in San Diego. The Imperial Valley Campus schedules its classes to meet once a week in three-hour blocks so that students who work full time can earn 9-12 units a semester by attending classes once or twice a week. Classes are also offered on the weekends.

The location on the Mexican border provides the opportunity for involvement in a bicultural environment. There are many opportunities to participate in the cultural life of Mexicali, just across the border, a city of more than 800,000 people. There are also many opportunities on the U.S. side of the border to be involved in a bilingual/cross-cultural setting. There is an exchange program for students between the Imperial Valley Campus and the Universidad Autonoma de Baja California which allows students to take classes at either of the participating universities and receive credit at their home institution. Among the faculty are professors with Latin American emphases in history, geography, sociology, and Spanish. The faculty is also augmented with other Latin American specialists from Mexico and from the San Diego campus.

The Imperial Valley is one of the richest agricultural centers in the country. It has a desert climate with mild winters and little rainfall. Because of this, the area has 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, in cooperation with academic units and the Graduate Division of the San Diego campus, offers selected graduate programs leading to advanced degrees and credentials. Such programs, scheduled on a part-time basis for working professionals, have been offered for the Master of Arts degree in Education with a concentration in Multicultural Education and in Administration and Supervision, and for the Bilingual/Cross-Cultural Specialist and Special Education Specialist credentials; 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. A program leading to a Master of Science degree in Counseling is also available.

Certificate Programs

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

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
Pupil Personnel 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. Originally, this was the site of Calexico's first high school, and some of the campus buildings, including Rodney Auditorium, are part of the original school structures. In 1980 the Legislature approved funding to construct a new classroom building and a library media center which was dedicated in February 1983.

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

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

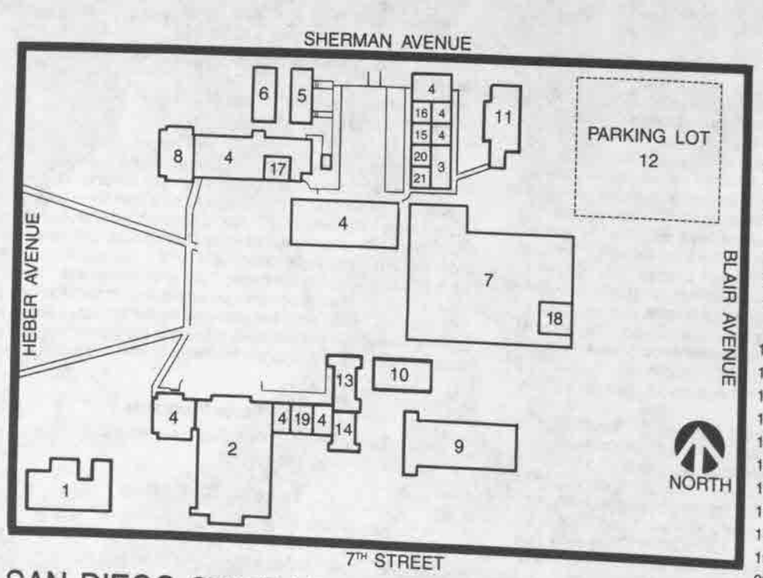
A student union, bookstore, administration, student services, faculty office and shop buildings complete the facilities on the campus.

Admission, Registration, Scholarships, 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) 357-0270 for further information. Applications for admission to the campus are accepted through registration week for both the fall and spring semesters. Because of the size of the campus, the registration process is easily accomplished in a short period of time with little chance of classes closing.

For information pertaining to Imperial Valley Campus scholarships, refer to the section on Financial Aid and Scholarships.

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



SAN DIEGO STATE UNIVERSITY
IMPERIAL VALLEY CAMPUS
CALEXICO, CALIFORNIA

North County

Administration

Dean: Richard R. Rush
Associate Dean for Curriculum and Academic Planning: Alan J. Litrownik
Assistant Dean for Administration: Ivalee M. Clark
Assistant Dean for Student Affairs: Sandra R. Kuchler
Coordinator of Library Services: Bonnie Biggs

Graduation and academic requirements for degree programs offered at North County are identical to main campus requirements.

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

General Information

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

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

San Diego State University, North County is located at 800 West Los Vallecitos Boulevard, San Marcos, California.

Curricula Offered

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

Major in liberal studies, option 3, 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 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.

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

Master of Arts degree in education with a concentration in educational technology, specialization in educational computing.

Master of Social Work degree.

Multiple subject teaching credential.

Single subject teaching credential.

Certificate in Instructional Technology.

Coursework pursuant to concentrations in elementary curriculum and instruction, secondary curriculum and instruction, multicultural education, reading education, and special education is also available.

Admission and Registration

To attend classes at San Diego State University, North County, 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 North County, or both.

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

Student Services

In addition to on-site registration and payment of fees, student services provided at North County include academic advising, career counseling, veterans benefit information, financial aid information, testing, health services, library services, student activity organizations, and a bookstore.

Fees

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

Academic Divisions and Special Programs

Division of Undergraduate Studies

Graduate Division

Nondegree Curricula

Preprofessional Programs

Certificate Programs

Division of Undergraduate Studies

Objectives and Functions

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

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

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

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

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

Honors Program

University Honors Program

The University Honors Program provides opportunities for students with demonstrated academic ability to find the stimulation and challenge that will help them develop their potential. 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 the third college semester. 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 this University.

Departmental Honors Courses

Some departments regularly offer honors classes which are independent of the University Honors Program; for these eligibility is determined according to achievement in the particular field. Students should consult the Class Schedule for such honors classes (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, 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 program provides assignment opportunities primarily with employers located in the San Diego area; however, placement is not limited to the San Diego region. The program 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 may also earn credit for an academic project related to that work experience and 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 Student Employment Office, Center for Counseling Services and Placement.

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 34 foreign universities cooperating with the International Programs in 16 countries around the globe. The affiliated institutions are: the University of Queensland (Australia), 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 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); Bradford, Bristol, Sheffield, and Swansea universities, and Kingston Polytechnic (the 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, Long Beach, California 90802-4275. Applications for the 1989-90 academic year overseas must be submitted by February 1, 1989.

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.

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 Graduate Dean, 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 Graduate Dean is the appropriate University authority for the administration of all matters related to graduate degree curricula, minimum requirements for which are specified in Section 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 Clinical Psychology 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.

Master of Arts

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

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

Master of Science

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

- Accountancy
- Aerospace engineering
- Applied mathematics
- Astronomy
- Biology
- Business administration
- Chemistry
- Civil engineering
- Computer science
- Counseling
- Electrical engineering
- Geological sciences
- Home economics
- Mass communication
- Mechanical engineering
- Microbiology
- Nursing
- Nutritional sciences
- Physics
- Psychology
- Radiological health physics
- Rehabilitation counseling
- Special major
- 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, credential, or certificate. 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 coursework completed as a postbaccalaureate student can be applied toward an advanced degree, subject to the requirements of the particular degree program and the regulations of the Graduate Division.

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

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 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 $45.00 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 Graduate Dean; (b) have attained a grade point average of at least 2.5 (when A equals 4) in the last 60 semester (90 quarter) units attempted; and (c) have been in good standing at the last institution attended. Applicants who do not qualify for admission under provisions (a) and (b) may be admitted by special action if the Graduate Dean determines that there is other academic or professional evidence sufficient to merit such action. **Each department or school offering an advanced degree program reserves the right of determining the admissibility of any student to that program even though the student may meet the general requirements for admission to postbaccalaureate study.**

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

Admission Categories

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

Postbaccalaureate Standing (Unclassified)

A student wishing to enroll in courses at the University for personal or professional reasons, but not necessarily with an objective of an advanced degree or credential, may be considered for admission with postbaccalaureate standing (unclassified) when the student meets the criteria specified under General Admission Requirements.

Admission with postbaccalaureate standing (unclassified) does not constitute admission to, or assurance of consideration for admission to, advanced degree curricula.

Postbaccalaureate Standing (Classified)

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

Graduate Standing (Classified)

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

(a) Achieve a satisfactory score on the GRE General test. (Students holding an advanced degree from an institution which is a member of the Council of Graduate Schools are exempted from this requirement; students applying to the College of Business Administration will take the Graduate Management Admission Test.)

(b) Have completed an undergraduate major appropriate to the field in which the prospective student desires to earn an advanced degree.

(c) Satisfy the special departmental or college requirements as stated in Part Three of the *Graduate Bulletin* under "Fields of Study and Courses of Instruction."

(d) Meet the professional, personal, and scholastic standards for graduate study established by the department and the Graduate Council.

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

Conditional Graduate Standing (Classified)

A student wishing to be admitted to a program of study leading to an advanced degree who meets the criteria specified under General Admission Requirements but who has deficiencies in the criteria for graduate standing (classified) may be granted conditional graduate standing (classified), if the deficiencies can be met by specific additional preparation, including qualifying examinations. Not more than 15 semester units may be assigned to satisfy undergraduate deficiencies in the major and all course conditions must be met within five semesters from the time of initial enrollment. Students admitted with conditional graduate standing (classified) are admitted to authorized advanced degree curricula and may enroll in 600- and 700-numbered courses. Once the conditions established by the department, school, or college have been met, the student will be accorded full graduate standing (classified).

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 or conditionally classified). Applications for such continuing students are available from the Graduate Division. Reports of the GRE General test scores must be on file at the University before continuing students may apply for graduate standing (classified).

International Faculty Exchanges

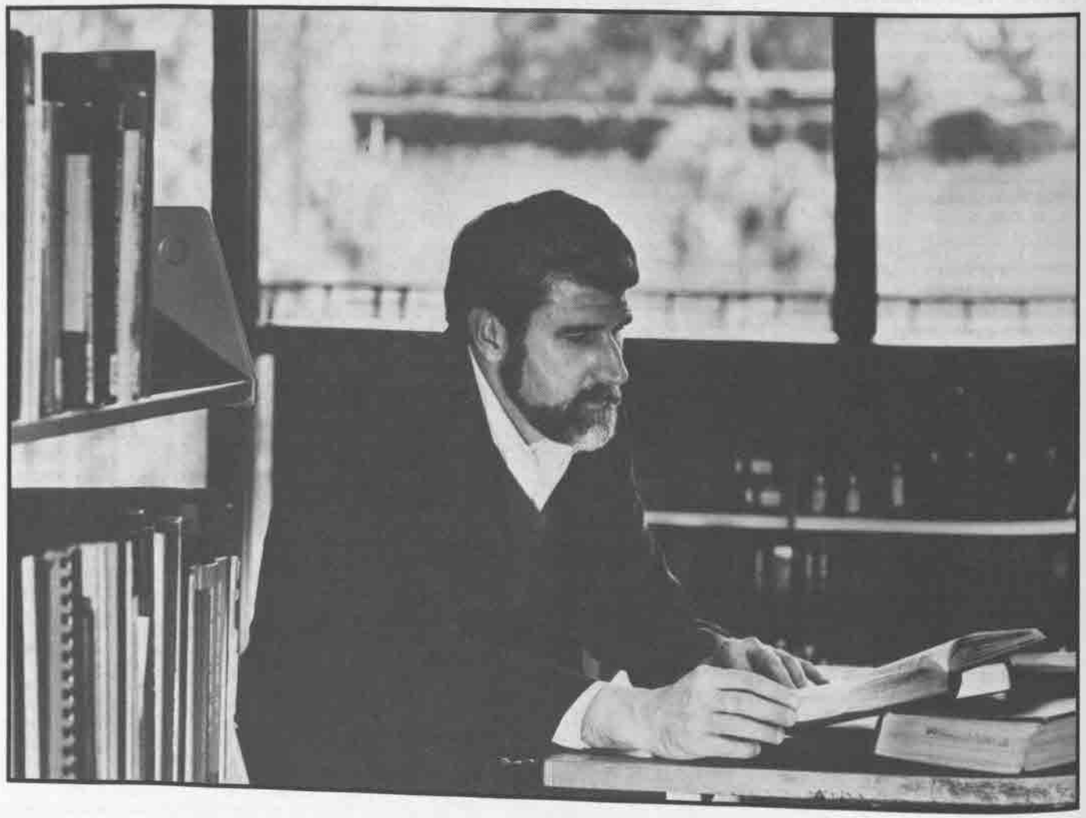
In order to enhance the international character of instruction and research, San Diego State University has developed a continuing program of faculty exchange with foreign universities. Since 1964, exchanges of faculty members have been arranged with various universities in Europe, Asia, and Latin America. Currently, San Diego State University has formal arrangements to exchange professors periodically with institutions in Europe, East Asia, Latin America, and the Middle East.

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, Japan, Mexico, the People's Republic of China, the United Kingdom, and West Germany. Information about student exchange opportunities may be obtained from the Graduate Division.

Graduate Bulletin

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



Nondegree Curricula

Preprofessional Programs

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

Preprofessional Health Advising Office

The preprofessional health advising office is responsible for advising premedical, predental 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, (619) 265-6638; Cynthia Lewis, Adviser.

Predental Curriculum

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

Science requirements.

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

Recommended electives.

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

College preparation.

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

Admission.

Predental students must realize that although the pool of dental applicants is declining, there is competition for admission to schools of dentistry, particularly at University of California, Los Angeles and University of California, San Francisco. The average GPA of the entering class of 1987 to these schools was 3.3. Minority students and students who wish to be considered under "disadvantaged" status must typically submit an additional petition or form to each school (such as University of California, San Francisco, Health Sciences Special Service Program).

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

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

The Preprofessional Health Adviser will be available to high school or transfer students by appointment in June and during the August registration period. **All predental students should establish a 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 201 and 202 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 521, 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.

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

Premedical Curriculum

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

Science requirements.

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

Recommended electives.

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

College preparation.

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

Admission.

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

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

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

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

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

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

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

The Preprofessional Health Adviser will be available to high school or transfer students by appointment in June and during the August registration period. **All premedical students should establish a 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 major in biology. Other departmental majors are permissible, however. Preveterinary students should confer with the preveterinary adviser prior to initial registration and at least once each semester regarding their progress, and to obtain approval for their program for the coming semester.

Science requirements.

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

Recommended electives.

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

College preparation.

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

Admission.

Competition for veterinary school admission continues to be great, with a 4 to 1 ratio of applicants to accepted students at University of California, Davis. All preveterinary students should consider applying to one or more out-of-state schools in addition to UC Davis as many now accept nonresidents. The 1986 UC Davis entering class had the following average statistics: cumulative undergraduate GPA, 3.5; required science coursework GPA, 3.4; last two years of undergraduate work GPA, 3.6; Graduate Record Examination general aptitude test scores – verbal 76%, quantitative 79%, advanced test in biology 84%.

Admission criteria at UC Davis include the following:

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

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

A new publication, *Veterinary Medical School Admission Requirements in the United States and Canada* is available in the Preprofessional Health Advising Office and the bookstore.

The Preprofessional Health Adviser will be available to high school or transfer students by appointment in June and during the August registration period. **All preveterinary students should establish a personnel file in Life 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 coursework in preparation for such programs. Students are advised to consult the catalog of the university to which they expect to transfer to determine requirements before arranging the program. Further information may be obtained from the Assistant Dean of Students in the appropriate college at San Diego State University.

Certificate Programs

Basic Certificate

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

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

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

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

Advanced Certificate – Postbaccalaureate

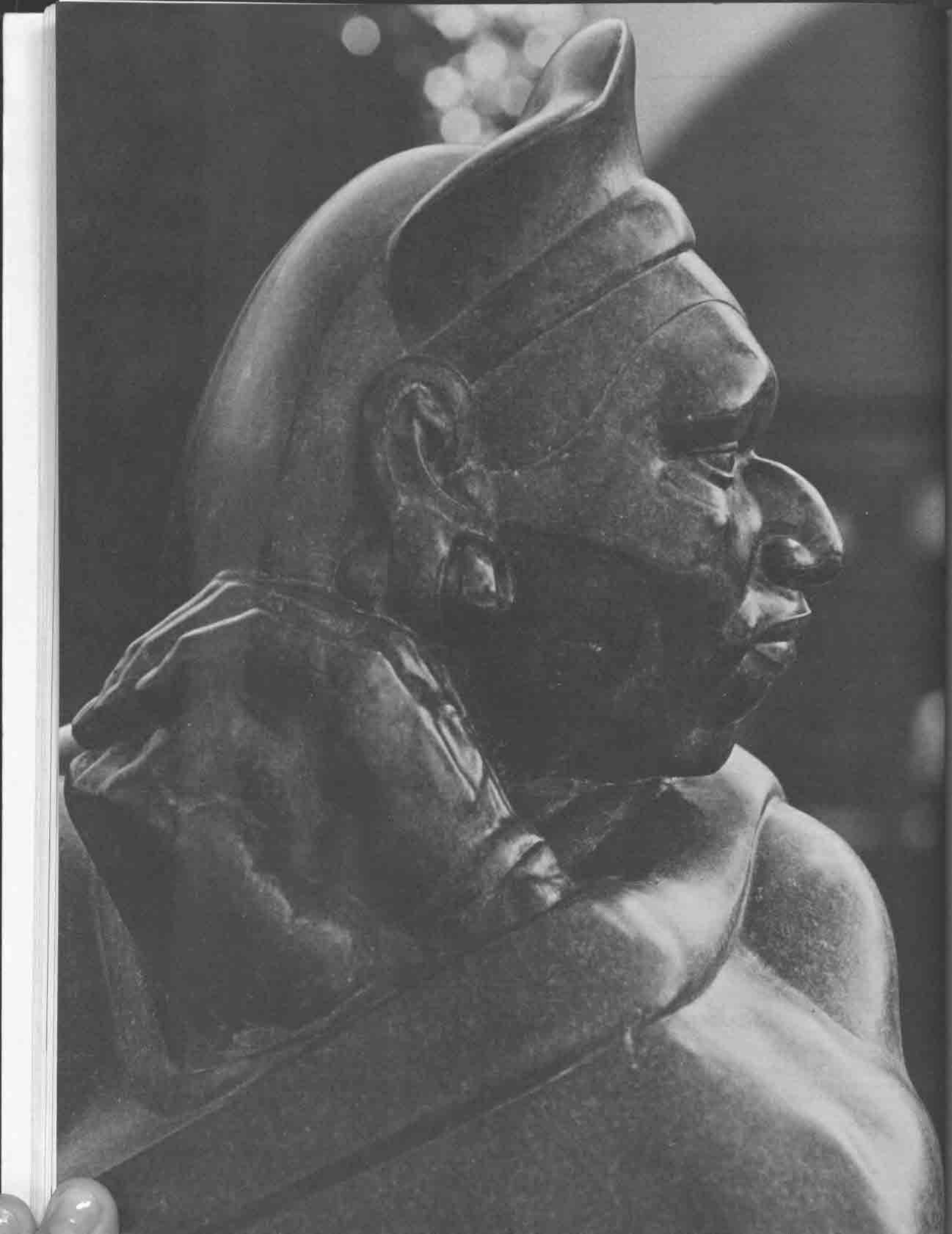
The advanced certificate at the postbaccalaureate entry level gives students a program of coursework leading to a specific applied goal. The general educational background of a bachelor's degree with a major in the appropriate field(s) of study is prerequisite to such a certificate.

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

Advanced Certificate – Post-Master's

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

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



College of Extended Studies

Continuing Education
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.

Several major sessions are scheduled each summer; two 3-week terms during which four units of credit may be earned; two 6-week 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.

Winter Session

The College of Extended Studies administers a special academic program during the winter recess period titled "The Winter Session." This special session provides students an opportunity to earn resident academic credit through participation in concentrated and interesting coursework. Credit earned during Winter Session is applicable to graduation and residence requirements. Admission to the University is not required for Winter Session attendance. Enrollment in Winter Session courses will be considered for students seeking reinstatement to the University; however, successful completion in such residence courses will not guarantee immediate reinstatement.

American Language Institute (ALI)

The American Language Institute offers noncredit intensive (20 hours per week) English programs throughout the year to students and professionals interested in improving their English proficiency. By enrolling in ALI, students may take advantage of a program called conditional acceptance. Conditional acceptance is available to those students who require 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 Business and Economics, English for Science and Technology, English for Computers and Academic Skills) and intercultural communication. In addition, students may choose from over 30 elective course offerings.

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 and Business English, Seminar for International Teachers of English, GMAT/GRE preparation, and TOEFL preparation are arranged.

Summer Special Programs

A number of special short-term language programs are offered by the ALI each summer (e.g., Management and Business English). These can be arranged for groups or individuals.

Services

All students at the Institute are offered housing assistance, counseling for university entrance, health services and orientation to university life.

Information about and applications for the ALI can be obtained from the Director, American Language Institute.

Travel/Study Programs

Each summer the College offers a variety of domestic and foreign travel/study programs which are designed to give students and community members an opportunity to travel and earn extension units of credit. Programs range from one 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 undergraduate 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 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. A maximum of 24 units from Open University may be applied to the bachelor's degree requirements. The course repeat policy does not apply to courses repeated through Open University.

Open University classes may not be taken by the following:

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

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 Extended Studies Office.

PROFNET/Distant Learning Programs

PROFNET, a Distant Learning Program, delivers full-credit graduate courses from San Diego State University to leading corporations and government agencies. Using the telecommunications facilities of KPBS Television, PROFNET televises classes for live transmission to the worksite. Students employed by PROFNET member companies view their classes on television and interact with their professor during class via an audio link.

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

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

The Division of Professional Development provides business, industry, and human service and other organizations with programs that are responsive to the training and development needs of their employees. Through the Division's activities, participants are kept abreast of the latest business, managerial, and technical techniques that ensure they will add to the productivity and profitability of their organizations.

Certificate Programs

Professional certificate programs are coordinated by the Division of Special Sessions and Extension. Educational services are provided for a wide variety of groups and professional organizations. Credit certificate programs are offered in the following areas: Applied Gerontology, Construction Practices, Fire Protection Administration, Government Contract Management, Materials Management, Personnel and Industrial Relations, and Training Systems Design and Administration.

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

Custom On-Site Training

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

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

Program leaders and training consultants are drawn from the academic and business worlds and have extensive practical experience.

Programs are cost effective and designed with quality and adaptability.

Seminars and Workshops

The Division coordinates practical two- and three-day seminars and workshops aimed at increasing the skills of the business professional. These seminars are taught by local and national seminar leaders chosen from the business and academic worlds for their expertise and outstanding teaching ability. Topics addressed cover a wide range of business and engineering subjects, such as management, finance, marketing, engineering, construction, manufacturing, purchasing, and computer literacy.

Center for Study of Data Processing and Management Development Center

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

Manufacturing Programs

A new certification program in Configuration Management and the Institute of Quality and Productivity are programs designed to increase the productivity and profitability of manufacturing companies.

Retired Adults Education Program

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

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

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

Pacific Region Training Center

The Pacific Region Training Center addresses the new opportunities in professional development, training, and technical services created by the increasing business and economic interdependence between the US and Mexico and other key exporting countries in the Pacific region. The mission of the Center is to: (1) Serve as an information clearinghouse and "neutral ground" where business leaders and public officials from various Pacific region countries can explore the practical aspects of multinational investment and production sharing; (2) Enhance the capability of the regional business community to engage in multinational ventures; (3) Facilitate communication between foreign entities and city, county, state, and federal agencies in the US and Mexico.

Drawing on the academic resources of SDSU and the telecommunications and language training programs of the College of Extended Studies, the Center is developing a wide variety of activities. Programs include language training for business people (Spanish, Japanese, English, Chinese), cultural awareness programs, workshops for prospective investors and multinational firms in the region, an annual Summer Institute on "US-Mexico Issues: Mexico's Perspective," and research assistance on economic, political, and human resources topics.

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 coursework 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 $45.00.

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

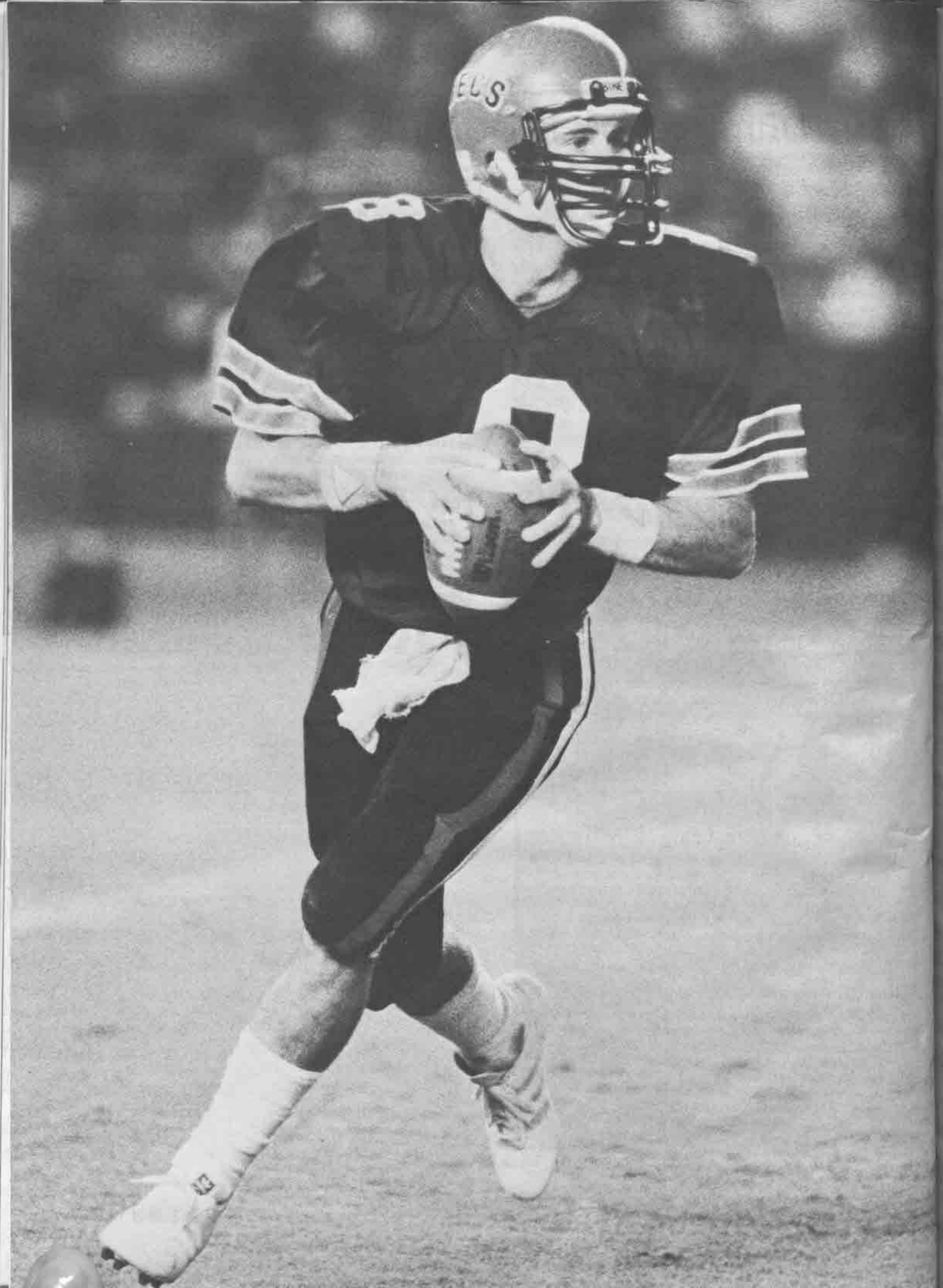
Since Extension and External Degree programs do not receive state support, they are required to be financially self-supporting. Contact Extended Studies for fee ranges.

Degrees Offered

Graduate

Master of Arts in education.

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



Regulations

Admission and Registration
General Regulations

Admission and Registration

Admission Procedures and Policies

Requirements for admission to San Diego State University are in accordance with Title 5, Chapter I, 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 is used as a means of identifying records pertaining to the student as well as identifying the student for purposes of financial aid eligibility and disbursement and the repayment of financial aid and other debts payable to the institution.

Measles and Rubella Immunizations Health Screening Provisions

All new and readmitted students born after January 1, 1957 will be notified of the California State University requirement to present proof of measles and rubella immunizations. This is **not** an admissions requirement but shall be required of students by the beginning of their second term of enrollment in CSU. San Diego State University students who have not complied with this CSU mandate will be notified of the need to comply *before* receiving registration materials for their second term.

Proof of measles and rubella immunizations shall also be required for certain groups of enrolled students who have increased exposure to these diseases. Students subject to this health screening requirement include:

Students who reside in campus residence halls;

Students who obtained their primary and secondary schooling outside the United States;

Students enrolled in dietetics, medical technology, nursing, physical therapy, and any practicum, student teaching, or fieldwork involving preschool-age children and/or school-age children or taking place in a hospital or health care setting.

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

Undergraduate Application Procedures

Prospective students applying for part-time or full-time programs of study, in day or evening classes, must file a complete application as described in the admissions booklet. The $45 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 alternative 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 admissions criteria if applying to an impacted program.

The CSU will announce before the opening of the fall filing period which programs are impacted and the supplementary criteria campuses will use. That announcement will be published in the *CSU School and College Review*, distributed to high school and college counselors. 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, Nursing, and Telecommunications and Film are impacted majors at San Diego State University.

Supplementary Admissions Criteria

Each campus with impacted programs uses supplementary admissions 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 admissions 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.

Graduate and Postbaccalaureate Application Procedures

All graduate and postbaccalaureate applicants (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 as described in the admissions booklet. Applicants who completed undergraduate degree requirements and graduated the preceding term are also required to complete and submit an application and the $45 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. To be assured of initial consideration by more than one campus, it will be necessary for any applicant to submit separate applications (including fees) to each. Applications may be obtained from the Graduate Studies Office of any California State University campus in addition to the sources noted for undergraduate applicants.

Application Filing Periods

Terms In 1988-89	Applications First Accepted	Student Notification Begins
Fall Semester 1988	November 1, 1987	December 1987
Spring Semester 1989	August 1, 1988	September 1988

Filing Period Duration

San Diego State University accepts applications until capacities are reached. Impacted programs are open only one month for each semester (initial filing period). Undergraduate applicants to nonimpacted programs are encouraged to apply during the initial filing period as capacities are usually reached one month after that date. Applicants for graduate programs are also encouraged to apply early, but capacities are usually reached at a later date for these programs.

Application Acknowledgment

You may expect to receive an acknowledgment of your application from San Diego State University within approximately four weeks of filing the application. The acknowledgment booklet will include a request for documents needed to determine your admission eligibility and general information about the admission process, housing, and financial aid. You may be assured of admission if the evaluation of your qualifications indicates that you meet admission requirements. Admission is not transferable to another term or to another campus.

Hardship Petitions

San Diego State University has established procedures for considering qualified applicants who would be faced with extreme hardship if not admitted. 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 and Records Office:

1. Transcript from high school of graduation or last in attendance (not required of the graduate student who holds a bachelor's degree from an accredited institution, but is required of the student who holds a bachelor's degree from a nonaccredited institution).
2. Transcripts from EACH college attended (including extension, correspondence, summer session, or evening courses). Graduate students must file transcripts *in duplicate* if they plan to enter a master's degree or credential program.
3. Photostat or true copy of the military separation form DD-214 (or equivalent) if applicant has had active military service. (Not required of graduate students.)

A transcript will be considered official and accepted to meet the regulations governing admission only if forwarded directly to San Diego State University by the institution attended. All records or transcripts received by the university become the property of the university and ***will not be released nor will copies be made.***

Undergraduate Admission Requirements

Freshman Requirements

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 the courses in the comprehensive pattern of college preparatory subject requirements. (*See* "Subject Requirements," below, and "Phase-in of the Subject Requirements," following page.)

Eligibility Index

The eligibility index is the combination of your high school grade point average and your score on either the American College Test (ACT) or the Scholastic Aptitude Test (SAT). Your grade point average is based on grades earned during your final three years of high school (excluding physical education and military science) and bonus points for approved honors courses. (*See* "Honors Courses," following page.) CSU may offer you early, provisional admission based on your work completed through the junior year of high school and planned for your senior year.

You can calculate your eligibility index by multiplying your grade point average by 800 and adding your total score on the SAT. Or, if you took the ACT, multiply your grade point average by 200 and add ten times the composite score from the ACT. If you are a California high school graduate (or a legal resident of California for tuition purposes), you need a minimum index of 2800 using the SAT or 674 using the ACT. (*See* "Eligibility Index Table for California High School Graduates," following page, for combinations of test scores and averages required.) If you neither graduated from a California high school nor are a resident of California for tuition purposes, you need a minimum index of 3402 (SAT) or 822 (ACT).

Applicants with grade point averages of 3.0 or above (3.60 for nonresidents) are exempt from the test requirement.

You will qualify for regular admission when the university verifies that you have a qualifiable eligibility index and will have completed the comprehensive pattern of college preparatory subjects, and, if applying to an impacted program, you meet supplementary criteria. You will still qualify for regular admission, ***on condition,*** if you are otherwise eligible but are missing a limited number of the required subjects. (*See* "Phase-in of the Subject Requirements," following page.) "Conditional admission" is an alternative means to establish eligibility for regular admission. Please consult a counselor if you have questions.

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

Subject Requirements

Beginning fall 1988, The California State University requires that first-time freshman applicants complete, with grades of C or better, 15 units in a comprehensive pattern of college preparatory courses. A "unit" is one year of study in high school.

English: 4 years (also required previous to 1988).

Mathematics: 3 years (2 years required previous to 1988). Algebra, geometry, and intermediate algebra.

US History or **US history and government:** 1 year.

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

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

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

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

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

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

GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score	GPA	ACT Score	SAT Score
(——)[1]			2.66	15	680	2.32	21	950
2.99	8	410	2.65	15	680	2.31	22	960
2.98	8	420	2.64	15	690	2.30	22	960
2.97	8	430	2.63	15	700	2.29	22	970
2.96	9	440	2.62	15	710	2.28	22	980
2.95	9	440	2.61	16	720	2.27	22	990
2.94	9	450	2.60	16	720	2.26	23	1000
2.93	9	460	2.59	16	730	2.25	23	1000
2.92	9	470	2.58	16	740	2.24	23	1010
2.91	10	480	2.57	16	750	2.23	23	1020
2.90	10	480	2.56	17	760	2.22	23	1030
2.89	10	490	2.55	17	760	2.21	24	1040
2.88	10	500	2.54	17	770	2.20	24	1040
2.87	10	510	2.53	17	780	2.19	24	1050
2.86	11	520	2.52	17	790	2.18	24	1060
2.85	11	520	2.51	18	800	2.17	24	1070
2.84	11	530	2.50	18	800	2.16	25	1080
2.83	11	540	2.49	18	810	2.15	25	1080
2.82	11	550	2.48	18	820	2.14	25	1090
2.81	12	560	2.47	18	830	2.13	25	1100
2.80	12	560	2.46	19	840	2.12	25	1110
2.79	12	570	2.45	19	840	2.11	26	1120
2.78	12	580	2.44	19	850	2.10	26	1120
2.77	12	590	2.43	19	860	2.09	26	1130
2.76	13	600	2.42	19	870	2.08	26	1140
2.75	13	600	2.41	20	880	2.07	26	1150
2.74	13	610	2.40	20	880	2.06	27	1160
2.73	13	620	2.39	20	890	2.05	27	1160
2.72	13	630	2.38	20	900	2.04	27	1170
2.71	14	640	2.37	20	910	2.03	27	1180
2.70	14	640	2.36	21	920	2.02	27	1190
2.69	14	650	2.35	21	920	2.01	28	1200
2.68	14	660	2.34	21	930	2.00	28	1200
2.67	14	670	2.33	21	940	(——)[2]		

[1] Above 2.99 qualifies with any score.
[2] Below 2.00 does not qualify for regular admission.

Phase-in of the Subject Requirements. CSU will phase in the 1988 subject requirements and during the phase-in period will admit, on condition, applicants who meet all other admission requirements but are missing a limited number of the required subjects. Applicants will be admitted on condition that they make up any missing subjects early in their CSU studies, as determined by the campus.

Fall 1988: at least 10 of the required 15 units, including at least three of the units required in English and two of the units required in mathematics.

Fall 1989 and 1990: at least 12 of the required 15 units, including at least three of the units required in English and two of the units required in mathematics.

Fall 1991: at least 13 of the required 15 units, including at least three of the units required in English and two of the units required in mathematics.

Fall 1992: full implementation expected.

Provisional Admission

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

High School Students

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

Transfer Requirements

You will qualify for admission as a transfer student if you have a grade point average of 2.0 (C) or better in all transferable units attempted, are in good standing at the last college or university attended, and meet one of the following standards:

1. were eligible as a freshman (*see* "Freshman Requirements," preceding page) at the time of application for admission or at the time of graduation from high school, provided you have been in continuous attendance at a college since graduation; or
2. were eligible as a freshman except for the college preparatory subject requirements and have completed appropriate college courses in the missing subjects; or
3. have completed at least 56 transferable semester (84 quarter) units and have completed appropriate college courses to make up any missing college preparatory subjects. (*See* "Subject Requirements," preceding page.) 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.

Making Up Missing College Preparatory Subject Requirements. Undergraduate transfer applicants who did not complete the subject requirements while in secondary school may make up missing subjects in any of the following ways:

1. complete appropriate courses with a grade of C or better in adult school or high school summer session;
2. complete appropriate courses in college with a grade of C or better (one course of three semester or four quarter units will be considered equivalent to one year of high school study); or
3. earn acceptable scores on specified examinations.
4. transfer applicants with 56 or more semester units can also satisfy the preparatory subject requirements by completing, with a grade of C or better in each course, one of the following alternatives:
   a. *1987 or earlier high school graduates:* the CSU general education requirement in communication in the English language and the general education requirement in mathematics;
   b. *1988 and later high school graduates:* a minimum of 30 semester (45 quarter) units to be chosen from courses in English, arts and humanities, social science, science, and mathematics of at least equivalent level to courses that meet general education or transfer curriculum requirements. Each student must have completed the CSU general education requirement in communication in the English language and the general education requirement in mathematics.

All transfer applicants with 56 or more transferable semester (84 quarter) units will be expected to have completed the general education requirements in communication in English (at least nine semester units) and in mathematics (usually three semester units).

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 full-time enrollment 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).

Systemwide Tests Required of Most New Students

The California State University system requires new students to be tested in English and mathematics after they are admitted. These are not admission tests, but a way to determine 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 transfer courses.

English Placement Test (EPT). The CSU English Placement Test must be completed by all undergraduates* 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 score on the CSU English Equivalency Examination that qualifies a student for exemption from the English Placement Test.
- A score of 470 or above on the Verbal section of The College Board Scholastic Aptitude Test (SAT-Verbal).
- A score of 22 or above on the ACT English Usage Test.
- 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.

* Undergraduates who are admitted with 56 or more transferable semester units and who are subject to a campus catalog earlier than 1986-87 are not required to complete the EPT.

Entry-Level Mathematics (ELM) Test. All undergraduate students must take the test and *pass it* before enrolling in a course that satisfies the college-level mathematics requirement of the General Education program. Exemptions from the test are given only to those students who can present proof of one of the following:

- A score of 3, 4, or 5 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).
- 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, with a grade of C or better, that satisfies the General Education-Breadth Requirement in Quantitative Reasoning provided it is above the level of intermediate algebra.

Failure to verify an exemption from these test requirements or to take the tests 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 (Section 41300.1 of Title 5, California Administrative Code, and CSU Executive Order 393). Failure to satisfy the requirements within four semesters will result in the withholding of registration privileges for future semesters.

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

Information bulletins and registration materials for the EPT and ELM will be mailed to all 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 conditions:

1. Possesses a high school diploma (or has established equivalence through either the Tests of General Educational Development or the California High School Proficiency Examination).

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

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

Other Applicants

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

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

Graduate and Postbaccalaureate Admission Requirements

Admission Requirements

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

- **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, exceptions may be made 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 department and SDSU may prescribe; or
- **Graduate Conditionally Classified** standing to enroll in a graduate degree curriculum if in the opinion of the appropriate department 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 department and SDSU 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. Those who do not possess a bachelor's degree from a postsecondary institution where English is the principal language of instruction must receive a minimum score of 550 on the Test of English as a Foreign Language (TOEFL).

Second Bachelor's Degree

Second bachelor's degrees are awarded by most departments. Currently, Business Administration, Liberal Studies Option 1, Mexican American Studies, and Telecommunications and Film do not participate in the second bachelor's degree program. A student wishing to earn a second bachelor's degree must apply for admission to San Diego State University during the filing period for undergraduate applicants, unless already enrolled at the University as a postbaccalaureate student. In addition, applicants to an impacted major (aerospace engineering, computer science, electrical engineering, and nursing) must apply during the first month of the undergraduate application filing period. Upon receipt of the admission application, students will be sent a separate application for a second bachelor's degree.

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

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

To receive a second bachelor's degree, the student must complete a minimum of 30 postbaccalaureate units in residence with a minimum grade point average of 2.0; at least 15 units must be upper division in the new major. Up to six upper division units from the previous major may be used in the new major, provided the student completed the same number of units above minimum requirements for the first degree. The student must fulfill all current requirements for the bachelor's degree, including but not limited to General Education, major, upper division writing, and foreign language if required by the major. Students are subject to undergraduate policies and procedures, including rules governing deadlines, course forgiveness, and academic probation and disqualification.

The second bachelor's degree is not granted automatically. When eligible for graduation, students must submit an application for graduation with the Office of Admissions and Records, AD-127. The Class Schedule each semester specifies the exact dates for filing. (Refer to the section on Application for Graduation in this catalog for additional information and regulations.)

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

Second Major for SDSU Graduates

San Diego State University graduates wishing to return for a second major may do so in most areas. Currently, Business Administration, Liberal Studies Option 1, Mexican American Studies, and Telecommunications and Film do not participate in the second major program. Students must apply for readmission to the University during the filing period for undergraduate applicants, unless already enrolled as a postbaccalaureate student. In addition, applicants to an impacted major (aerospace engineering, computer science, electrical engineering, and nursing) must apply during the first month of the undergraduate application filing period.

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

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

To receive a second major, students must meet with the major adviser and develop a major outline detailing requirements for the second major. These include a minimum of 12 upper division units in the new major after approval in the program, a minimum grade point average of 2.00 in the major, and satisfaction of all current catalog requirements associated with the major including foreign language and upper division writing requirements where appropriate. Acceptance of second major courses completed during the first degree is subject to department review and approval. If taken some time ago, students may be required to take more than the minimum number of units needed in the discipline.

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

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

International (Foreign) Student Admission Requirements

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

Applicants for admission as either graduates or undergraduates whose education has been in a foreign country should file an application for admission and official certificates and detailed transcripts of record from each secondary school and collegiate institution attended several months in advance of the opening of the semester in which the applicant expects to attend. If certificates and transcripts are not in English, they should be accompanied by certified English translations. Credentials will be evaluated in accordance with the general regulations governing admission to San Diego State University.

Because 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, 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, USA.

Upon arrival at San Diego State University, further tests of English may be given for the purpose of placing students in an English language program commensurate with their linguistic ability in English, and for use by advisers to assist students in planning an appropriate course of study. Depending upon their performance on the placement test and their academic background, students may be required to enroll in one or more English language courses during their first year at San Diego State University. Foreign students admitted to the University will be subject to the same competency and placement examinations and standards as govern the rest of the student population.

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

Health insurance coverage is mandatory for international (foreign) students. Acceptable health insurance is available on campus at approximately $269 per year.

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

Upon arrival at San Diego State University the students 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 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 for certain specified students. 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 will 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, returning, and continuing students for nonresident tuition purposes. Responses to the Application for Admission and, if necessary, other documentation furnished by the student are

used in making this determination. A student who fails to submit adequate information to establish entitlement to classification as a California resident will be classified as a nonresident.

The following statement of the rules regarding residency determination for nonresident tuition purposes is not a complete discussion of the law, but a summary of the principal rules and their exceptions. The law governing residence determination for tuition purposes by The California State University is found in ***Education Code*** Sections 68000-68090, 68121, 68123, 68124, 89705-89707.5, and 90408, and in Title 5 of the ***California Administrative Code,*** Sections 41900-41912. A copy of the statutes and regulations is available for inspection at the campus Admissions and Records Office.

Legal residence may be established by an adult who is physically present in the state and who, at the same time, intends to make California his or her permanent home. Steps must be taken at least one year prior to the residence determination date to show an intent to make California the permanent home with concurrent relinquishment of the prior legal residence. The steps necessary to show California residency intent will vary from case to case. Included among the steps may be registering to vote and voting in elections in California; filing resident California state income tax forms on total income; ownership of residential property or continuous occupancy or renting of an apartment on a lease basis where one's permanent belongings are kept; maintaining active resident memberships in California professional or social organizations; maintaining California vehicle plates and operator's license; maintaining active savings and checking accounts in California banks; maintaining permanent military address and home of record in California if one is in 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 or last maintained his or her place of abode. The residence of a minor cannot be changed by the minor or the minor's guardian, so long as the minor's parents are living.

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

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

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

The general rule is that a student must have been a California resident for at least one year immediately preceding the residence determination date in order to qualify as a "resident student" for tuition purposes. A residence determination date is set for each academic term and is the date from which residence is determined for that term. The residence determination dates are September 20 for fall and January 25 for spring. Questions regarding residence determination dates should be directed to the Legal Residence Office in the Admissions and Records 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. Minors who have been present in California with the intent of acquiring residence for more than a year before the residence determination date, and entirely self-supporting for that period of time.
3. Persons below the age of 19 who have lived with and been under the continuous direct care and control of an adult, not a parent, for the two years immediately preceding the residence determination date. Such adult must meet California residency requirements.
4. Dependent children and spouses of persons in active military service stationed in California on the residence determination date. 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 residence and maintain that residence for one year.
6. Certain credentialed, full-time employees of California school districts.
7. Full-time State University employees and their children and spouses; State employees, assigned to work outside the State, and their children and spouses. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for one year.
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 and Records Office. Applications for a change in classification with respect to a previous term are not accepted.

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

Academic Advising

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

College of Arts and Letters Advising Center (Storm Hall, 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 (SH-132) for general education advising.

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

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

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

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

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

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

- Aerospace Engineering
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering

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

- Communicative Disorders
- Health Science
- Nursing
- Social Work
- Public Health

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

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

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

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

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: Assistant Dean Flores or Academic Specialist Russum. These academic advisers may be consulted at any time on specific questions concerning programs of study, general degree requirements, or students' evaluations.

Students should call the Student Affairs Unit, 357-0270, for an appointment for academic advising. 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.

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

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

Teaching credential requirements. Advising concerning requirements for the single subject (secondary school) and the multiple subject (elementary school) credential programs is available through the Teacher Education Admissions Office. The office is located in room 151 of the Education building. Hours of service are Monday through Friday from 9:00 a.m. to 4:30 p.m. Regularly scheduled group advising is offered by both the single subject and multiple subject 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: ***predentistry,*** Life Sciences, room 135; ***preeducation,*** Campus Laboratory, room 107; ***prelaw,*** Nasatir Hall, room 131; ***premedicine,*** Life Sciences, room 135; ***preoccupational therapy,*** Life Sciences, room 133; ***preoptometry,*** Life Science, room 133; ***prepharmacy,*** Life Sciences, room 133; ***prephysical therapy,*** Life Sciences, room 133; ***preveterinary 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. Academic advising is an important part of each program, including General Education requirements, group meetings with the assistant deans from the various colleges, and completion of the registration packet. Questions concerning orientation can be directed to the Student Resource Center, Campus Laboratory School, Room 114; telephone 265-5933.

EOP students are required to attend the EOP orientation program known as EOP-START. Attendance at an Academic Information Day or CONTACT is encouraged, but does *not* meet the EOP orientation requirement. Call EOP at 265-6298 for additional information.

Transcript Evaluation

An evaluation is a summary of college work completed and of requirements to be completed for a bachelor's degree. To be eligible for an evaluation, a student must be currently enrolled, have completed at least 56 units of acceptable college work, and have a declared major. An evaluation will not be done until official copies of all transfer credit are on file in the Office of Admissions and Records. Only one evaluation will be done for each major. 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.)

General Regulations

Student Responsibility for Catalog Information

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

Changes in Rules and Policies

Although every effort has been made to assure the accuracy of the information in this catalog, students and others who use this catalog should note that laws, rules, and policies change from time to time and that these changes may alter the information contained in this publication. Changes may come in the form of statutes enacted by the Legislature, rules and policies adopted by the Board of Trustees of The California State University, by the Chancellor or designee of The California State University, or by the President or designee of San Diego State University. Further, it is not possible in a publication of this size to include all of the rules, policies and other information which pertain to the student, San Diego State University, and The California State University. More current or complete information may be obtained from the appropriate department, school, or administrative office. Each semester, the Class Schedule and Student Information Handbook outlines changes in academic policy and procedure and current deadlines which are of importance to students.

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

Privacy Rights of Students in Education Records

The federal Family Educational Rights and Privacy Act of 1974 (20 U.S.C. 1232g) and regulations adopted thereunder (34 C.F.R. 99) and California Education Code Section 67100 et seq, set out requirements designed to protect the privacy of students concerning their records maintained by the campus. Specifically, the statute and regulations govern access to student records maintained by the campus and the release of such records. In brief, the law provides that the campus must provide students access to 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, Office of Civil Rights, Region 9, 221 Main Street, 10th Floor, San Francisco, California 94105.

Age, Marital Status, Religion, or Sexual Preference

The California State University does not discriminate on the basis of age, marital status, religion, or sexual preference.

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

Plus/Minus Grading

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

A = 4.0	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 first four weeks of instruction because of a verified serious and compelling reason and has obtained the signature of the instructor and the approval of the dean or designee of the college in which the class is located. After the fourth week, the grade of "W" will appear on the student's permanent record for courses on which an official drop has been approved.

Dropping a class after the end of the tenth day of instruction and prior to the last three weeks of instruction is permissible only for verified serious and compelling reasons. Permission to drop a class during this period is granted only with the signature of the instructor, who indicates the student's grade status in the class, and the approval of the dean or designee of the college in which the class is located. Students wishing to withdraw from all classes during this period must obtain the signature of each instructor and the approval of the dean or designee of the college of the student's major.

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 signed by each instructor, who indicates the student's grade status in the class, and approved by the dean or designee of the college of the student's major.

After the last day of the semester, a student who wishes to change assigned grades to "W" grades must request to withdraw from the full semester's work; no requests for individual classes will be accepted. Such requests may be granted only in verified cases such as accident or serious illness where the cause for substandard performance was due to circumstances clearly beyond the student's control. Only those retroactive changes from an assigned grade to a "W" which are approved by the instructor who assigned the original grade will be made, except that (a) the dean or designee of the college of the student's major may authorize the change of "U" to "W," and (b) department chairs shall act on behalf of instructors no longer affiliated with the University.

Auditing — "AU"

Enrollment as an auditor is subject to permission of the instructor, provided that enrollment in a course as an auditor shall be permitted only after students otherwise eligible to enroll on a credit basis have had an opportunity to do so. Auditors are subject to the same fee structure as credit students and regular class attendance is expected. Failure to meet required class attendance may result in an administrative drop of the course. 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 or minor 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 15 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 15 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 an SDSU course on a credit/no credit basis.
4. If for any reason (change of major or minor 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 a Change of Program form and returning that form to the Change of Program booth 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.

NOTE: "NC" is not calculated in the grade point average at San Diego State University. However, some institutions, particularly for graduate admissions, calculate an "NC" as an "F."

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 Courses

Course "Forgiveness" and Course Repeat Policy. Undergraduate students may repeat at San Diego State University up to five courses for "forgiveness" of a C− or lower grade, subject to the following conditions and requirements.

1. In the semester in which students are repeating a course for which they want an earlier grade "forgiven," ***they must notify Admissions and Records before the end of the add period (or before noon of the third day of Winter or Summer Session classes)*** that they want the "forgiveness" policy applied to that course. While the original grade(s) will remain on students' records, the grade earned in the repeat, whether higher or lower than the original grade, will be used in place of the earlier grade in calculation of grade point averages.
2. Students may request grade "forgiveness" no more than five times and no more than twice for the same course.
3. The course "forgiveness" and course repeat policy applies only to repeats of the ***same course*** (same number, same title, and, for Experimental Topics courses, same subtitle). Exceptions will be made only in those cases where the course number changes and the change is documented in the General Catalog.
4. The only courses which may be repeated Credit/No Credit are those in which students previously received No Credit; if a course previously taken for a grade is repeated Credit/No Credit, the original grade will continue to be calculated in grade point averages. Repeating courses in which the original grade was "NC" does not require the filing of the Course Forgiveness Petition, nor does it subtract from the five forgiveable repeats permitted, since the No Credit grade does not affect the student's GPA.
5. The course "forgiveness" policy may be extended to courses originally taken elsewhere and repeated at San Diego State University, in which case the original transfer grade will no longer be used in the calculation of the overall grade point average. However, ***the "forgiveness" policy applies only to courses repeated at San Diego State University.***
6. The course "forgiveness" policy applies to courses repeated at San Diego State University in Summer Session and Wintersession; it does *not* apply to courses repeated through Open University.
7. ***If courses with C− or lower grades are repeated without appropriate notification having been filed by the deadline or in excess of course repeat limitations (no more than two repeats per course, no more than five repeats total), course "forgiveness" may not be applied; all grades for those courses will be calculated in grade point averages. Units for a course will be counted only once toward graduation, regardless of number of repeats. Missed deadlines and excess repeats are* not *petitionable.***
8. If students repeat a course in which a grade of C or better was received, only the original grade and units earned will be used for calculation of grade point averages and units needed for a degree.
9. In some cases, admission to courses may have become restricted due to impaction, limitation by major code, or enforcement of prerequisites; in those cases, students may be prohibited from repeating those courses.

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 80 through 99 are nonbaccalaureate level and are not acceptable for a bachelor's degree or General Education; those numbered 100 through 299 are in the lower division (freshman and sophomore years); those numbered 300 through 499 are in the upper division (junior and senior years) and intended for undergraduates; those numbered 500 through 599 are in the upper division and are also acceptable for advanced degrees when taken by students admitted to graduate standing; those numbered 600 through 799 are graduate courses; and those numbered 800 through 899 are doctoral courses.

Courses numbered X-01 through X-79 and X-397 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-79 and X-397 are designated as upper division. It is the prerogative of the academic department/college to determine if X-01 through X-79 and X-397 level courses are applicable to a major, a minor, or toward specified electives. The X-01 through X-79 and X-397 level courses are offered in conjunction with certificate programs only. Courses at the X-01 through X-79 and X-397 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-79 and X-397 level courses offered in any certificate program toward their proposed course of study.

California Articulation Number (CAN)

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

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

The following courses at San Diego State University have been designated as CAN courses:

Anthropology 101	CAN ANTH 2
Anthropology 102	CAN ANTH 4
Art 100	CAN ART 8
Art 204	CAN ART 10
Art 258	CAN ART 2
Art 259	CAN ART 4
Drama 110	CAN DRAM 6
Drama 130	CAN DRAM 8
Economics 101	CAN ECON 2
Economics 102	CAN ECON 4
History 110A	CAN HIST 8
History 110B	CAN HIST 10
Mechanical Engineering 260	CAN ENGR 4
Philosophy 120	CAN PHIL 6
Psychology 101	CAN PSY 4

Final Examinations

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

Academic Credit Through Coursework

Credit for Upper Division Courses

Normally, only juniors, seniors and graduate students enroll in upper division courses (numbered 300 and above). However, a freshman or sophomore may enroll in an upper division course for upper division credit if the instructor consents. Article 40405.2 of Title 5, ***California 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

The bachelor's degree must be completed at the end of the semester or term in which the concurrent credit is earned.

A senior who has met all of the required competencies in writing and mathematics and who is within 12 units of completing requirements for the bachelor's degree and whose grade point average in the last 60 semester units attempted is 3.0 or above may petition the Graduate Council to take for concurrent master's degree credit 500-numbered courses listed in the ***Graduate Bulletin*** as acceptable for master's degree programs, and certain 600- and 700-numbered courses approved by the department, with the remaining requirements for the bachelor's degree. Petitions may be obtained from the Graduate Division and must be submitted to the Evaluations Office of Admissions and Records by the end of the third week of classes of the semester or term in which the concurrent credit is earned, and the student must have on file a current graduation application for the bachelor's degree. The maximum number of units which may be earned as concurrent master's degree credit is determined by the difference between the number of units remaining for the bachelor's degree and 15.

Concurrent Postbaccalaureate Credit

Applicable to the "Fifth Year" Credential Requirement Only

Concurrent postbaccalaureate credit may be earned during the final semester or summer session by seniors admitted to the College of Education who meet all of the following qualifications:

1. Have a minimum grade point average of 2.5 on the last 60 units attempted.
2. Complete coursework in excess of graduation requirements during the semester (or summer session) when graduation occurs.
3. Attempt no more than 18 units during the final undergraduate semester (or 15 units during summer session).
4. Request no more than a maximum of 12 units of 300-, 400-, or 500-numbered courses for postbaccalaureate credit.
5. Submit petition before the end of the first week of classes (or the first week of summer Term A) of the final undergraduate semester (or term) when graduation occurs.
6. Petition the Dean of the College of Education.
7. Graduate at the end of the semester (or summer session) the petition is made.

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 are not counted in satisfaction of the minimum residence requirement. A maximum of nine units in extension courses at San Diego State University may be accepted as part of the requirements for the master's degree, subject to limitations described in the Graduate Bulletin.

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

Courses numbered 80 through 99 are nonbaccalaureate level and are not acceptable for a bachelor's degree or General Education; those numbered 100 through 299 are in the lower division (freshman and sophomore years); those numbered 300 through 499 are in the upper division (junior and senior years) and intended for undergraduates; those numbered 500 through 599 are in the upper division and are also acceptable for advanced degrees when taken by students admitted to graduate standing; those numbered 600 through 799 are graduate courses; and those numbered 800 through 899 are doctoral courses.

Courses numbered X-01 through X-79 and X-397 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-79 and X-397 are designated as upper division. It is the prerogative of the academic department/college to determine if X-01 through X-79 and X-397 level courses are applicable to a major, a minor, or toward specified electives. The X-01 through X-79 and X-397 level courses are offered in conjunction with certificate programs only. Courses at the X-01 through X-79 and X-397 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-79 and X-397 level courses offered in any certificate program toward their proposed course of study.

Academic Credit Through Examination

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

Credit by Examination

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

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

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

1. The student must be matriculated, in good standing (not on probation), be registered in at least one regular course (not Extension) at the time credit-by-examination is authorized, and pay for additional units if cost exceeds fees already paid.
2. The student must register in the course for which credit by examination is being requested within the time limits for filing a change of program as listed in the Academic Calendar each semester.
3. Approval of the department chair and the dean of the college concerned is required prior to taking the examination. Forms for approval may be obtained from the Office of Admissions and Records.
4. Credit-by-examination is restricted to regular undergraduate courses listed in the General Catalog, does not include 600- and 700-numbered or Extension courses, and does not count toward the 30-unit minimum residency requirement.
5. Credit-by-examination is not treated as part of the student's study load and, therefore, is not considered by the Veterans Administration in the application of their regulations; and is not always accepted as transfer credit between collegiate institutions.
6. Credit-by-examination is restricted to the regular fall or spring semester. It is not allowed during summer or winter sessions.

English Equivalency Examination

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

Credit for College-Level Examination Program (CLEP)

The University grants credit 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 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 6 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 Advanced Placement Credit table on the following page indicates the score necessary, the units earned, and the course equivalents for each of the examinations offered.

Advanced Placement Credit

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:				
General	3, 4, 5	6	Art 100 and 101 (6)	
Drawing	3, 4, 5	6	Art 100 and 101 (6)	
General and Drawing	3, 4, 5	12	Art 100, 101, 102, 103 (12)	
Biology	3	6	Biology 100 and 100L (4), and 296 (2) (6)	
	4, 5	8	Biology 200A and 200B (8)	
Chemistry	3, 4, 5	10	Chemistry 200, 201 (10)	
Classics:				
Vergil	3, 4, 5	6	Classics 202L (5)	If more than one examination is satisfactorily passed, 5 additional units credit will be provided.
Latin Prose	3, 4, 5	6	Classics 202L (5)	
Latin Lyric	3, 4, 5	6	Classics 202L (5)	
Computer Science	3	6	Mathematics 107 and 299 "Topics in Computer Science" (6)	
	4, 5	6	Mathematics 107 and 108 (6)	
English:				
Lang. and Comp.	3, 4, 5	6	English 100 and 200 (6)	Exempts from CSU English Placement Test and satisfies Writing Competency.
Comp. and Lit.	3, 4, 5	6	English 100 and 220 (6)	
French Language	3	6	French 200A and 200D (6)	Satisfies the foreign language requirement
	4, 5	9	French 200A, 200B and 200D (9)	
French Literature	3, 4, 5	6	French 305A and 305B (6)	
German Language	3	6	German 200A and 211 (6)	Satisfies the foreign language requirement
	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)	Exempts from CSU Entry Level Mathematics Test and satisfies Mathematics Competency.
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 l82A-182B (8)	
C (Mechanics)	3, 4, 5	4	Physics 195, 195L (4)	
C (Electricity and Magnetism)	3, 4, 5	4	Physics 196, 196L (4)	
Political Science				
Govt./Politics: American	3, 4, 5	6	Political Science 101 and 102 (6)	Satisfies American History/Institutions and Ideals, and U.S. Constitution requirements. Does not satisfy Calif. government requirement.
Govt./Politics: Comparative	3, 4, 5	6	Political Science 101 and 102 (6)	
Govt./Politics: American and Comparative	3, 4, 5	12	Political Science 101, 102, 103, 296 (12)	
Spanish Language	3	6	Spanish 201 and 211 (7½)	Satisfies the foreign language requirement
	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 Instruction in Noncollegiate Settings

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

Credit will be considered to be elective units in most cases. Petitions for acceptance of credits toward specific requirements are available in the Admissions and Records Office (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 Public Information area of Admissions and Records verifies student enrollment for students in person with proper identification and through the mail with an authorized signature from the student.

Prerequisites

Prerequisites will be enforced in all sections of courses listed in the Academic Policy pages of the current Class Schedule and Information Handbook. Enrollment will depend on the student's verification of completion of prerequisites.

Change of Program

San Diego State University provides for change of program beginning the first day of classes every term. Change of program includes: dropping a class, adding a class, adding or reducing units of a class for which the student is already registered, changing a section of the same class, or changing grading options.

Students are responsible for every course on their official study list filed at registration. If a student does not attend the first class meeting of the semester and is not present at the start of the second meeting, the professor may give that student's place to another student; however, if this occurs, the student ***must*** still take the necessary formal drop action personally. Changes of program cannot be effected by nonattendance in class; nonattendance without consequent formal drop action will result in a failing grade.

Dropping a class after the end of the tenth day of instruction and prior to the last three weeks of instruction is permissible only for serious and compelling reasons. Permission to drop a class during this period is granted only with the signature of the instructor, who indicates the student's grade status in the class, and the approval of the dean or designee of the college in which the class is located, and approvals are made in writing on prescribed forms. After the fourth week, the grade of "W" will appear on the student's permanent record for courses on which an official drop has been approved.

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

Change of grading option is not permitted after the end of the fifteenth day of instruction.

Deadlines

1. Dropping courses will be permitted with no penalty or restriction only until the end of the **tenth** day of classes.

2. Adding courses or complete withdrawal from the University will be allowed without penalty or restriction until the end of the **fifteenth** day of classes.

3. Change of grading option will NOT be permitted after the **fifteenth** day of classes.

Change of Major or Curriculum

At the time of admission to the university, each undergraduate student is assigned to a major field or curriculum, or is designated as an undeclared major. After registration, all students wishing to change their major or curriculum should check with the department of their intended major for requirements and filing periods. Change of major forms are available at the Admissions and Records Office.

Veterans using veteran benefits must obtain appropriate approval from the Veterans Administration for necessary changes in letters of eligibility. Upon change or declaration of major, students must adopt the requirements of the major and any minors in effect at that time.

Academic Renewal

Under certain circumstances the campus may disregard up to two semesters or three quarters of previous undergraduate coursework taken at any college from all considerations associated with requirements for the baccalaureate degree. These circumstances are:

1. The student has requested the action formally and has presented evidence that work completed in the term(s) under consideration is substandard and not representative of present scholastic ability and level of performance; and
2. The level of performance represented by the term(s) under consideration was due to extenuating circumstances; and
3. There is every evidence that the student would find it necessary to complete additional units and enroll for one or more additional terms in order to qualify for the baccalaureate if the request were not approved.

Final determination that one or more terms shall be disregarded in determination of eligibility for graduation shall be based upon a careful review of evidence by a committee appointed by the President which shall include the Vice President for Academic Affairs and consist of at least three members. Such final determination shall be made only when:

1. Five years have elapsed since the most recent work to be disregarded was completed; and
2. The student has completed at SDSU, since the most recent work to be disregarded was completed, 15 semester units with at least a 3.0 GPA, 30 semester units with at least a 2.5 GPA, or 45 semester units with at least a 2.0 GPA. Work completed at another institution cannot be used to satisfy this requirement.

When such action is taken, the student's permanent academic record shall be annotated so that it is readily evident to all users of the record that **no** work taken during the disregarded term(s), even if satisfactory, may apply toward baccalaureate requirements. However, all work must remain legible on the record ensuring a true and complete academic history.

The procedure for filing Petition for Academic Renewal is as follows:

1. Obtain the petition from the Division of Undergraduate Studies, AD-223.
2. Fill in the form carefully and completely.
3. Attach statements and documentary evidence from doctors, lawyers, employers, parents, professors, or other appropriate persons to substantiate your claim that the request is justified.
4. Obtain all necessary clearances and signatures.
5. Return all materials to the Admissions and Records Office.

Withdrawal, Leaves of Absence, Readmission, and Evaluation

Withdrawal

Students who wish to withdraw from the University must initiate action formally through the Admissions and Records Office. Failure to file will result in a failing grade in all courses. A student who is not enrolled in at least one class (other than for audit) at the end of the fourth week of instruction (census date) is no longer considered a continuing student and may be required to apply for readmission. Refunds are obtainable only for the first 14 days after the semester begins. In order to receive a refund, the student must file an official withdrawal form and refund request at the Office of Admissions and Records within the first 14 days of the term.

A course will not appear on the permanent record if withdrawal occurs before the end of the fourth week of classes. After the fourth week, a grade of "W" will appear for courses on which an official drop has been approved. During the final three weeks of instruction, withdrawals are not permitted except in cases where the cause of withdrawal is due to circumstances clearly beyond the student's control. Credit or an incomplete may be assigned for courses in which sufficient work has been completed to permit an evaluation to be made. Refer to the Class Schedule for appropriate dates for the deadlines indicated above.

After the last day of the semester, a student who wishes to change assigned grades to "W" grades must request to withdraw from the full semester's work; no requests for individual classes will be accepted. Such requests may be granted only in verified cases such as accident or serious illness where the cause for substandard performance was due to circumstances clearly beyond the student's control.

Unofficial Withdrawal

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

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

Leaves of Absence

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

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

Students who leave San Diego State University in order to attend up to four consecutive semesters at another accredited college or university need not apply for a leave of absence in order to maintain catalog requirements; however, such students absent from San Diego State University more than one semester must apply for readmission in order to return to the University.

A student must file an application for the leave at the Admissions and Records Office. Requests will be reviewed by appropriate officials designated by the Vice President for Academic Affairs. Students wishing to cancel a leave must do so prior to the first day of classes. The Class Schedule and Student Information Handbook contains specific procedures and deadlines. For students participating in the CSU visitors' program, units completed at the visitor campus will be considered resident units; they will not, however, be calculated into the San Diego State University grade point average.

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

Readmission

A student who leaves the University for more than one semester must file an application for readmission with a $45 application fee. If the student was enrolled at another institution subsequent to the last attendance at San Diego State University, an official transcript showing work completed must be sent by the transfer institution, directly to the Office of Admissions and Records before readmission can be completed.

Readmitted students may retain rights to graduation requirements in effect when leaving San Diego State University if the following conditions are met:

1. Enroll at least one semester (or two quarters) per year at an accredited institution, and
2. Be absent from San Diego State University for no more than two years, and
3. Remain in good standing (not academically disqualified) at all institutions attended.

In order to retain catalog rights for major requirements, a student must maintain the same major at any institution attended during absence from San Diego State University.

Evaluation

An evaluation is a summary of college work completed and of requirements to be completed for a bachelor's degree 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 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 midyear graduates and at the end of the fall semester for May and summer session graduates. Notation of ***cum laude, magna cum laude,*** or ***summa cum laude*** on transcripts and diplomas is based on actual total achievement.

Upon recommendation of their major department, students doing superior work in their major field may be graduated with distinction in that field. To qualify for Distinction in the Major, a student must have a minimum 3.50 grade point average in the major (upper division courses) by the beginning of the fall semester for midyear graduates and by the end of the fall semester for May and summer session graduates.

To be considered for computation of the major grade point average, grades for removal of Incomplete and all other grade changes must be received in the Admissions and Records Office no later than the end of the fifth week of the semester in which the student plans to graduate. All changes for summer session graduates must be received by the end of the fifth week of the spring semester prior to graduation.

Dean's List

The Dean's List recognizes academic achievement within a single semester.

Students must place within the top ten percent of the college in which they are majoring and have a grade point average of at least 3.50 based on a minimum of 12 units of credit for courses in which letter grades were assigned. The computation of grade points will be made six weeks after the end of the semester to include students who complete Incomplete grades promptly.

Students will be recognized by the dean of their respective college; undeclared and liberal studies majors will be listed by the Dean of Undergraduate Studies.

Academic Probation, Disqualification, and Reinstatement of Undergraduate Students

Academic Probation

The purpose of probation is to warn students that their academic performance is below the state minimum required for graduation and to indicate that improvement is required before a degree can be granted. If students on probation allow their work to deteriorate to the point where it is unlikely that their grade point deficiency can be removed in the time remaining to complete their degree requirements, they will be subject to disqualification.

Undergraduate students will be placed on academic probation if at any time their cumulative grade point average in all college work attempted or their cumulative grade point average at SDSU falls below 2.0. Summer Session and Winter Session courses are included in the SDSU grade point average; Open University (concurrent enrollment) courses are calculated only in the overall grade point average.

The grade point average is computed by dividing the number of grade points accumulated by the number of graded units attempted. (See chart under "Plus/Minus Grading" for number of grade points assigned per unit in each grade category.)

Students will be removed from Academic Probation when their cumulative grade point average has been raised to 2.0 or higher in all college work attempted and in all work attempted at this University.

Academic Disqualification

Undergraduate students on academic probation will be subject to disqualification when:

1. As a lower division student (with fewer than 60 semester units of college work completed) they fall 15 or more grade points below a 2.0 (C) average on all units attempted or in all units attempted at this campus.
2. As juniors (with 60-89 semester units of college work completed) they fall nine or more grade points below a 2.0 (C) average on all units attempted or in all units attempted at this campus.
3. As seniors (90 semester units of college work completed) they fall six or more grade points below a 2.0 (C) average on all units attempted or in all units attempted at this campus.

Grade point deficiencies below a 2.0 average are calculated in the following manner:

+2 points for every unit of A
+1 point for every unit of B
0 points for every unit of C
−1 point for every unit of D
−2 points for every unit of F
−2 points for every unit of U
−2 points for every unit if INC
(after one calendar year)

Reinstatement of Academically Disqualified Students

Disqualified students will ordinarily be considered for reinstatement to the University only when conditions causing the poor performance have been alleviated or sufficient academic work at another college or university has been completed at a level indicating that the student is capable of returning to SDSU and successfully satisfying the requirements for a degree.

Students may be considered for reinstatement only after filing an application for reinstatement by the published deadline and furnishing transcripts of all college work taken since disqualification. Reinstatement is not automatic. Each applicant will be considered on an individual basis. Because criteria for reinstatement vary, disqualified students should immediately contact the Assistant Dean of the college of their major to find out what criteria will be used to determine their eligibility for reinstatement.

Students accepted for reinstatement will reenter on academic probation and those out one or more semesters will be subject to catalog requirements in effect at the time they resume study at SDSU or a California community college and remain in continuous attendance (see "Election of Regulations for Graduation" under "Graduation Requirements"). They are not guaranteed reentry into their previously declared majors. Consideration for reentrance into the previously declared major is done on an individual basis at the discretion of the major department.

Disqualified students should be aware of the following:

1. Grades of less than 2.0 (C) for courses taken at SDSU will not be replaced if repeated at another college or university. These courses should be repeated only in resident enrollment at SDSU. (Extension and Open University are not considered resident enrollment.)
2. Grades earned at other accredited colleges or universities or through SDSU Extension or Open University do not reduce the SDSU grade point deficiency or change the SDSU grade point average, but are used in the reinstatement process as indicators of the student's future academic success. They will be used for calculating the overall GPA.
3. Courses traditionally considered "nonacademic" are inappropriate as indicators of future academic success.
4. Normally, students who have been disqualified twice from this institution will not be considered for reinstatement a third time.

Administrative Academic Probation

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

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

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

Student-Athlete Satisfactory Academic Progress Requirement

In order to remain eligible for intercollegiate competition, a student-athlete must be enrolled in an academic program leading to a recognized degree, must be making satisfactory progress toward that degree under the rules of the institution and the NCAA, and must achieve at least the minimum cumulative GPA standards found in the WAC Minimum Cumulative Grade Point Average Requirement Table.

Student Discipline and Grievances

Inappropriate conduct by students or by applicants for admission is subject to discipline on the San Diego State University campus. The Office of Judicial Procedures coordinates the discipline process and establishes standards and procedures in accordance with regulations contained in Article 1.1 of Title 5, *California Administrative Code*, Sections 41301 through 41304. These sections are as follows:

41301. Expulsion, Suspension and Probation of Students.

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

(a) Cheating or plagiarism in connection with an academic program at a campus.
(b) Forgery, alteration or misuse of campus documents, records, or identification or knowingly furnishing false information to a campus.
(c) Misrepresentation of oneself or of an organization to be an agent of a campus.
(d) Obstruction or disruption, on or off campus property, of the campus educational process, administrative process, or other campus function.
(e) Physical abuse on or off campus property of the person or property of any member of the campus community or of members of his or her family or the threat of such physical abuse.
(f) Theft of, or nonaccidental damage to, campus property, or property in the possession of, or owned by, a member of the campus community.
(g) Unauthorized entry into, unauthorized use of, or misuse of campus property.
(h) On campus property, the sale or knowing possession of dangerous drugs, restricted dangerous drugs, or narcotics as those terms are used in California statutes, except when lawfully prescribed pursuant to medical or dental care, or when lawfully permitted for the purpose of research, instruction or analysis.
(i) Knowing possession or use of explosives, dangerous chemicals or deadly weapons on campus property or at a campus function without prior authorization of the campus president.
(j) Engaging in lewd, indecent, or obscene behavior on campus property or at a campus function.
(k) Abusive behavior directed toward, or hazing of, a member of the campus community.
(l) Violation of any order of a campus president, notice of which had been given prior to such violation and during the academic term in which the violation occurs, either by publication in the campus newspaper, or by posting on an official bulletin board designated for this purpose, and which order is not inconsistent with any of the other provisions of this Section.
(m) Soliciting or assisting another to do any act which would subject a student to expulsion, suspension or probation pursuant to this Section.
(n) For purposes of this Article, the following terms are defined:
  (1) The term "member of the campus community" is defined as meaning California State University Trustees, academic, nonacademic and administrative personnel, students, and other persons while such other persons are on campus property or at a campus function.
  (2) The term "campus property" includes:
    a) real or personal property in the possession of, or under the control of, the Board of Trustees of The California State University, and
    b) all campus feeding, retail or residence facilities whether operated by a campus or by a campus auxiliary organization.
  (3) The term "deadly weapons" includes any instrument or weapon of the kind commonly known as a blackjack, slingshot, billy, sandclub, sandbag, metal knuckles; any dirk, dagger, switchblade knife, pistol, revolver, or any other firearm; any knife having a blade longer than five inches; any razor with an unguarded blade, and any metal pipe or bar used or intended to be used as a club.
  (4) The term "behavior" includes conduct and expression.
  (5) The term "hazing" means any method of initiation into a student organization or any pastime or amusement engaged in with regard to such an organization which causes, or is likely to cause, bodily danger or physical or emotional harm to any member of the campus community; but the term "hazing" does not include customary athletic events or other similar contests or competitions.
(o) This Section is not adopted pursuant to Education Code Section 89031.
(p) Notwithstanding any amendment or repeal pursuant to the resolution by which any provision of this Article is amended, all acts and omissions occurring prior to that effective date shall be subject to the provisions of this Article as in effect immediately prior to such effective date.

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

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

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

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

41303. Conduct by Applicants for Admission.

Notwithstanding any provision in this Chapter 1 to the contrary, admission or readmission may be qualified or denied to any person who, while not enrolled as a student, commits acts which, were he enrolled as a student, would be the basis for disciplinary proceedings pursuant to Sections 41301 or 41302. Admission or readmission may be qualified or denied to any person who, while a student commits acts which are subject to disciplinary action pursuant to Section 41301 or Section 41302. Qualified admission or denial of admission in such cases shall be determined under procedures adopted pursuant to Section 41304.

41304. Student Disciplinary Procedures for The California State University.

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

Student Grievances

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

Plagiarism

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

(1) when prior work of another has been demonstrated as the accessible source; (2) when substantial or material parts of the source have been literally or evasively appropriated (substance denoting quantity; matter denoting qualitative format or style); and (3) when the work lacks sufficient or unequivocal citation so as to indicate or imply that the work was neither a copy nor an imitation. This definition comprises oral, written, and crafted pieces. In short, if one purports to present an original piece but copies ideas word for word or by paraphrase, those ideas should be duly noted.

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

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.

Graduation Requirements

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

Graduation Requirements for the Bachelor's Degree

The requirements in this "Graduation Requirements" section of the catalog are those requirements which the University will make every effort to preserve for students subject to this catalog according to the provisions enumerated below. All other parts of the catalog are subject to change from year to year as University rules, policies, and curricula change. It is the students' responsibility to keep informed of such changes; failure to do so will not exempt students from whatever penalties they may incur.

The requirements appearing in this catalog are applicable to students under the following circumstances:

1. Students may remain with the graduation requirements in effect during the academic year in which they entered SDSU, another campus in the CSU system, or a California community college, so long as they have remained in attendance at least one semester or two quarters within a calendar year in either the CSU or community college system. Absence due to an approved educational leave or for attendance at another regionally accredited institution of higher learning shall not be considered an interruption in attendance if the absence does not exceed two years. If students change or declare their majors in subsequent years, however, they must adopt the major and minor requirements in effect at the time of such change or declaration. They may continue with the earlier catalog only with regard to General Education and other graduation requirements.

Students who are disqualified from San Diego State University and not immediately reinstated 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 1988, May 1989, or in the 1989 summer sessions may adopt this catalog by so indicating on their application for graduation.

Applications for graduation are available in the Office of Admissions and Records, Administration Bldg., Room 127. Deadlines by which applications must be received in the Office of Admissions and Records are published each year in the fall semester ***Class Schedule.***

The declaration of a major can occur in either of two ways: (a) by entering it on an ***Application for Admission-Readmission,*** or (b) by obtaining and filing a ***Change or Declaration of Major*** form at the Office of Admissions and Records, Administration Bldg., Room 127. Majors which require a master plan may require that the master plan be filed before considering the change of major to be official. Students are advised to check with appropriate departments if they wish to declare an impacted major.

I. Competency Requirements: Writing and Mathematics

Competency in standard written English and in basic mathematics is essential to successful university study. All students pursuing a baccalaureate degree must satisfy two writing requirements and two mathematics requirements:

1. the CSU English Placement Test requirement
2. the SDSU Writing Competency requirement
3. the CSU Entry-Level Mathematics Examination requirement
4. the SDSU Mathematics Competency requirement

These requirements ***must be satisfied*** BEFORE students may enroll in baccalaureate level writing, mathematics, statistics, and selected economics, health science, and telecommunications courses.

Failure to ***verify*** an exemption from or to ***take*** the appropriate examinations in writing and mathematics ***within two semesters*** of attendance at SDSU will result in the withholding of registration privileges for a third semester. Failure to ***verify*** an exemption from or to ***pass*** the appropriate examinations ***within four semesters*** will result in the withholding of registration privileges for future semesters. All requirements ***must be satisfied*** prior to a student's graduation.

All courses for which fulfillment of writing and/or mathematics requirements is an enforced prerequisite are listed in the "Prerequisite Enforcement and Provisional Enrollment" section of the Class Schedule.

Students enrolled at the Imperial Valley Campus of SDSU must satisfy the SDSU Writing Competency requirement and the SDSU Mathematics Competency requirement by the beginning of their second semester at SDSU Imperial Valley Campus. If these requirements are not satisfied, students must then register and attempt to pass the appropriate Academic Skills courses.

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 92A, 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 Academic Skills courses ***within four semesters*** or by being enrolled in the appropriate Academic Skills courses during the fourth semester will result in the withholding of registration privileges for future semesters.

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

1. CSU English Placement Test (EPT) requirement.*

Students must satisfy the CSU English Placement Test (EPT) Test by one of the following methods:

a. Completion of the CSU English Placement Test (EPT) at SDSU or at another CSU campus.
b. Completion before matriculation at SDSU of an acceptable college course in English composition of three semester or four quarter units with a grade of C or better.
c. Score of 470 or above on the Verbal section of the Scholastic Aptitude Test (SAT).
d. Score of 22 or above on the English Usage section of the American College Test (ACT).
e. Score on the CSU English Equivalency Examination (EEE) that qualifies a student for exemption from the English Placement Test.
f. Score of 3 or above on the English Composition Examination of The College Board Advanced Placement Program (AP).
g. Score of 600 or above on The College Board Achievement Test in English Composition with Essay (ES).

* Undergraduates who are admitted with 56 or more transferable semester units, and who are subject to a campus catalog earlier than 1986-87 are not required to complete the EPT.

2. 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. Satisfactory score on the SDSU Writing Competency Test.
c. Score of 470 or above on the Verbal section of the Scholastic Aptitude Test (SAT).**
d. Score of 22 or above on the English Usage section of the American College Test (ACT).**
e. Satisfactory score on the CSU English Equivalency Examination (EEE).
f. A score of 3 or above on the English Composition Examination of The College Board Advanced Placement Program (AP).
g. A score of 600 or above on The College Board Achievement Test in English Composition with Essay (ES).
h. Credit for Academic Skills 92A or 92B at SDSU.

Students may attempt the Writing Competency Test twice; after two unsuccessful attempts, students must make a substantial effort to improve their writing skills (for example, by taking Academic Skills 92A) before being allowed a third attempt.

Students who fail to pass the SDSU Writing Competency Test or who wish to take a course to prepare themselves for the examination may take Academic Skills 92A within two semesters of admission. The final examination in the course is a competency examination. Students who do not score at an adequate level on that examination may advance to Academic Skills 92B, which also uses a competency examination as a final examination. A grade of Cr (Credit) in Academic Skills 92B will satisfy the SDSU Writing Competency requirement. Credit earned in Academic Skills 92A and 92B is not applicable to the baccalaureate degree.

MATHEMATICS REQUIREMENTS

All students ***must satisfy*** both the CSU Entry-Level Mathematics Examination and the SDSU Mathematics Competency requirement ***before*** enrolling in selected economics and health science courses.

Students ***must satisfy*** both the CSU Entry-Level Mathematics Examination and the appropriate part(s) of the SDSU Mathematics Departmental Placement Examination ***before*** enrolling in baccalaureate level mathematics and statistics courses.

Furthermore, failure to ***attempt*** the CSU Entry-Level Mathematics Examination and the appropriate part of the SDSU Mathematics Departmental Placement Examination, or to register in Academic Skills 90A, 90B, or 91, 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*** or by being enrolled in the appropriate Academic Skills courses during the fourth semester will result in the withholding of registration privileges for future semesters.

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

1. CSU Entry-Level Mathematics Examination (ELM) requirement.

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

a. A scaled score of 480 or above on the CSU Entry-Level Mathematics Examination (ELM) taken at SDSU or at another CSU campus.****
b. Completion before matriculation at SDSU of an approved General Education mathematics transfer course of three semester or four quarter units above the level of Intermediate Algebra with a grade of C or better.
c. Score of 530 or above on the Mathematics section of the Scholastic Aptitude Test (SAT).
d. Score of 23 or above on the Mathematics section of the American College Test (ACT).
e. Score of 3 or above on The College Board Advanced Placement Test (AP) in Mathematics, level AB or BC.
f. Score of 520 or above on The College Board Mathematics Achievement Test, Level 1.
g. Score of 540 or above on The College Board Mathematics Achievement Test, Level 2.
h. Continuous attendance at a California community college or CSU campus prior to summer 1983 until the present.

Students who fail to pass the CSU Entry-Level Mathematics Examination or who wish to take a course to prepare themselves for the examination may take Academic Skills 90A; however, credit for the course does not satisfy the requirement. All students subject to the ELM must pass the examination.

2. SDSU Mathematics Competency requirement.***

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

a. A scaled score of 480 or above on the CSU Entry-Level Mathematics Examination (ELM).****
b. Satisfactory score on any section of the SDSU Mathematics Departmental Placement Examination.
c. Score of 530 or above on the Mathematics section of the Scholastic Aptitude Test (SAT).**
d. Score of 23 or above on the Mathematics section of the American College Test (ACT).**
e. Score of 3 or above on The College Board Advanced Placement Test (AP) in Mathematics, level AB or BC.
f. Score of 520 or above on The College Board Mathematics Achievement Test, Level 1.
g. Score of 540 or above on The College Board Mathematics Achievement Test, Level 2.
h. 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.
i. Credit for Academic Skills 90A, 90B, or 91 at SDSU.

3. Mathematics Departmental Placement Examination requirement.

Satisfaction of the CSU 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, statistics, sciences, and many other academic disciplines. Therefore, students who wish to enroll in any mathematics or statistics courses must pass the appropriate part of the Mathematics Departmental Placement Examination which assesses mathematical ability beyond the elementary level: Part I tests knowledge of intermediate algebra; Part II tests knowledge of college algebra; Part III tests knowledge of trigonometry. Students may attempt any part of the Mathematics Departmental Placement Examination three times. After three unsuccessful attempts, students must make a substantial effort to improve their mathematical skills (for example, by taking a course — SDSU Academic Skills 91 for Part I, SDSU Mathematics 140 for

** These scores are appropriate only to those students who satisfy the requirement upon matriculation in this catalog year or who take the examinations during this catalog year.
*** Exemption from the English Placement Test does not automatically satisfy the Writing Competency requirement.
**** A score of 480 for the ELM taken July 1987 and later is equivalent to a 38 for the ELM taken before July 1987.
***** Exemption from the Entry-Level Mathematics Examination does not automatically satisfy the Mathematics Competency Requirement.

Part II, and SDSU Mathematics 104 for Part III). Equivalent transfer courses will award credit but will not grant exemptions from any part of the Placement Examination.

II. Upper Division Writing Requirement

All students must demonstrate competency in writing skills as mandated by the major and included in each major description.

Before attempting to satisfy this requirement, students must:

1. Have completed or be completing 60 units;
2. Have fulfilled the Writing Competency requirement; and
3. Have completed the General Education Communication and Analytical Reasoning requirement in Written Communication.

Failure to complete these prerequisites precludes satisfying the requirement by any means. Proof of completion of prerequisites is required for enrollment in courses listed below.

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

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

Anthropology 396W	Info and Dec Sys 396W
Commun Disorders 396W	Info and Dec Sys 490W
English 304W	Linguistics 305W
English 305W	Linguistics 396W
English 306W	Mex Amer Studies 396W
English 500W	Recreation 396W
English 508W	Religious Studies 396W
English 581W	Sociology 396W
English 582W	Teacher Education 396W
History 430W	

(**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 courses offered for resident credit during Summer Sessions and Winter Session, are not applicable to the residency 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 the major department or 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. Courses graded credit (Cr) may not be used to fulfill upper division requirements in the major except for those courses identified in the course listing as graded Cr/NC.

A student may wish to major in two departments. If so, the requirements for both majors must be satisfied. Units for courses which could satisfy the requirements in both majors can be counted only once. Only one diploma will be granted but the diploma and transcript will note the completion of each major.

A student may earn two majors in one department only where the specific combinations of majors are authorized in the catalog. All requirements for both majors must be satisfied; units for courses which could satisfy requirements in both majors can be counted only once. In most cases, students pursuing two majors in one department will be required to file with the Evaluations Office a master plan approved by the major department.

Time Limit on Completion of Requirements for the Major. As authorized by Title 5, California Administrative Code, Section 40401, departments may require that specific academic requirements be met within seven years of granting an undergraduate degree. Such requirements will consist of advanced courses and examinations in areas of knowledge changing so rapidly that information may be obsolete after seven years. In those cases in which a student is required to repeat a course taken more than seven years previously, only the last grade will be used in computation of grade point averages.

C. Minor. Completion of a minor is necessary if required by the major, the decision otherwise to have, or not to have, a minor is left with the student. Like the major, the minor offers an integrated and coherent pattern of coursework, combining lower and upper division coursework in proportions appropriate to the various disciplines. The minor shall consist of 15-24 units of which at least six upper division units must be completed at SDSU. The minimum grade point average for awarding a minor at the time of graduation is 2.0 (C) or better in all units applicable toward a minor, including those accepted by transfer from another institution. Courses graded credit (Cr) may not be used to fulfill upper division requirements in the minor except for those courses identified in the course listing as graded Cr/NC. Courses numbered 296, 496, 596 may be applicable to the minor only with approval of the department chair. A summary list of all minors appears at the close of this chapter; the full statement of requirements for each minor can be found through the Index. Because special prerequisites must be met to qualify for certain minors, checking with the minor department before taking courses is advised. Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and General Education requirements. Declaration of a minor occurs by obtaining and filing a Declaration of Major or Minor form at the Office of Admissions and Records, AD-127.

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-Amer Studies 170A-170B	Political Sci 101 and 320
History 110A-110B	Political Sci 102 and 305
History 110A-310B	Political Sci 102 and 321
History 115A-115B	Political Sci 102 and 522
History 310A-310B	Political Sci 305 and 320
History 310A-110B	Political Sci 305 and 321
History 410A-410B	Political Sci 305 and 522
History 547A-547B	Political Sci 320 and 321
Mex Amer Studies 120A-120B	Political Sci 320 and 522
Mex Amer Studies 141A-141B	Women's Studies 341A-341B
Political Sci 101 and 102	

B. Examination and courses: By passing the California State and Local Government Test (1 hour) or coursework listed in B.3 AND completing coursework appropriate to the remaining two areas. Courses applicable to each area are listed below.

1. *American History, Institutions and Ideals:* All pairs of courses listed in IV.A above and History 537A-537B, 544A-544B, 545A-545B.
2. *United States Constitution:* 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.
3. *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 third-semester equivalent proficiency examination in one foreign language;
4. Graduating from high school (other than an American high school) in a non-English speaking country.

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

Students who are majoring in **art history, European studies, humanities, and linguistics** should also read the section on Foreign Language requirement under their respective majors for special conditions and limits pertaining to those majors.

Courses offered at San Diego State University which satisfy the Foreign Language requirement are:

Chinese 101, 202, and 303
Classics 101G, 202G, and 303G (Greek)
Classics 101L, 202L, and 303L (Latin)
French 100A, 100B, and 200A or 200B or 200C or 200D
German 100A, 100B, and 200A
Hebrew 101, 102, and 201
Italian 100A, 100B, and 200A or 200B
Japanese 101, 102, and 201
Portuguese 101, 301, and 302
Russian 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 where English is not the principal language and who have finished high school or the equivalent in that country will be considered to have satisfied the Foreign Language requirement and will not be given credit for taking lower division courses in their native language except with advance approval from the department.

B. The Bachelor of Music degree requires 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).

VI. Unit Requirements

A. Total unit requirement. The total number of units necessary for a bachelor's degree exclusive of Academic Skills 90A, 90B, 91, 92A, 92B, 93, 94, 95, 96, Aerospace Studies 92, 93A, 93B, 94A, 94B, Education 397, Educational Technology 97, English 90, and Speech Communication 90 is as follows:

1. Bachelor of Arts degree in Applied Arts and Sciences 124
2. Bachelor of Arts degree in Liberal Arts and Sciences 124
3. Bachelor of Science degree in Applied Arts and Sciences 128
- * 4. Bachelor of Science degree in Geological Sciences 132
5. Bachelor of Science degree in Engineering 133
6. Bachelor of Music degree 132
7. Bachelor of Vocational Education degree 124

The degree which applies to a particular student is determined by the student's choice of major. Each student should therefore consult the statement of his or her major to establish the applicable degree. The full statement of each major can be found by consulting the Index.

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

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

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

* 36 units required for students subject to 1980 and earlier General Education requirements.
* 60 units required for Finance and Financial Services majors.

C. Unit limit totals. The maximum number of special units accepted for a bachelor's degree is as follows:

1. From transferable community and junior college courses .. 70
2. From credit by examination 30
3. From extension, Open University, and correspondence courses 24
- * 4. From courses graded credit (Cr) 15
5. From topics courses numbered 296, 496, 596 9
6. From General Studies courses numbered 200 and 400 6

* Upper division courses in the major and minor must be taken for a letter grade unless they are offered only credit/no credit.

7. From Academic Skills 90A, 90B, 91, 92A, 92B, 93, 94, 95, 96, Aerospace Studies 92, 93A, 93B, 94A, 94B, Educational Technology 97, Education 397, English 90, Physical Education 497, and Speech Communication 90 0
8. From Academic Skills 296 3
9. From Aerospace Studies, Military Science, and Naval Science courses 24
10. From courses numbered 499 9
11. From Music 170-189, 370-389, 569-589 (for non-major and music major for B.A. degree with credential) 8
12. From Music 170-189, 370-389, 569-589 (for music major for B.A. degree) 9
13. From Music 170-189, 370-389, 569-589 (for music major for B.M. degree) 12

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 French, German, Russian, Spanish, and journalism. Students completing the single subject credential program in French, German, Russian, or Spanish may take a maximum of 52 units in the language department. Students majoring in journalism may not accumulate more than 30 units of credit in journalism courses. A minimum of 94 units of coursework applicable to the bachelor's degree in journalism must be completed outside the areas of journalism, film, broadcasting, television, photography, and mass communication.
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 ten business majors is 52 (40 percent of 128 units). In addition, the minimum number of units from departments outside of business administration and economics is likewise 52 (40 percent of 128 units).
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 Requirements

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.

C. If a minor is completed, a minimum of six upper division units in the minor.

D. At least nine units in General Education courses.

Note: Courses taken in extension, Open University, and units earned through credit-by-examination may not be applied to these requirements.

VIII. Grade Point Average Requirements

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

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.

D. An average based on all units applicable to a minor, if a minor is being completed for the degree.

Information on the computation of averages can be found in the chapter General Regulations under these headings: Grade Point Average, Grades, Incomplete Grade, and Repeated Course.

IX. General Education

The following describes the General Education requirements in effect on the SDSU campus as of the beginning of the fall semester 1982. Students who began college at another California State University or a California community college prior to the summer of 1982 and who have maintained continuous enrollment may meet General Education requirements as stated in the SDSU General Catalog from the year when such studies began.

Students entering SDSU in fall 1988 and (1) starting as first-semester freshmen; or (2) transferring from another college or university, having never been to a California community college or California state university; or (3) not having maintained continuous enrollment, must follow the General Education pattern described below.

California Community College and CSU Certified Transfer Students

Transfer students who are certified by California community colleges or other CSU campuses to have completed 39 state-mandated lower division General Education units as outlined in the *California Administrative Code,* **Title 5,** will be required to complete an additional nine upper division units after achieving upper division status (60 units) 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. If not included within the certification, at least one course within the nine units must be cross-cultural (indicated by *) and only one course may be counted from American Institutions.

Those transfer students who have completed upper division General Education courses on another CSU 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.

Students Subject to 1980-81 and Earlier General Education Requirements

Students subject to General Education Requirements which included Explorations in the Human Experience (prior to 1981-82 catalog) may complete a Human Experience theme as published in the appropriate catalog or may substitute the following for the Human Experience theme: A minimum of nine units of upper division courses selected from the Explorations courses listed in Part III of the General Education pattern described below, with at least one cross-cultural course (indicated by *) and no more than two courses from a single area (Natural Sciences, Social and Behavioral Sciences, Humanities).

Coursework 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. Coursework in a major (upper division courses).**
2. Mathematics 104, computer programming courses, and all Academic Skills courses.
3. Coursework in excess of 12 units in one department or academic unit.
4. Courses numbered 296, 496, or 596 (Topics).
5. Courses numbered 299, 499 (Special Study).

NOTE: Coursework completed in a minor or in preparation for the major may be used if such courses have been approved for General Education.

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. Coursework 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.

Specific Requirements

Students will complete a minimum of 49 units in General Education, to include a minimum of nine upper division (300-498) units which shall be taken **no sooner than the term in which the student achieves upper division status (completion of 60 units).**** At least nine units of General Education must be earned at San Diego State University. A maximum of 12 units may be used for General Education credit from any one department or academic unit, with no more than seven units from any one department or academic unit in the combined sections of Foundations and Explorations.

* 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.

I. COMMUNICATION AND ANALYTICAL REASONING

Courses taken to satisfy the Communication and Analytical Reasoning component 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.*

Coursework 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)

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'
- 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.

' 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.

Coursework 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 Biocultural 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)

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 110A. Energy in Nature with Laboratory (4)
Physics 103. Physics for Poets (3)
Physics 107. Introductory Physics with Laboratory (4)

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

a. Where coursework 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 with a declared major 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 coursework in these disciplines, the student may nevertheless receive General Education credit for courses taken in those disciplines.

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. Introduction to Language (3)
Political Science 103. Introduction to Comparative Government (3)
Psychology 101. Introductory Psychology (3)
Sociology 101. Introductory Sociology: The Study of Society (3)

C. Humanities. Nine units to include courses from three of the four areas listed below. Students should be aware that a course from the fourth area must be taken as part of the Explorations requirement.

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. Our Classical Heritage (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)

3. History

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

4. Philosophy and Religious Studies

Philosophy 101. Introduction to Philosophy: Values (3)
Philosophy 102. Introduction to Philosophy: Knowledge and Reality (3)
Philosophy 103. Historical Introduction to Philosophy (3)
Religious Studies 101. World Religions (3)
Religious Studies 102. Introduction to Religion (3)

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 component is called Explorations. There are in Explorations four sections of study—Natural Sciences, Social and Behavioral Sciences, Humanities, and American Institutions.

Coursework in Explorations. A minimum of 15 units, of which at least nine units must be upper division courses numbered 300-498 taken **no sooner than the term in which the student achieves upper division status** (completion of 60 units) and at least one course must be cross-cultural (indicated by *), distributed as follows:

1. One course from Section A. **Natural Sciences.**
2. One course from Section B. **Social and Behavioral Sciences.**
3. Two courses from Section C. **Humanities,** as follows:
   a. One course from the Humanities area of Explorations *not* selected in the Foundations component above (1. Literature; 2. Art, Classics, Drama, Humanities, and Music; 3. History; 4. Philosophy and Religious Studies); and
   b. One course from any Humanities area in the Explorations component below.
4. One course from Section 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. Students taking general education courses at San Diego State University must select courses from the following list; no substitutions will be approved.

+ Only one of these three courses may be taken for General Education credit.
% Students may not substitute History 305A for 105.
§ Students may not substitute History 305B for 106.

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 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 Animals and Plants (3)
Biology 330L. Natural History of Animals and Plants Laboratory (1)
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 361. Energy and Environment (3)
Biology 362. Plants, Medicines, and Drugs (3)
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 302. Fossils: Life Through Time (3)
Geological Sciences 303. Natural Disasters (3)
Mathematics 303. History of Mathematics (3)
Natural Science 305. Modern Physical Science (3)
Natural Science 315. History of Science I (3)
Natural Science 316. History of Science II (3)
Natural Science 317. Development of Scientific Thought (3)
Natural Science 333. Technology and Human Values (3)
Natural Science 431. The Origins of Life (3)
Oceanography 320. The Oceans (3)
Physics 204. Light, Vision, and Color (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 221. Afro-American Political Thought (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 321. Black Political Participation in America (3)
* Afro-American Studies 420. Afro-Americans and the Politics of Urban Education (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)
Education 350. Education in American Society (3)
General Studies 310. Our Global Future: Values for Survival (3)
General Studies 320. Nuclear War: Causes, Consequences, and Prevention (3)
General Studies 420. Handicapped Individuals in Society (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 371. Conservation of Natural Resources (3)
Gerontology 101. Introduction to Human Aging (3)
* Health Science 362. International Health (3)
Journalism 408. Mass Communication and Society (3)
* Latin American Studies 101. Latin American Heritage (3)
Linguistics 354. Language and Computers (3)
Linguistics 420. Linguistics and 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 303. Mexican American Community Studies (3)
* Mexican American Studies 320. Mexican American Life Styles (3)
* Mexican American Studies 355. The United States-Mexico International Border (3)
Political Science 301A. History of Western Political Thought (3)
Political Science 301B. History of Western Political Thought (3)
Political Science 302. Modern Political Thought (3)
Political Science 306. Democracy and Mass Society (3)
* Political Science 330. Women and Electoral Politics (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 370. Political Violence (3)
Psychology 330. Developmental Psychology (3)
Psychology 340. Social Psychology (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 150. Contemporary Social Problems (3)
Sociology 320. Sex/Gender Roles in American Society (3)
Sociology 335. Mass Communication and Popular Culture (3)
Sociology 338. Sociology of Religion (3)

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

Sociology 350. Population and Contemporary Issues (3)
* Sociology 355. Minority Group Relations (3)
Sociology 410. Social Psychology: Mind, Self, and Society (3)
Sociology 421. The American Family and Its Alternatives (3)
Sociology 430. Social Organization (3)
Sociology 450. Social Change (3)
* Speech Communication 475. Intercultural Communication (3)
* Women's Studies 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 375. Sex, Power, and US Politics (3)
* Women's Studies 485. Economics of Women and Work (3)

C. Humanities. One course from those listed below in the Humanities area ***not*** selected in the Foundations component above (1. Literature; 2. Art, Classics, Drama, Humanities, and Music; 3. History; 4. Philosophy and Religious Studies); and a second course from any one of the five Humanities areas in Explorations listed below.

1. Literature

* Afro-American Studies 260. Introduction to Afro-American Literature (3)
* Afro-American Studies 460. Black Images in Western Literature (3)
* Afro-American Studies 463. Black Literatures of the World (3)
* Afro-American Studies 464. Caribbean Literature (3)
* American Indian Studies 200. American Indian Literature (3)
* American Indian Studies 430. American Indian Poetry and Fiction (3)
‡ Chinese 303. Readings in Contemporary Chinese (4)
Chinese 304. Readings in Chinese (4)
‡ Classics 303G. Readings in Greek Prose (3)
‡ Classics 303L. Readings in Latin Prose (3)
Classics 304G. Readings in Greek Poetry (3)
Classics 304L. Readings in Latin Poetry (3)
Classics 320. Classical Literature (3)
Comparative Literature 405. The Bible as Literature (3) [Same course as English 405.]
* Comparative Literature 430. Asian Literature (3) (Maximum GE credit 3 units)
* 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)
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 200B. Reading French (3)
French 305A. Survey of French Literature (3)
French 305B. Survey of French Literature (3)
‡ German 200C. Literary German for Reading Comprehension (3)
Italian 305A. Italian Literature (3)
Italian 305B. Italian Literature (3)
* Mexican American Studies 335. Mexican American Literature (3)
* Mexican American Studies 380. US-Mexico Borderlands Folklore (3)
Russian 305A. Survey of Russian Literature (3)
Russian 305B. Survey of Russian Literature (3)
Spanish 305A. Survey Course in Spanish Literature (3)
Spanish 305B. Survey Course in Spanish Literature (3)
Spanish 306A. Survey of Spanish American Literature (3)
Spanish 306B. Survey of Spanish American Literature (3)
* Women's Studies 352. Women in Literature (3)

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

* Afro-American Studies 180. Afro-American Music (3)
* American Indian Studies 255. American Indian Music (3)
* Anthropology 422. Music and Culture (3)
* Art 158. Arts of Native America, Sub-Saharan Africa and Oceania (3)
* Art 263. Far Eastern Art (3)
Classics 330. Classical Drama (3)
Drama 460A. History of the Theatre (3)
Drama 460B. History of the Theatre (3)
French 421. French Civilization (3)
French 422. French Civilization (3)
Music 345. Music in Contemporary Life (3)
Music 351A. Musical Masterpieces of the Eighteenth and Nineteenth Centuries (3)
Music 351B. Musical Masterpieces of the Twentieth Century (3)
Music 351C. Masterpieces of Grand Opera (3)
Music 351D. Jazz History and Appreciation (3)
Spanish 440. Spanish Civilization (3)
Spanish 441. Spanish American Civilization (3)
Spanish 442. Mexican Civilization (3)
Telecommunications and Film 363. International Cinema (3) (Maximum GE credit 3 units)

3. History

* Afro-American Studies 470. Comparative History: Afro-American and African Heritage (3)
* Afro-American Studies 472. Slavery (3)
* American Indian Studies 440. American Indian History (3)
* Asian Studies 458. Asian Traditions (3)
* Asian Studies 459. Contemporary Asian Cultures (3)
Classics 340. Classical Civilization (3)
* History 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)
* History 422. Southeast Asian and Filipino Experience in America (3)
History 440. The Holocaust and Western Civilization (3)
History 442A. People Out of Our Past (3)
History 442B. People Out of Our Past (3)

* Cross-cultural course.

% May be used for General Education credit only by students who have not taken History 105.

§ 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 (AD 600-AD 1600) (3)
* History 473B. Middle Eastern History from the Rise of Islam to the Present (AD 1600-present) (3)
* History 475A. Africa (3)
* History 475B. Africa (3)
History 480. History of Corporations in the Modern World (3)
* Humanities 157. Arab-Islamic Culture and Civilization (3)
* Humanities 158. African Culture and Civilization (3)
Humanities 400. Civilization Through Travel/Study (1-3) (Maximum GE credit 3 units)
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)
Linguistics 410. History of English (3)
* Mexican American Studies 350A. Chicano History (3)
* Mexican American Studies 350B. Chicano History (3)
* Mexican American Studies 375. US/Mexico Border History (3)
* Mexican American Studies 376. Mexican American Culture and Thought (3)
* Women's Studies 205. Women in Western Civilization (3)
* Women's Studies 340. Women in Modern History (3)

4. Philosophy and Religious Studies

* American Indian Studies 470. Roots of Indian Tradition (3)
Anthropology 424. Primitive Religion (3)
Classics 310. Classical Mythology (3)
Philosophy 305. Classics of Western Philosophy (3)
Philosophy 310. Philosophy and Human Nature (3)
Philosophy 329. Social Ethics (3)
Philosophy 330. Medical Ethics (3)
Philosophy 333. Philosophy of Technology (3)
Philosophy 334. Philosophy of Literature (3)
* Philosophy 351. Chinese Philosophy (3)
Religious Studies 301. Hebrew Scriptures (3)
Religious Studies 305. The New Testament (3)
Religious Studies 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)
Religious Studies 363. Religion and the Sciences (3)
* Religious Studies 401. Religions of India (3)
* Religious Studies 403. Religions of the Far East (3)

5. Foreign Language

‡ Chinese 101. Elementary (4)
‡ Chinese 202. Elementary (4)
‡ Classics 101G. Elementary Greek I (5)
‡ Classics 101L. Elementary Latin I (5)
Classics 120. English from Latin and Greek (3)
‡ Classics 202G. Elementary Greek II (5)
‡ Classics 202L. Elementary Latin II (5)
‡ French 100A. Elementary (5)
‡ French 100B. Elementary (5)
‡ French 200C. Writing French (3)
‡ French 200D. The Grammar of Spoken French (3)
French 200E. Readings in Commercial French (3)
French 301. Advanced Grammar and Composition (3)
French 302. Advanced Grammar and Composition (3)
‡ German 100A. First Course in German (5)
‡ German 100B. Second Course in German (5)
‡ German 200B. Expository German for Reading Comprehension (3)
‡ German 202. Fourth Course in German (4)
German 211. Conversation (2) Cr/NC
German 212. Conversation (2) Cr/NC
German 301. Grammar and Composition (3)
German 302. Grammar and Composition (3)
‡ Hebrew 101. Elementary (4)
‡ Hebrew 102. Elementary (4)
‡ Italian 100A. Elementary (5)
‡ Italian 100B. Elementary (5)
‡ Italian 200A. Intermediate Grammar and Composition (3)
‡ Italian 200B. Reading and Speaking Italian (3)
Italian 301. Advanced Oral and Written Composition (3)
‡ Japanese 101. Elementary Japanese I (4)
‡ Japanese 102. Elementary Japanese II (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)
‡ 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)
‡ 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)
‡ Spanish 101. Elementary (4½)
‡ Spanish 102. Elementary (4½)
‡ Spanish 201. Intermediate (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)

D. American Institutions. No more than **three** units of American Institutions coursework 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-Amer Studies 170A-170B	Political Sci 101 and 320
History 110A-110B	Political Sci 102 and 305
History 110A-310B	Political Sci 102 and 321
History 115A-115B	Political Sci 102 and 522
History 310A-310B	Political Sci 305 and 320
History 310A-110B	Political Sci 305 and 321
History 410A-410B	Political Sci 305 and 522
History 547A-547B	Political Sci 320 and 321
Mex Amer Studies 120A-120B	Political Sci 320 and 522
Mex Amer Studies 141A-141B	Women's St 341A-341B
Political Sci 101 and 102	

* 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.

Application for Graduation

Graduation is not automatic upon 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 Office of Admissions and Records, AD-127. The Class Schedule each semester specifies the exact date. An application fee of $20.00, which is nonrefundable, is required.

The degree is granted upon completion of all requirements by the graduation date. Candidates for graduation are not eligible to register for terms subsequent to the graduation date unless an application for readmission as a postbaccalaureate student has been filed with the Office of Admissions and Records.

Students not completing requirements must cancel the current application at the earliest possible date, reapply for graduation during the appropriate filing period, and pay the $10 reapplication fee. Graduation requirements will be determined by the continuous enrollment regulations outlined in this catalog.

After the degree is granted **no** changes can be made to the undergraduate record.

Election of Regulations for Graduation

An undergraduate student remaining in attendance in regular session at any California State University campus, any California community college, or any combination of California community colleges and campuses of The California State University may, for purposes of meeting graduation requirements, elect to meet the requirements in effect at San Diego State University either at the time the student began such attendance or at the time of entrance to the campus or at the time of graduation. Substitutions for discontinued courses may be authorized or required by the proper authorities.

"Attendance" is defined here as attendance in at least one semester or two quarters within a calendar year. Absence due to an approved educational leave or for attendance at another accredited institution of higher learning shall not be considered an interruption in attendance if the absence does not exceed two years. When students change or declare their majors, they must adopt the requirements of the major and any minors in effect at that time.

Commencement

Commencement exercises are held once a year at the end of the spring semester for students who were graduated at mid-year, those graduating at the end of the spring semester, and undergraduate students who expect to complete requirements for graduation in the summer session. The President of the University, by the authority of the Trustees and on recommendation of the faculty, awards the degrees. Brochures giving details regarding the exercises are mailed to prospective participants in early May.

Curricula Summary

Summary of Curricula Offered

Majors	Applied Arts and Sciences		Liberal Arts and Sciences	Graduate Curricula		
	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	–	BS	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	–	–	–	–	MCP	–
Civil engineering	–	BS	–	–	MS	–
Classics	–	–	AB	–	–	–
Communicative disorders	AB	–	–	MA	–	–
Comparative literature	–	–	AB	–	–	–
Computer science	–	BS	–	–	MS	–
Counseling	–	–	–	–	MS	–
Criminal justice administration	–	BS	–	–	–	–
## Decision Systems	–	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	–	–
Geography	–	–	AB	MA	–	–
Geological sciences	–	BS	–	–	MS	–
German	–	–	AB	–	–	–
Health science	–	BS	–	–	–	–
History	–	–	AB	MA	–	–
Home economics	AB	–	–	–	MS	–
Humanities	–	–	AB	–	–	–
Human resources management	–	BS	–	–	–	–
Industrial arts	AB	–	–	MA	–	–
## Information systems	–	BS	–	–	–	–
Journalism	–	–	AB	–	–	–
Latin American studies	–	–	AB	MA	–	–
Liberal arts	–	–	–	MA	–	–
Liberal studies	AB	–	AB	–	–	–
Linguistics	–	–	AB	MA	–	–
## Management	–	BS	–	–	–	–
## Marketing	–	BS	–	–	–	–
Mass communication	–	–	–	–	MS	–
Mathematics	–	BS	AB	MA	–	–
Mechanical engineering	–	BS	–	–	MS	–
Mexican American studies	–	–	AB	–	–	–
Microbiology	–	BS	AB	–	MS	–
Music	AB	BM	–	MA	MM	–
Nursing	–	BS	–	–	MS	–
Nutritional sciences	–	–	–	–	MS	–
Philosophy	–	–	AB	MA	–	–
Physical education	AB	–	AB	MA	–	–
Physical science	AB	–	–	–	–	–
Physics	–	BS	AB	MA	MS	–
Political science	–	–	AB	MA	–	–
Production and operations management	–	BS	–	–	–	–
Psychology	–	–	AB	MA	MS	PhD
Public administration	AB	–	–	–	MPA	–
Public health	–	–	–	–	MPH	–
Public history	–	–	–	MA	–	–
Radiological health physics	–	–	–	–	MS	–
Radio-television	AB	BS	–	MA	–	–
## Real estate	–	BS	–	–	–	–
Recreation administration	AB	–	–	–	–	–
Rehabilitation counseling	–	–	–	–	MS	–

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

Summary of Curricula Offered — *continued*

Majors	Applied Arts and Sciences		Liberal Arts and Sciences	Graduate Curricula		
	AB	BS	AB	MA, MFA	MS	PhD
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	–	–	–

Emphases, Options, and Concentrations

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

BACCALAUREATE MAJORS

Art (AB, Liberal Arts and Sciences)
Emphases:
art history
studio arts

Art (AB, Applied Arts and Sciences)
Emphases:
applied design
environmental design
graphic design
interior design
painting and printmaking
sculpture

Biology (BS, Applied Arts and Sciences)
Emphasis:
entomology

Chemistry (BS, Applied Arts and Sciences)
Emphasis:
biochemistry

Classics (AB, Liberal Arts and Sciences)
Concentrations:
classical humanities
Greek
Latin
Greek and Latin

Drama (AB, Applied Arts and Sciences)
Emphases:
acting
children's drama
design for drama
design for television
directing

Geological Sciences
(BS, Applied Arts and Sciences)
Emphases:
engineering geology
geochemistry
geology
geophysics
hydrogeology
marine geology
paleontology

Health Science (BS, Applied Arts and Sciences)
Emphasis:
community health education

Journalism (AB, Liberal Arts and Sciences)
Emphases:
advertising
news-editorial
photojournalism
public relations
radio-TV news

Liberal Studies (AB, Applied Arts and Sciences)
Option 1
Option 2
Option 3

Mathematics (BS, Applied Arts and Sciences)
Emphases:
applied mathematics
computer science
statistics

Physical Education
(AB, Applied Arts and Sciences)
Emphases:
athletic training
dance

Public Administration
(AB, Applied Arts and Sciences)
Emphasis:
city planning

Recreation Administration
(AB, Applied Arts and Sciences)
Emphases:
outdoor recreation
recreation systems management
recreation therapy

Social Science (AB, Liberal Arts and Sciences)
Emphases:
Africa and the Middle East
environment

GRADUATE MAJORS

Art (MA)
Emphases:
studio arts
art history

Biology (MA or MS)
Concentrations:
ecology
entomology
genetics and developmental biology
molecular biology
physiology
plant sciences
systematics and evolutionary biology

Business Administration (MS)
Concentrations:
finance
financial services and tax planning
human resources management
information systems
international business management
management science
marketing
production and operations management
real estate

Communicative Disorders (MA)
Concentrations:
speech-language pathology audiology
education of the hearing impaired
communicative sciences

Drama (MFA)
Emphases:
design and technical theatre
musical theatre

Education (MA)
Concentrations:
administration and supervision
community college curriculum and instruction
counseling
educational research
educational technology
elementary curriculum and instruction
policy studies in language and cross-cultural education
reading education
secondary curriculum and instruction
special education

Geography (MA)
Concentrations:
conservation of environmental quality
transportation

Nursing (MS)
Concentrations:
community health nursing
critical care nurse specialist
nursing systems administration

Psychology (MS)
Concentratons:
clinical psychology
industrial and organizational psychology

Public Administration (MPA)
Concentrations:
city planning
criminal justice administration
public telecommunications administration

Public Health (MPH)
Concentrations:
environmental health
occupational health
epidemiology
maternal and child health
health services administration
health promotion

Credentials Offered

Teaching Credentials

- Adapted physical education
- Community college
- Multiple subject
- Single subject

Specialist Credentials

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

Service Credentials

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

Minors for the Bachelor's Degree

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

Special Curricula

Preprofessional Curricula

- Predental
- Prelegal
- Premedical
- Preveterinary

Medical Technology

Military Curricula

- Aerospace studies (AFROTC)
- Military science (ROTC)
- Naval science (NROTC)

Certificate Programs (nondegree)

Certificate in accounting
Certificate in applied linguistics and English as a second language (ESL)
Certificate in art (Imperial Valley campus only)
Certificate in bilingual (Spanish) special education
Certificate in business administration (Imperial Valley campus only)
Certificate in children's literature
Certificate in creative writing (advanced)
Certificate in family life education
Certificate in geographic information systems
Certificate in human services paraprofessional
Certificate in instructional microcomputer software design
Certificate in instructional technology
Certificate in introductory mathematics
Certificate in language development specialist
Certificate in personal financial planning
Certificate in preventive medicine residency
Certificate in professional services bilingual/bicultural
Certificate in public administration (Imperial Valley Campus only)
Certificate in public history
Certificate in quantitative analysis in the social sciences
Certificate in recombinant DNA technology
Certificate in single subject mathematics
Certificate in Spanish court interpreting (Imperial Valley campus only)
Certificate in Spanish translation
Certificate in supported employment and transition specialist
Certificate in teaching the emotionally disturbed
Certificate in technical and scientific writing
Certificate in United States-Mexico border studies

The following programs are available through Extension only.

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

Courses and Curricula

Courses and Curricula

Course Numbering

Courses numbered 80 through 99 are nonbaccalaureate level and are not acceptable for a bachelor's degree or General Education; those numbered 100 through 299 are in the lower division (freshman and sophomore years); those numbered 300 through 499 are in the upper division (junior and senior years) and intended for undergraduates; those numbered 500 through 599 are in the upper division and are also acceptable for advanced degrees when taken by students admitted to graduate standing; those numbered 600 through 799 are strictly graduate courses; and those numbered 800 through 899 are doctoral courses.

Courses numbered X-01 through X-79 and X-397 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-79 and X-397 are designated as upper division. It is the prerogative of the academic department/college to determine if X-01 through X-79 and X-397 level courses are applicable to a major, a minor, or toward specified electives. The X-01 through X-79 and X-397 level courses are offered in conjunction with certificate programs only. Courses at the X-01 through X-79 and X-397 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-79 and X-397 level courses offered in any certificate program toward their proposed course of study.

The Unit or Credit Hour

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

Prerequisites for Undergraduate Courses

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

Prerequisites will be enforced in all sections of courses listed in the Prerequisite Enforcement and Provisional Enrollment section of the current Class Schedule and Information Handbook. Enrollment will depend on the student's verification of completion of prerequisites.

Semester in Which Courses Are Offered

In the listing of courses that follows, Roman numeral I indicates a course offered in the fall semester. Roman numeral II indicates a course offered in the spring semester. An "S" indicates a course offered in the summer.

Following the course title are designations of credit and the semester in which the course is offered. Examples:

(3) I ..... Three units. Offered in fall semester.
(3) II ..... Three units. Offered in spring semester.
(3-3) ..... Three units each semester. Year course normally beginning in fall semester.
(3-3) I, II..... Three units each semester. Year course beginning either semester.

Although the University fully expects to carry out the arrangements planned in the list of courses, it reserves the right to make changes. Classes in which the enrollment does not come up to the minimum number set by the Trustees of The California State University may not be offered or may be postponed.

Common Courses

Experimental or Selected Studies or Topics or Workshop Courses (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 (299, 499, 599)

These courses provide opportunity for individual study of a subject not offered in the regular curriculum. The student does this outside of the classroom and must secure the consent of an instructor to supervise the study *before* registering for the course. The student should discuss the topic with the instructor and come to an understanding on the amount of time to be devoted to the topic, the credit to be earned, and the mode of investigation and report to be used. As with regular courses, the expectation is that the student will devote three hours per week to the subject for each unit of credit. A maximum combined credit of nine units of 299, 499, and 599 is applicable to a bachelor's degree.

A 499 or 599 number cannot be used to offer lower division coursework. Also, 299, 499, and 599 cannot be used to extend internships, to award academic credit in place of pay, for work experience, or for class-sized groups.

Credit/No Credit Courses

Courses which are offered for credit/no credit are indicated by the symbols Cr/NC in the course title.

Academic Skills

In the College of Arts and Letters

Faculty

Emeritus: MacDonald
Chair: Basile
Professors: Basile, Johns
Associate Professors: Denman, Sweedler-Brown
Lecturers: Agatucci, Allister, Anderson, Brown, Dolansky, Duran, Enright, Friberg, Greco, Gregg, Johnson, M., Johnson, P., Keesey, Miller, Morgan, Nower, Smith, Williams

Offered by the Academic Skills Center

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

Academic Skills Center

The principal role of the Academic Skills Center is to prepare students to satisfy San Diego State University's competency requirements in basic mathematics and written English. Passing the final examination for Academic Skills 90A or 90B with a minimum score of 20 satisfies the SDSU Mathematics Competency requirement. Credit in Academic Skills 91 satisfies the SDSU Mathematics Departmental Placement Examination, Part I, requirement necessary for students enrolling in designated mathematics, statistics, and political science courses. Attaining a minimum score of 8 on the Writing Proficiency Test, the final examination in the academic skills writing courses (92A, 92B, 94, 95), satisfies the SDSU Writing Competency requirement. For more information on the writing and mathematics competency requirements, refer to the "Graduation Requirements" section of this catalog.

In addition to the competency classes, the Academic Skills Center offers one-, two-, and three-unit reading improvement and study skills classes which are open to all students.

The units awarded a student who earns a grade of "Credit" in an academic skills course (with the exception of Academic Skills 296) are not applicable to the baccalaureate degree.

Courses

LOWER DIVISION COURSES

Academic skills courses may not be used to satisfy general education requirements and no more than three units of 296 may be applied towards a bachelor's degree.

90A. Fundamentals of Mathematics (3) I, II S Cr/NC/SP

Three hours of lecture per week. Two hours of lecture and two hours of activity per week for students enrolled in the Intensive Learning Experience.

Prerequisite: Academic Skills 90A is prerequisite to 90B.

Designed to satisfy the SDSU Mathematics Competency requirement and to prepare students for the CSU Entry-Level Mathematics Examination (ELM). Review of arithmetic and elementary algebra; topics from geometry covered in adjunct workshops. The final examination is the SDSU Mathematics Departmental Placement Examination, Part C. Students attaining a score of 20 or better on the final examination earn "Credit" in the course and satisfy the Mathematics Competency requirement. Students attaining scores of 15 to 19 points earn "SP" (satisfactory progress) but do not satisfy the Mathematics Competency requirement and should enroll in Academic Skills 90B. Students attaining scores of 14 or lower receive "No Credit" and should repeat Academic Skills 90A. (Formerly numbered Academic Skills 102 and 102A.)

90B. Basic Algebra Review (3) I, II, S Cr/NC

Three hours of lecture per week. Two hours of lecture and two hours of activity per week for students enrolled in the Intensive Learning Experience.

Prerequisite: "SP" (satisfactory progress) in Academic Skills 90A.

Designed for students who have attained "SP" (satisfactory progress) in Academic Skills 90A but have not satisfied the CSU Entry-Level Mathematics Examination (ELM) or SDSU Mathematics Competency requirement. Topics covered include elementary algebra with a brief review of arithmetic and topics from geometry. Prepares students for the CSU Entry-Level Mathematics Examination (ELM), but does not satisfy the ELM requirement. Course final examination is the SDSU Mathematics Departmental Placement Examination, Part C; a score of 20 or better on the final examination gives "Credit" and satisfies the Mathematics Competency requirement. (Formerly numbered Academic Skills 102 and 102B.)

91. Intermediate Algebra (3) I, II, S Cr/NC

Prerequisite: Satisfaction of the CSU Entry-Level Mathematics Examination (ELM) or SDSU Mathematics Competency requirement.

Designed to prepare students for the Mathematics Departmental Placement Examination, Part I, which is given as the final examination for the course. A review of intermediate algebra skills. Topics include rational and radical expressions, quadratic equations, set and function notations, logarithms, and complex numbers. Credit in Academic Skills 91 satisfies the Mathematics Departmental Placement Examination, Part I, requirement. (Formerly numbered Academic Skills 103.)

92A. Writing Development: Fundamentals of Writing (3) I, II, S Cr/NC/SP

Academic prose, emphasizing the purpose, structure, and style of academic essays. Designed to improve student skills in planning, drafting, revising, and editing essays. Open to students who have not satisfied the Writing Competency requirement. Students who do not meet the Writing Competency requirement may receive an "SP" (satisfactory progress) grade. Credit in Academic Skills 92A satisfies the SDSU Writing Competency requirement. Students not passing the final examination should enroll in Academic Skills 92B. (Formerly numbered Academic Skills 100 and 110.)

92B. Writing Development: Intermediate (3) I, II, S Cr/NC

Prerequisite: Open to students who have earned "SP" (satisfactory progress) in Academic Skills 92A but have not satisfied the Writing Competency requirement.

Individualized instruction in intermediate writing skills. Credit in Academic Skills 92B satisifes the SDSU Writing Competency requirement. (Formerly numbered Academic Skills 150.)

93. 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 is not applicable to a bachelor's degree. (Formerly numbered Academic Skills 111.)

94. 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 95. Credit earned in this course is not applicable to a bachelor's degree. (Formerly numbered Academic Skills 132.)

95. 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 is not applicable to a bachelor's degree. (Formerly numbered Academic Skills 133.)

96. Mini-Course: Selected Topics (1) Cr/NC

Assorted short courses which will meet three hours a week for five weeks and will cover a variety of academic skills through intensive lectures and laboratory work.

Suggested topics: Research paper, communication skills, research tools, vocabulary development, learning skills, spelling, grammar, and speed reading. See Class Schedule for specific content. Credit earned in courses from this series is not applicable to a bachelor's degree. (Formerly numbered Academic Skills 141.)

A. Speed Reading
D. Learning Skills
E. Grammar
F. Research Paper
G. Communication Skills
H. Research Tools.

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: Lutes
Professor: Lutes
Assistant Professors: Borja, Carbajal, Douglas

Offered by the Department

AFROTC curriculum.
Minor in aerospace studies.

AFROTC Curriculum

The department offers a four- or two-year Air Force Reserve Officers/Training Corps program designed to develop officers who have broad understanding and high growth potential. For qualified students, two- to four-year scholarships are available in certain areas on a competitive basis. Scholarships pay full tuition and various laboratory, textbook, and incidental fees plus a monthly nontaxable $100 allowance during the school year. Cadets participate in dialogues, problem solving, and other planning activities designed to develop leaders and managers. All coursework is done on campus with the exception of field trips and the Field Training Unit conducted at military bases.

Either a four- or six-week Field Training camp is required for all students during the summer between the sophomore and junior years. The four-week camp is for students who have completed all AFROTC lower division courses with a grade of "C" or better in each course and for those with prior military service. Field training emphasizes military orientation for the junior officer and aircraft and aircrew familiarization. Cadets receive physical training and participate in competitive sports. They observe selected Air Force units perform everyday operations and are trained in drill and ceremonies, preparation for inspections, and the use of weapons. 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 after graduation. Other graduates go on active duty in a specialty consistent with their academic major, their desires, and existing Air Force needs. Graduates may request a delay from entry on active duty to continue their education or may apply for Air Force sponsored graduate study to begin immediately upon entry on active duty.

Applying for the Program

SDSU students enroll in aerospace classes by signing up for courses in the same manner as other university classes. There is no advance application needed for the freshman or sophomore (AS 100/200) classes. However, a three- to four-day orientation program, held just prior to the start of the fall term, is recommended and designed to give new cadets a broad, realistic introduction to Air Force officer training and provide them with helpful, important information on meeting academic requirements. Contact the Aerospace Studies Department as early as possible for additional information and sign-up procedures. The last two years of 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 (AFOQT), a physical examination, and a personal interview. Students from other institutions in the San Diego area are eligible to take AFROTC and should check with the department to obtain enrollment procedures. Veterans who can be commissioned by age 35 are also eligible for the program. All AS 100/200 students should take the AFOQT by no later than the end of their first semester in AFROTC.

Aerospace Studies Minor

The minor in aerospace studies consists of a minimum of fifteen units in aerospace studies, nine of which must be upper division.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

92. Leadership Laboratory (1) I, II Cr/NC

Prerequisite for AFROTC cadets: Concurrent registration in Aerospace Studies 100A or 100B or 200A or 200B.

Designed to prepare junior cadets for positions as leaders and managers of the cadet corps and a commission in the US Air Force. Application of principles of motivation, time management, organizational behavior, and participative group management in solving problems. Maximum credit four units. Credit earned in this course not applicable to a bachelor's degree. (Formerly numbered Aerospace Studies 250.)

93A-93B. Leadership Laboratory (1-1) I, II Cr/NC

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. Credit earned in this course not applicable to a bachelor's degree. (Formerly numbered Aerospace Studies 350A-350B.)

94A-94B. Leadership Laboratory (1-1) I, II Cr/NC

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. Credit earned in this course not applicable to a bachelor's degree. (Formerly numbered Aerospace Studies 450A-450B.)

100A-100B. The Air Force Today (1-1) I, II

Prerequisite for AFROTC cadets: Concurrent registration in Aerospace Studies 92.

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 (1-1) I, II

Prerequisite for AFROTC cadets: Concurrent registration in Aerospace Studies 92.

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) S

Required for advanced cadets, military orientation and flight familiarization. Credit granted for six-week field training camp on basis of individual student application with approval of the Aerospace Studies department chair.

UPPER DIVISION COURSES

(Intended for successful AFROTC applicants or for those with special permission)

300A-300B. The Professional Officer (3-3)

Semester I: The Professional Officer: Leadership theory and practice. Semester II: Management principles and functions; problem solving; briefing for commissioned service.

400A-400B. National Security Forces in Contemporary American Society (3-3)

Semester I: Role of professional officer in democratic society; socialization within Armed Services; requisites for adequate national security forces. Semester II: Political, economic, and social constraints on national defense structure and impact of technological and international developments on defense policy making.

499. Special Study (1-3) I, II

Prerequisite: Consent of Aerospace Studies Department chair. Individual study. Maximum credit six units.

Afro-American Studies

In the College of Arts and Letters

Faculty

Chair: Scarborough
Professors: Chambers, Kornweibel
Associate Professors: Scarborough, Weber
Assistant Professors: Cornwell, Hayes

Offered by the Department

Major in Afro-American studies with the A.B. degree in liberal arts and sciences.

Minor in Afro-American studies.

The Major

Afro-American studies offers a broad, interdisciplinary program. The curriculum is designed to study a variety of subjects pertaining to the Afro-American experience. It is concerned with strengthening links between the needs of black students and the black community, and developing frameworks for social change and the struggle for black dignity. It seeks, in short, to provide a total educational experience of the Afro-American culture. The courses offered in Afro-American studies are available to anyone who is interested.

The major provides excellent preparation for the fields of law, government, foreign service, business administration, research, consulting, librarianship, counseling, program development, program design, program analysis, urbanology, and writing, to name a few, as well as the more traditional Afro-American studies profession of teaching.

Advising

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

Afro-American Studies Major

With the A.B. Degree in Liberal Arts and Sciences (Major Code: 22111)

All candidates for the degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

Preparation for the Major. Afro-American Studies 101, 170A or 170B, 180, 221, 232 or 250, 260, and three units selected from 102, 220, 230, 231, 286. (21 units.)

Foreign Language Requirement. Twelve units in a foreign language or demonstration of equivalent knowledge in a reading examination administered by the foreign language department concerned.

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 24 upper division units to include twelve units selected from one of the following areas and six units from each of the two remaining areas. Up to six units, with appropriate content, of 496 and 499 in any combination may be applied to an area of specialization with the approval of the department chair.

Sociology and Psychology: Afro-American Studies 330, 331, 360*, 445, 448, 451, 452, 453.

Humanities: Afro-American Studies 350 (3 units applicable to major), 363, 460, 461, 462, 463, 480, 485.

* Additional prerequisite required.

History and Political Science: Afro-American Studies 321, 332, 362, 380, 420, 470, 471A, 471B, 472.

Afro-American Studies Minor

The minor in Afro-American studies consists of a minimum of 18 units to include six units selected from the courses for preparation for the major, six units selected from one of the three areas of the major, and three units from each of the remaining areas.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

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: Satisfaction of the English Placement Test and Writing Competency requirements. (See the Graduation Requirements section of catalog.) Proof of completion of prerequisites required.

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 sociocultural variables in development of music.

185. Black Gospel Choir (1) I, II

Prerequisite: Audition by director.

Roots of Black choral music, performance practices, and styles. Vocal technique and technical aspects of choral singing. Public performances. Maximum credit two units applicable to a bachelor's degree.

200. Intermediate Expository Writing and Research Fundamentals (3) I, II

Prerequisites: Satisfaction of the English Placement Test and Writing Competency requirements; and Afro-American Studies 120 or English 100 or Linguistics 100 or Mexican American Studies 111B. PROOF OF COMPLETION OF 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.

221. Afro-American Political Thought (3) I
Major political ideas put forward by Afro-Americans in their struggle for social development and human rights to include slave resistance, emigration, nationalism, Pan-Africanism, socialism, conservatism, integration, cultural domination, alienation, double-consciousness, race/class theories.

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)

321. Black Political Participation in America (3) I
Prerequisites: Afro-American Studies 101 or 102 or 170A or 170B. Completion of the General Education requirement in Foundations, II.B. Social and Behavioral Sciences.
Afro-American political life and development in the United States. Interaction between Afro-Americans and various actors, institutions, processes, and policies of the American system of politics and governance.

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 functions of Black languages, verbal and nonverbal, in Afro-American life, and their profound impact on larger society. Also, a probe into issues concerning validity of Black English.

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.

420. Afro-Americans and the Politics of Urban Education (3)
Prerequisites: Afro-American Studies 101 or 102 or completion of the General Education requirement in Foundations, II.B. Social and Behavioral Sciences.
Struggle against Afro-American subordination and complexities, contradictions, and dilemmas of formulating and implementing quality education and equal opportunity policies. Interaction between politics and education during eras of machine, reform, and post-reform politics.

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.

462. The Harlem Renaissance (3) II
Prerequisite: Afro-American Studies 260.
Black literature of the 1920s from literary, historical, sociological and cultural perspectives.

463. Black Literatures of the World (3)
Prerequisite: Afro-American Studies 260 or completion of the General Education requirement in Foundations, II.C. Humanities.
Afro-American literature in context of world literatures by Blacks. Cross-cultural influences between Africa and the Americas.

464. Caribbean Literature (3)
Political, religious, and musical paradigms in writing from 1900 to present. Politico-religious movements and related art forms (Rastafarian Reggae, Dub Poetry).

470. Comparative History: Afro-American and African Heritage (3) 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; anti-slavery movements and Black nationalism; slavery's end and dawn of freedom.

471B. Twentieth Century Black History (3) II
History of social movements and institutions from 1890 to the present. Focus on both leadership and life of the masses.

472. Slavery (3) II
Prerequisite: Afro-American Studies 101 or 170A or History 100 or 105 or 110A or 115A.
Enslavement of Blacks in the new world contrasted to slavery in ancient and modern societies.

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.

485. Blacks in the Arts (3) I, II
Prerequisite: Afro-American Studies 101 or 102.
Academic and artistic perspectives on Black participation in and contributions to the creative and performing arts. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

496. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

499. Special Study (1-3) I, II
Prerequisite: Consent of instructor.
Individual study. Maximum credit six units.

American Indian Studies

In the College of Arts and Letters

Faculty

Chair: Trafzer
Professor: Trafzer
Associate Professor: Parker
Lecturers: McKanna, Whitehorse

Offered by American Indian Studies

Minor in American Indian studies.
Courses in American Indian studies.
Major work in American Indian studies is not offered.

The Minor

A minor in American Indian studies provides students with a liberal education which focuses on cultural diversity. Individuals will attain competency in a broad understanding of the human condition which will relate closely to the areas of public relations, cultural pluralism, and race relations. Students pursuing majors in mass media, politics, journalism, and education will find that a minor in American Indian studies opens a new spectrum of human understanding and critical analysis of professional life.

The American Indian studies program focuses on individual elements that comprise the native American cultures. Using literature, art, history and politics as touchstones, students come to understand the individual as well as tribal character of the Indian peoples. The academic area also draws comparisons between American Indian life and the life of other members of American society.

Career opportunities for graduates include jobs in business, education, government, politics, social sciences, and health and human services. Students have also found positions in programs for Indian tribes and reservations. Federal agencies also seek people with knowledge about and experience with American Indian people and their culture. Agencies include the Bureau of Indian Affairs, the Indian Health Services, the Bureau of Land Management, and the U.S. Forestry Services.

American Indian Studies Minor

The minor in American Indian studies consists of a minimum of 15 units to include American Indian Studies 110; nine of the 15 units must be in upper division courses selected from American Indian studies or other appropriate departments (e.g., anthropology or history) in consultation with the departmental adviser.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

110. American Indian Heritage (3) I, II
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.

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, prophesies, 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: McLeod (English and Comparative Literature)

Advisers: Kushner (History), McLeod (English and Comparative Literature)

Committee: Deutsch (Family Studies and Consumer Sciences), Donahue (Linguistics), DuFault (History), Ford (Geography), Griswold (English and Comparative Literature), Huckle (Women's Studies), Kornfeld (History), Kornweibel (Afro-American Studies), Kushner (History), Lewin (Political Science), McLeod (English and Comparative Literature), Meadows (Music), Peters (Management), Real (Telecommunications and Film), Samovar (Speech Communication), Santangelo (English and Comparative Literature), Trafzer (American Indian Studies), 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.

The Major

American studies is an interdisciplinary program designed to bridge the division of knowledge into discrete disciplines. Each of the four program clusters combines American studies core courses, which relate materials and methods from various disciplines, with upper division courses from several disciplines. The courses are selected to focus on and bring into interrelation one group of American people, one social or cultural process, one place and one period.

The special integrating work in the student's major program is a series of special studies under the direction of members of the American studies faculty in which the student produces a paper or project interrelating the four focuses of his or her studies. The paper or project must make use of two or more disciplines' analyses of the same material. Because American studies finds its center in the concept of culture, the paper or project must deal at least in part with the cultural connections among the four subjects of focus.

With the approval of the American studies adviser, the student may design a program cluster comparable in format to those listed in this catalog but tailored to his or her individual interests.

The minor in American studies is open to all students and is of special interest to international students. The coursework is intended to provide a broad perspective of the American culture – the heritage, the ideas and dreams, and the failures as well as accomplishments. The flexibility of this interdisciplinary major allows graduates to enter a broad range of career areas, including journalism, law, law enforcement, environmental planning, teaching, archival work, museum curatorship, international business, librarianship or government service. Competencies gained by the American studies major provide a sound basis for entering graduate study in a variety of areas. Many universities have graduate programs in American studies. Graduate work may be required for entrance into a specific career field.

Business and teaching professions in foreign countries welcome American studies majors who can help them understand the way business and social life is conducted in the United States.

Advising

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

American Studies Major

With the A.B. Degree in Liberal Arts and Sciences (Major Code: 03131)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

Preparation for the Major. American Studies 201; 12 units selected from Anthropology 102, English 250A-250B (three or six units), History 110A-110B (three or six units). (15 units.)

Students should note that a number of the upper division required and recommended courses listed below have lower division prerequisites, but these prerequisites do not constitute requirements per se for the completion of the major.

Foreign Language Requirement. Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

Upper Division Writing Requirement. History 430W, English 500W, 508W, 581W or Sociology 396W with a grade of C (2.0) or better.

Major. A minimum of 36 upper division units to include American Studies 360 or 580; 499, 501; and nine courses from one of the following clusters **or a specially designed cluster.**

In the selected cluster, the student will normally take three courses in one area and two courses in each of three other areas. However, the student must take at least one course in each area. The student may take no more than three courses in one discipline on the major program. The student must file with the Evaluations Office a master plan approved by the adviser for the American studies curriculum.

Cultural Pluralism

People: Ethnic Community

Sociology 355 and one of the following: Afro-American Studies 471B; American Indian Studies 440, 444; Anthropology 446; Mexican American Studies 320 or 350B.

Process: Development of Identity

Afro-American Studies 362 or 461; Mexican American Studies 335; Music 344, 351; Political Science 531; Sociology 430 or 457; Women's Studies 352 or 453 (when American in content).

Place: The City

Economics 458; Geography 354 or 555; 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 330 or 341B.

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 522.

Process: Material Culture

Anthropology 302; Art 347, 550; English 526 (when offered as American Literature and American Art); Family Studies and Consumer Sciences 345; Geography 354, 555; 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, 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 531; Women's Studies 330.

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 456, 545; Speech Communication 475.

Place: United States

Geography 321; History 534, 535A, 535B, 546A, 546B, 547A, 547B, 548A, 548B.

Period: Nuclear Age

Two of the following:

English 525; History 536; Natural Science 333; Women's Studies 330.

Special Study: American Studies 499.

Majority American Goals and Values

People: The Middle Class

Art 560; History 548B; Political Science 531; Sociology 531; Women's Studies 330.

Process: Tradition and Change in the Evolution of American Goals and Values

No more than one course in each discipline.

Anthropology 444; Economics 474; English 525; History 435, 545A, 545B, 548A, 548B; Management 356, 456; Political Science 334, 335, 345, 346, 348; Sociology 433, 456, 457, 537.

Place: United States

English 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 433.

With the consent of the American studies adviser, six units in courses not listed here may be included in the student's program. Courses in the minor may not be counted towards the major but may be used to satisfy preparation for the major and general education requirements. A minimum of six upper division units must be completed at San Diego State University. In designing their American studies minor program, students may not include courses drawn from their major department.

Courses

LOWER DIVISION COURSES

201. Introduction to American Culture (3) I, II

Emphasizes the concept of culture as framework for introductory cross-disciplinary study of the American culture, through analyses of such things as artistic expression, historical events, social processes, folk and popular culture, using methodology adapted from social sciences and humanities.

296. Experimental Topics (1-4)

Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

UPPER DIVISION COURSES (Intended for Undergraduates)

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. Maximum credit six units.

UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

501. Study of American Culture (3) II

Prerequisite: Major in American studies; open to other students with interdisciplinary interests.

American studies as a discipline, the important methods of the field, and variety of materials for interdisciplinary study.

580. Topics in American Studies (1-3) I, II

Topics dealing with cultural images and myths, social protest, folklore; themes focusing upon fear, alienation and nationalism; problems around racism, minorities and counter-cultures. See Class Schedule for specific content. May be repeated once with new content; and with the approval of the adviser, more than once by American studies majors. Maximum credit six units applicable to a master's degree in American studies.

Anthropology

In the College of Arts and Letters

Faculty

Emeritus: Anderson, Ezell, Rogers
Chair: Himes
Professors: Ball, Bartel, Goldkind, Henry, Leach, Lippold, Pendleton, Rohrl, Rollefson, Watson, Whitney
Associate Professors: Greenfeld, Himes, Moore
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.

The Major

Anthropology is the broad study of human beings. It is a particularly far-reaching area of study regarding human beings as both biological and culturally adaptive organisms. Anthropologists may study the physical and mental characteristics, social relationships, institutions, customs, myths, and geographic distribution of human beings.

The anthropology major provides a broad background for the various specialized areas in the field, such as archaeology, concerned with the analysis of past cultures; cultural anthropology, the study of cultural differences in contemporary societies; linguistics, the evaluation of differences in cross-cultural communications; and physical anthropology, concerned with biological characteristics of past and present peoples. Elective courses which provide information on the newest developments in the field are also offered in order that anthropology graduates have a greater understanding of human nature in the context of past and present environmental influences.

A variety of employment opportunities exist for anthropology graduates. Positions include work in senior citizen or minority agencies, the National Park Service, state archaeological services, marketing, environmental impact projects, urban affairs, state and local governmental agencies, and business.

Advising

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

Anthropology Major

With the A.B. Degree in Liberal Arts and Sciences (Major Code: 22021)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

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, 422-452, 520, 531, 532, 580.

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, 580.

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, 580.

Anthropology 496, 499, 582 and 583 may be used when subject is appropriate.

(d) Sociocultural

Major (continued). Nine units selected from Anthropology 350, 410, 422, 424, 428, 430, 432, 439, 520, 526, 529, 531, 532, 580. Nine units selected from Anthropology 440, 441, 442, 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, 509, 580.

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, 580.

Sociocultural: Anthropology 102 and 350 and nine units selected from Anthropology 305, 424, 428, 430, 439, 496 (if appropriate), 520, 526, 529, 532, 580.

Linguistics: Anthropology 102, 304 and 410 and six units selected from Anthropology 305, 350, 496 (if appropriate), 499, 580, 582, 583.

General: Anthropology 101, 102 and nine units selected from 301, 302, 304, 305, 580.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

101. Human Biocultural Origins (3) I, II (CAN ANTH 2)
Man's place in nature; fossil evidence for hominid evolution; evolutionary theory; racial, clinical and genetic variability; relationship of physical and cultural adaptations; the rise of civilization.

102. Introduction to Cultural Anthropology (3) I, II (CAN ANTH 4)
May be taken before Anthropology 101.
Man's relationship to his environment; types of preliterate society; systems of social organization, politics, economics, religion, and language.

296. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

UPPER DIVISION COURSES (Intended for Undergraduates)

301. Principles of Physical Anthropology (3) I, II
Two lectures and three hours of laboratory.
Prerequisite: Anthropology 101.
Primate comparative anatomy and human paleontology. Physical measurement of the living subject and skeletal specimens. The statistical treatment of data in physical anthropology. Applications of physical anthropology in industry and medicolegal problems.

302. Principles of Archaeology (3) I, II
Two lectures and three hours of laboratory.
Prerequisite: Anthropology 101.
History, method, and theory of archaeological data acquisition and interpretation. Methods of data recovery and analysis suitable to resolution of historical and processual questions. Archaeological examples from a worldwide sample of prehistoric and historic societies.

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 nonindustrial 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.

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.

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.

430. Anthropology of Law (3) I, II
Prerequisite: Anthropology 102.
Law and social control studied in sociocultural context. Law in Western society compared with "law-ways" in a number of traditional or nonindustrialized cultures. Basic concepts and theories about law examined cross-culturally and applied to our own society.

432. Principles of Personality in Culture (3)
Prerequisite: Anthropology 102.
Principles related to the determinants of human behavior contained in culture. Studies of behavior cross-culturally.

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.

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. Paleoanthropology (3)
Prerequisite: Anthropology 101. Recommended: Anthropology 301.
Fossil evidence for human evolution. Comparative and functional anatomy of fossil human and infrahuman primates; geochronology, paleoecology, and cultural associations; taxonomic implications.

502. Microevolution (3)
Prerequisite: Anthropology 101. Recommended: Anthropology 301.
The evolution of human populations over a short period of time. Interaction of the evolutionary forces of mutation, selection, drift and gene flow with the cultural systems of human populations.

503. Human Variation (3)
Prerequisite: Anthropology 101.
Morphological, physiological and genetic aspects of human variability. Significance of this diversity in the biological adaptations of human populations.

504. Primate Anatomy (3)
Two lectures and three hours of laboratory.
Prerequisite: Anthropology 101.
Primate anatomy both regional and systemic, including skeletal, cardiovascular and digestive systems; the integument and otolaryngology of primates.

505. Human Osteology (3)
Two lectures and three hours of laboratory.
Prerequisite: Anthropology 101. Recommended: Anthropology 301 and/or Biology 150.
Identification of individual bones and teeth; sex, age, and racial variation; stature reconstruction; continuous and discontinuous morphological variations; paleopathology. Training in observations, measurements, and analyses.

506. Physical Anthropology of the Living (3)
Two lectures and three hours of laboratory.
Prerequisite: Anthropology 101. Recommended: Anthropology 301.
Theory and practice of techniques in measurement and description of biological variations in modern populations.

507. Genetic Markers and Anthropology (3)
Two lectures and three hours of laboratory.
Prerequisite: Anthropology 101.
Use of genetic markers in the study of human populations. Biology of blood groups, serum proteins, enzymes, etc.; and analyses of gene frequencies. Significance of genetic markers in evolutionary studies.

508. Medical Anthropology (3)
Prerequisite: Anthropology 101 or 102.
Evolution and ecology of disease, medical beliefs and practices in non-Western cultures, and complexities of health care delivery in pluralistic societies.

509. Culture and Biological Aging (3)
Prerequisite: Anthropology 101 or 102.
Do different cultures age at different rates? Theories of biological aging, genetics of longevity and cultural influences on biological aging. Process of aging and role of the aged in various cultures.

520. 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.

526. Cultural Change and Processes (3)
Prerequisites: Anthropology 102 and six upper division units in anthropology.
Patterns of change in subsistence, social structure, and belief systems. Processes of change including diffusion, acculturation, individual innovation, and directed change among contemporary and historic peoples. (Formerly numbered Anthropology 426.)

529. Urban Anthropology (3)
Prerequisites: Anthropology 102 and six upper division units in anthropology.
Urban adaptations of past and present societies. Descriptive topics and applied concerns regarding urban origins, migrations, kinship, family, ethnicity, stratification, and change. Ethnographic examples drawn from Western and non-Western societies. (Formerly numbered Anthropology 429.)

531. Applied Anthropology (3)
Prerequisite: Anthropology 102.
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.

580. Anthropological Data Analysis (3)
Two lectures and three hours of laboratory.
Prerequisites: Anthropology 101 or 102 and a statistics course (Psychology 270 or Sociology 201 recommended).
Computer oriented data analysis class utilizing anthropological data sets. Special section of the SPSS computer workshop is required.

582. Regional Anthropology (3)
Prerequisite: Anthropology 102.
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, Hopkins, Jackson, Lingren, Longenecker, Sorenson, Swiggett, Tanzer, Wallace

Chair: Orth

Professors: Austin, Berg, Cotten, Covington, Dominguez, Esser, Fisch, Groover, Hunter, Miller, Orth, Ray, Rigby, Roberts-Fields, Rogers, Shirk

Associate Professors: Baker, R., Dumlao, Flaxman, Frick, Hayakawa, Mansfield, Papworth, Perczel

Assistant Professors: Cooling, Moaney

Lecturers: Barker, Delaney, Galczenski, Knowlton, Merritt, Nakamura, Schamu, Tibbs, Yapelli

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.
Certificate in Art (available at Imperial Valley Campus only).

The Major

A significant concern of the Department of Art is the creative growth of its students. The department focuses on the development of sound undergraduate programs which provide a strong basic foundation in art. A major in art may be planned with an emphasis in applied design, with specialities in ceramics, enameling, furniture, metalsmithing, jewelry, and textiles; art history; studio arts; environmental design; graphic design; interior design; painting and printmaking; and sculpture. A program for those preparing for a single subject teaching credential is also available, as is a broad spectrum of courses for both majors and nonmajors in art history, art appreciation, basic drawing and design.

All emphases except art history require a set of core courses consisting of two courses each in drawing, design, and the survey of art history of the Western world. It is strongly recommended that all students complete the core requirements during their freshman year, or at least prior to taking beginning coursework in a specific program emphasis. It is recommended that students take courses from other emphases in order to enhance their overall art experience. In addition to the undergraduate degree, the department offers a Master of Arts degree (30 units) in all of these emphases and a Master of Fine Arts degree (60 units).

Although a degree in art is often pursued as a means of self-fulfillment and creative growth, graduates of the department are employed in a variety of settings. The programs in environmental design, interior design, and graphic design have a preprofessional orientation supplemented by a strong liberal arts background. Environmental design and interior design can lead to interior, architectural, landscape design or city planning. Graphic design prepares the student for the areas of environmental graphics, art direction, visual design for the contemporary media of advertising, or editorial illustration. The areas of painting 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, metalsmithing, textile design and weaving.

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

(Major Code: 10031)

Preparation for the Major. Art 158, 258, 259, and 263. (12 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 Art 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 27 upper division units in art history to include Art 593; and 24 units selected from Art 365, 366, 371, 557 through 577, and 590; and 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, 573A, 573B, 574, 575
Modern Art and American Art: Art 557, 558, 560
Native American, African and Oceanic Art: Art 561, 569, 570, 576
Byzantine, Islamic, Indian, and Oriental Art: Art 365, 366, 564, 565, 572

Emphasis in Studio Arts

(Major Code: 10021)

Preparation for the Major. Art 100, 101, 102, 103, 203, 204, 216, 258, 259, and six units of art electives. (33 units.)

Foreign Language Requirement. Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 24 upper division units in art to include Art 403, 404, and 500; six units of art history; and nine units of art electives selected in consultation with an adviser.

Art Major

With the 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.

Emphasis in Applied Design

(Major Code: 10021)

Preparation for the Major. Art 100, 101, 102, 103, 220, 258, 259, and six units of art electives.(27 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 27 upper division units in art to include three units from each of the areas listed below, and three units of extended work in one of the areas; three units of art electives; and six units of art history. Nine units of advanced work in one area is strongly recommended.

Fiber: Art 334, 435, 436, 534, 535, 536
Metal: Art 331, 431, 531, 532, 533
Clay: Art 325, 425, 525, 526
Enamel: Art 429, 529
Wood: Art 323, 423, 523

Emphasis in Environmental Design

(Major Code: 10021)

Preparation for the Major. Art 100, 101, 102, 103, 148, 247, 248, 249, 250, 251, 258, 259. (36 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 27 upper division units in art to include Art 348, 450, 454, 547, 550, 577; six units selected from Art 323, 381, 416, 451, 453, 481, 552, 581; and three additional units of art history.

Emphasis in Graphic Design

(Major Code: 10091)

Preparation for the Major. Art 100, 101, 102, 103, 241, 243, 258, 259; and six units selected from Art 203, 204, 210, 240, 242. (30 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 27 upper division units in art to include Art 341, 441, 541; six units of art history; and twelve units selected from Art 340, 440, 443, 444, 445, 540, 542, 543, 544.

Emphasis in Interior Design

(Major Code: 02031)

Art majors wishing to enter one of the Interior Design upper division courses (Art 451, 453, 552, 553) must receive, as a condition of junior level qualification, a *passing* evaluation of a portfolio of work submitted to the Interior Design Evaluation Committee. Any advance enrollment in the above-listed upper division courses will remain provisional until clearance of the portfolio review. Reviews are held prior to the beginning of the fall and spring semesters. See the Art Department office for specific information concerning current policies pertaining to the review, content of the portfolio, and the schedule to be observed.

Preparation for the Major. Art 100, 101, 102, 103, 148, 247, 248, 249, 250, 251, 258, 259. (36 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 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, 325, 334, 429, 436, 450, 547; and three additional units of art history.

Emphasis in Painting and Printmaking

(Major Code: 10021)

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 consulation 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

(Major Code: 10021)

Preparation for the Major. Art 100, 101, 102, 103, 216, 217, 258, 259; and three units selected from Art 203, 204, 220, 225, 231, 234. (27 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 24 upper division units to include Art 416, 498A, 516, 517; six units of art history; and six units selected from Art 323, 331, 403, 404, 500.

Art Major

For the Single Subject Teaching Credential
With the A.B. Degree in Applied Arts and Sciences
(Major Code: 10021)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under 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.

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. A minimum of six upper division units must be completed at San Diego State University.

Art History Minor

The minor in art history includes a minimum of 21 units in art distributed as follows: Nine units to include Art 258, 259, and three units selected from Art 158 or 263. Twelve units selected in consultation with an adviser from Art 365, 366, 371, 557, 558, 559, 560, 561, 562, 564, 565, 567, 568, 569, 570, 572, 573A, 573B, 574, 575, 576, 577, 582, 590.

Courses in the minor may not be used toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Certificate in Art (Imperial Valley Campus)*

The Certificate in Art is a response to the needs of the community for a professionally oriented course of art studies. The certificate requirements are designed to satisfy those who want more than an occasional art course and who are not content with anything less than a solid foundation in a given medium. For apprentice artists, practicing artists, art educators, and others interested in developing their creative abilities, the certificate program demands a significant degree of commitment and meets that involvement with a strong basis in studio skills backed up with art history.

The student must complete an approved selection of six courses (18 units) with a minimum grade point average of 2.5 within a period of six consecutive semesters in order to qualify for the certificate. Candidacy will be established by the director of the program. In some cases, specific course prerequisites may be waived for persons able to demonstrate the skills or knowledge in question. In addition to formal course requirements, the student must submit a portfolio of work for review by a committee made up of the director and other instructional staff.

The Art Certificate requires a minimum of 18 units to include Art 404 or 500, 406, 557 or 558; and nine units selected with the approval of the adviser from Art 325, 340, 341, 387, 403, 407, 425, 435, 496 (Color Photography; Studio Techniques), 502, 512, 557 or 558 (if not taken above), 559.

* Additional prerequisites required for this certificate.

Courses

LOWER DIVISION COURSES

100. Drawing and Composition (3) I, II (CAN ART 8)
Six hours.
The ordering of two-dimensional space through drawing.

101. 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) I, II
Six hours.
Prerequisite: Art 101.
Introduction and investigation of design and theory, and practice in three dimensions.

148. Visual Presentation I (3) I, II
Six hours.
Prerequisite: Art 100.
Design drawing techniques including interior presentation drawings, interior detailing, architectural drafting, and lettering. Tools and materials used in the design professions.

157. Introduction to Art (3) I, II
An illustrated lecture course dealing with the meaning of art derived from an investigation of the principles of art. Designed to increase the understanding and appreciation of art.

158. Arts of Native America, Sub-Saharan Africa and Oceania (3)
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 (CAN ART 10)
Six hours.
Prerequisites: Art 101 and 102.
Pictorial composition and techniques of painting. Maximum credit six units.

205. Waterbase Media (3) I, II
Six hours.
Prerequisites: Art 101 and 102.
Composition of still-life and landscape in aqueous media. Maximum credit six units.

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. Beginning Handbuilt Ceramics (3) I, II
Six hours.
Prerequisite: Art 103.
Design and construction of handbuilt ceramic forms. Introduction of glaze for surface enrichment. Maximum credit six units.

231. Beginning Jewelry Design (3) I, II
Six hours.
Prerequisite: Art 220.
Design and fashioning of jewelry.

234. Weaving (3) I, II
Six hours.
Prerequisite: Art 220.
Structure and design of woven fabrics. Maximum credit six units.

240. Graphic Imagery (3) I, II
Six hours.
Prerequisites: Art 100 and 103.
The organization concepts of design applied to experimental photographic and technical reproductive media, and environmental graphics.

241. Beginning Graphic Design (3) I, II
Six hours.
Prerequisites: Art 102 and 103.
Creative projects exploring the interrelation of fundamental art principles and design using phonetic symbols and typography.

242. Graphic Design Visual Techniques (3)
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, S
Architecture, interior design, landscape and city planning for forming man's physical and aesthetic environment.

248. Visual Presentation II (3) I, II
Six hours.
Prerequisites: Art 102, 103, 148.
Methods, materials, and tools of the professional environmental designer stressing art principles.

249. Visual Presentation III (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 and 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 (CAN ART 2)
Art development in painting, sculpture, architecture, and handicrafts from the dawn of art to the Renaissance. Illustrated.

259. Appreciation and History of Art (3) I, II (CAN ART 4)
The period from the Renaissance through the modern school treated in the same manner as in Art 258.

263. Far Eastern Art (3) II
Arts of China and Japan from prehistoric times to present. Not open to students with credit in Art 264 and 265.

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. Beginning Throwing-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, S
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) II
Six hours.
Prerequisite: Art 249.
Design communication and documentation techniques using photography, exhibition, portfolio, and publication orientations as they relate to environmental design.

352. Professional Lectures in Interior Design (2) II
Prerequisites: Art 250 and 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.

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.

371. Medieval Art (3) II
Prerequisites: Art 258 and 259.
Development of painting, sculpture and architecture from the time of Constantine through the Gothic period.

381. History and Theory of Environmental Design (3) S
Prerequisites: Art 258 and 259.
Environmental arts. From earliest times to the 15th century.

387. Design for Teachers (3) I, II, S
Six hours.
Prerequisite: Art 101.
A design-crafts course that explores in depth materials and processes that could be used with young people. 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. Maximum credit six units.

406. Design and Composition (3)
Six hours.
Prerequisites: Art 103 and 204.
Structure in picture making.

407. Black and White Photography as a Fine Art Medium (3) I, II
One lecture and four hours of activity.
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 and 210.
Creative intaglio—etching, drypoint, aquatint, engraving and variations. Emphasis on fine print quality and technical development. Maximum credit six units.

411. Lithography Printmaking (3) I, II
Six hours.
Prerequisites: Art 101 and 203.
Creative lithography—stone and plate planographic process. Emphasis on fine print quality and technical development. Maximum credit six units.

416. Intermediate Sculpture (3) I, II
Six hours.
Prerequisite: Art 216.
Individual investigations into sculpture ideas, methods and materials. Individual development in sculpture. Maximum credit six units for Art 416.
A. Ceramic sculpture
B. Plastic sculpture
C. Foundry/metal sculpture
D. Handmade paper sculpture
E. Wood sculpture

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. Intermediate Ceramics (3) I, II
Six hours.
Prerequisite: Art 325.
Continuation of Art 325. Further development of knowledge, skills and philosophy of ceramics through individual creative projects.

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, silk-screen, batik, and tie-dye. Maximum credit six units.

440. Advanced Graphic Design – Environmental Graphics (3)
Six hours.
Prerequisite: Art 241.
Study of visual design for contemporary architectural, motivational, display traffic and guidance graphics.

441. Advanced Graphic Design – Media (3) I, II
Six hours.
Prerequisite: Art 341.
Application of visual design concepts to graphic design, advertising media and technical reproductive processes.

443. Drawing and Illustration for Graphic Design (3) I
Six hours.
Prerequisites: Art 103 and 203.
Disciplines of realistic, descriptive illustration. Methods, materials and tools of the professional graphic designer and illustrator.

444. Visual Communication Media (3)
Six hours.
Prerequisite: Art 341.
Experimental, creative and practical exploration of contemporary communication as related to sequential visual imagery.

445. Internship in Graphic Design (3) I, II Cr/NC
Prerequisites: Art 441 and consent of instructor.
Field experience in design, business procedures, management, client relationships, and supervision of subcontractual work with local practicing professionals. Maximum credit six units.

450. Synergetic Environments (3) I
Six hours.
Prerequisites: Art 249 and 454.
Synthesis of materials, space, sound and light using exploratory methods in full scale projects.

451. Interior Design II (3) I, II
Six hours.
Prerequisites: Art 249, 250, 251, and completion of portfolio requirement.
Survey, analysis and conceptual design methods of residential interiors stressing materials, equipment, components and structural detailing. Maximum credit six units.

452. Interior Design Practicum (3) I, II Cr/NC
Nine hours of laboratory.
Prerequisite: Art 453.
Field experience with local professional interior designers in client relationships, business procedures, supervision of subcontracted work and installation, and execution of contracts. Maximum credit six units.

453. Interior Design III (3) I, II
One lecture, two hours of activity, and three hours of laboratory.
Prerequisites: Art 249, 250, 251, and completion of portfolio requirement.
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) I
Prerequisites: Art 258 and 259.
Environmental arts. From the 15th to the 19th century.

483. Museum Internship (1-6) Cr/NC
Prerequisites: Upper division standing in art and consent of instructor.
Internship in assigned local museums and galleries under the direction of an art historian. Maximum credit six units.

496. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

497. Senior Investigation and Report (3) I, II
Nine hours for 497A; three hours for 497B.
Prerequisites: Six upper division units in art, and consent of instructor.
Individual research into areas of studio and art history not covered by regular courses.
A. Studio Investigations
B. 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)
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. Maximum credit six units.

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

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

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

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

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

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

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

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

525. Advanced Ceramics (3) I, II
Six hours.
Prerequisite: Art 425.
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 to a master's degree.

531. Advanced Jewelry and Metalwork (3) I, II
Six hours.
Prerequisite: Art 431.
Problems involving fabrication processes already studied in order to increase technical competence while exploring personal design statements; specialized techniques such as photoetching and electroforming. Maximum credit six units.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

569. Art of Sub-Saharan Africa (3)
Prerequisite: Upper division standing.
Form and content of the art of Sub-Saharan Africa viewed within its cultural context.

570. Art of Oceania (3)
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.

573A. Early Renaissance Art in Italy (3)
Prerequisites: Art 258 and 259.
Italian arts, architecture, artists, and patrons from fourteenth century Proto-Renaissance period through fifteenth century revival of classical humanism in city states of Florence, Siena, Bologna, Mantua, and Padua. (Formerly numbered Art 573.)

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

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

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

576. Arts of Native North America (3) 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 258 and 259.
Architecture from primitive times to the present.

581. History and Theory of Environmental Design (3) II
Prerequisites: Art 258 and 259.
Environmental arts in the nineteenth and twentieth centuries.

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

590. Principles and Elements of Visual Aesthetic Organization (3) 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.

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

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

GRADUATE COURSES
Refer to the Graduate Bulletin.

Asian Studies

In the College of Arts and Letters

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 Dan Whitney is director, Professor Thomas R. Cox 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.

The Major

Two and one-half billion people live in East, Southeast, and South Asia – half of the world's population. The importance of this immense and varied region cannot be overstated. More and more Americans are discovering the rich culture and history of the Asian people. Asians have made a major contribution to the world's literature and art, religion and philosophy, and are becoming increasingly important in international relations, business, and economics.

Nonmajors who wish to increase their knowledge about Asian peoples will find courses available in the Asian studies undergraduate and graduate programs.

The Asian studies program seeks to provide a background for students planning to enter business, the academic environment, government, or community service – wherever the knowledge of Asia and Asians is needed. Students in the major develop an understanding of cultural heritage, societies, language and special forces. Areas of special interest may be pursued in depth.

Advising

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

Asian Studies Major

With the A.B. Degree in Liberal Arts and Sciences (Major Code: 03011)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

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 105, 106 or 107, or History 120, 121. (18 units.) Art 263 is recommended.

Foreign Language Requirement. Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in an appropriate foreign language, such as Chinese or Japanese, as part of the preparation for the major. Refer to section of this catalog on "Graduation Requirements."

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 30 upper division units to include six units selected from Asian Studies 458, 459, 499 (maximum three units), 560, 596; from the humanities not less than 12 units from at least two departments selected from Art 308, 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*; Music 351F, 561*; Philosophy 351, 575*, 596; Religious Studies 401, 403, 499*, 506, 508, 580*, 581*; and from the social sciences and related disciplines no less than 12 units from at least two departments selected from Anthropology 448, 450, 452, 481*, 496*, 582*; Economics 330, 336*, 360, 365*, 465, 489, 496*, 499*; Geography 331, 350, 540*; Management 466*; Political Science 361, 362, 499; Women's Studies 480*. Students must file with the Evaluations Office a master plan approved by the adviser.

* When deemed relevant by the undergraduate adviser.

Asian Studies Minor

The minor in Asian studies consists of a minimum of 21 units to include History 120 and 121, or six units selected from Asian Studies 105, 106, and 107. Other lower division courses acceptable for the minor are Art 263 and four units of an appropriate Asian language. Twelve units must be in upper division. Upper division courses acceptable for the minor include:

Humanities: No less than six units selected from History 561A-561B, 562, 563, 564A-564B, 566, 567, 568, 569, 570; Philosophy 351, 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 458, 459, 499, 560, or 596.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of twelve upper division units must be completed at San Diego State University.

* Additional prerequisites are required for these courses.

Courses

LOWER DIVISION COURSES

105. Intellectual Foundations of Man (3) I

An interdisciplinary survey of the philosophical and religious thought of South, Southeast and East Asia and its application in theory and practice in traditional Asian societies. Not open to students with credit in Asian Studies 105A.

106. Cultural Heritage of Asia (3) II

Social and cultural heritages of South, Southeast, and East Asian societies as revealed in art, drama, classical literatures, and folk traditions. Not open to students with credit in Asian Studies 105A.

107. Social Foundations of Modern Asia (3) I, II

Social, economic, and political systems of South, Southeast, and East Asia in modern times. (Formerly numbered Asian Studies 105B.)

UPPER DIVISION COURSES (Intended for Undergraduates)

458. Asian Traditions (3) I, II

Prerequisite: Six units of Asian-content courses or upper division standing.

Social, cultural, economic, and political traditions of South, Southeast, and East Asia; how they functioned in theory and practice prior to twentieth century. (Formerly numbered Asian Studies 458A.)

459. Contemporary Asian Cultures (3) II

Prerequisite: Six units of Asian-content courses or upper division standing.

Continuity and change in traditions and values of Asian societies in face of urbanization, modernization, and Westernization since mid-nineteenth century. (Formerly numbered Asian Studies 458B.)

499. Special Study (1-3)

Prerequisites: At least six units of upper division work completed toward the major or minor in Asian studies and consent of the instructor.

Individual study. Maximum credit six units.

UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

560. History of Japanese Business and Trade (3) I, II

Prerequisites: Upper division standing and consent of instructor.

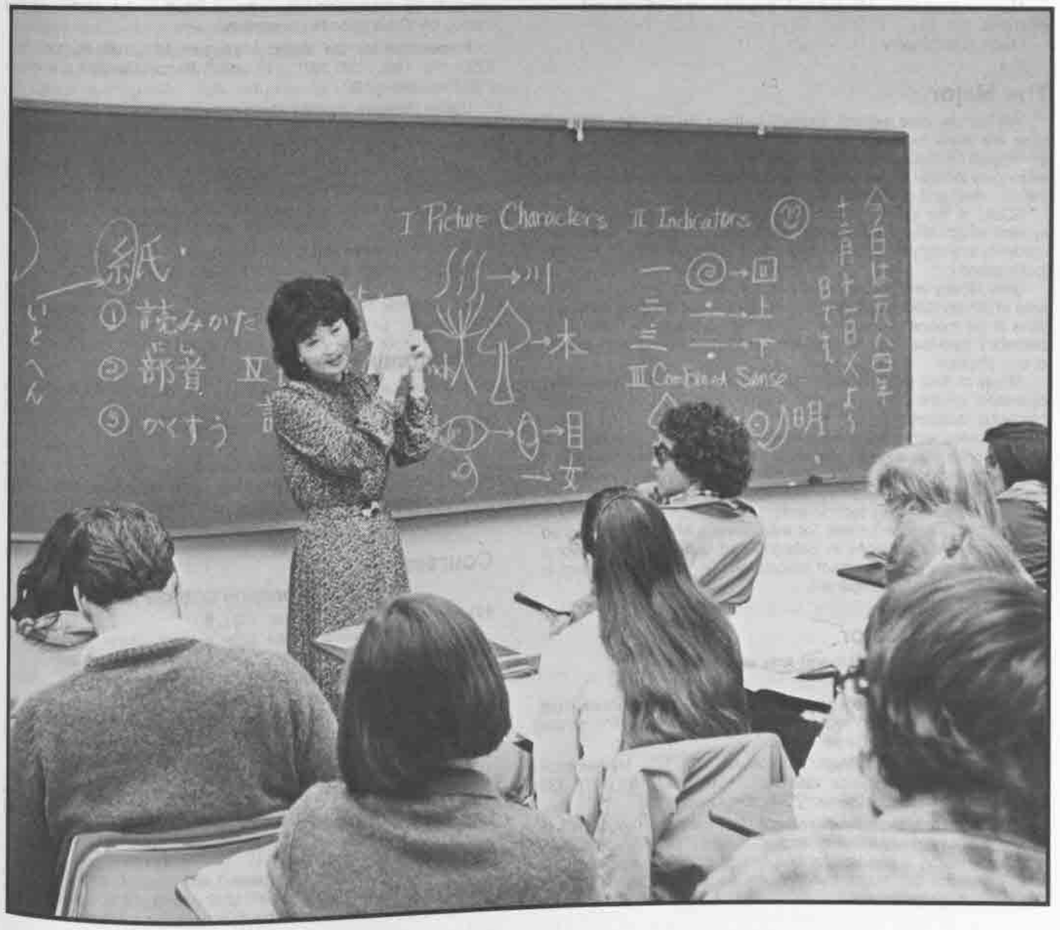
Japanese business and trade from 1600 to present. Emphasis on Japan's rapid economic development since 1868, interplay of social and economic forces, structure of Japanese business system, and problems of international trade.

596. Selected Studies in Asian Cultures (3)

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

GRADUATE COURSES

Refer to the Graduate Bulletin.



Astronomy

In the College of Sciences

Faculty

Emeritus: Nelson, Smith
Chair: Angione
Professors: Angione (Director of Mt. Laguna Observatory), Daub, Schopp, Young, A.
Associate Professor: Talbert
Assistant Professor: Etzel
Adjunct: Beale, F. Jr., Beale, F. Sr., Kovach, Olson, Yoss, Young, A.T.

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 B.S. degree in applied arts and sciences.
Minor in astronomy.

The Major

Will the universe expand forever? Is there life on other planets? How are stars formed? These are the types of questions being addressed by students majoring in astronomy. Some areas of study in astronomy include the sun, the solar system, the stars, the Milky Way, the galaxies, and cosmology.

SDSU is the only institution in The California State University system which offers a complete academic program in astronomy. Students actively participate in all phases of observational astronomical research.

Joint faculty and student research activities are principally in the area of observational astrophysics. These include ongoing investigations in the moons of Jupiter, eclipsing binary stars, low mass stars, planetary nebulae, galactic clusters, exterior galaxies, and atmospheric physics.

Much of this work is done at the Mount Laguna Observatory operated by the University. The department also has excellent computer facilities.

Graduates with a bachelor's degree may find some positions in observatories and large astronomy departments. These jobs support continuing research and include telescope operators, instrument makers, opticians, electronic technicians, programmers, photographers, and laboratory technicians.

Employment opportunities for astronomers who have advanced degrees include positions in colleges and universities, in national observatories and government laboratories, in planetariums, and in industry and private companies.

Astronomy Major

With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 19111)

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; Mathematics 150, 151, 252, 253; Physics 195, 195L, 196, 196L, 197, 197L. (32 units.) Recommended: Chemistry 200, Engineering 120.

Foreign Language Requirement. Competency (equivalent to that which is normally attained through three consecutive semesters of college study) is required for one foreign language as part of the preparation for the major. Refer to the section of this catalog on "Graduation Requirements."

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 24 upper division units in astronomy and physics to include Astronomy 340, 350, 440, 450; Physics 350A, 354A; and six units selected with the approval of the astronomy undergraduate adviser. Recommended: Astronomy 320, 510; Physics 354B, 400A, 406, 460.

Astronomy Major

With the B.S. Degree in Applied Arts and Sciences
(Major Code: 19111)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

Preparation for the Major. Astronomy 101, 109; Physics 195, 195L, 196, 196L, 197, 197L. (16 units.) Recommended: Chemistry 200, Engineering 120.

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 36 upper division units in astronomy and physics to include Astronomy 340, 350, 440, 450, 498A, 498B; Physics 350A, 354A, 400A, 460; and nine units selected from Astronomy 320, 510; Physics 311, 350B, 354B, 400B, 406, 510.

Minor in Mathematics. All candidates for the B.S. degree in astronomy must complete a minor in mathematics, to include Mathematics 150, 151, 252, 253, 341A, and six additional upper division units of electives in mathematics. Recommended: Mathematics 341B, 524, 533, 537, 541A, 551A.

Astronomy Minor

The minor in astronomy consists of a minimum of 15 units to include Astronomy 101 and 12 upper division units selected from Astronomy 301, 305, 320*, 340*, 350*, 440*, 450*, 510*.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

* Additional prerequisites required.

Courses

LOWER DIVISION COURSES

101. Principles of Astronomy (3) I, II
Nature of the universe: the solar system, stars, galaxies, and remote universe.

109. Astronomy Laboratory (1) I, II
Three hours of laboratory.
Prerequisite: Credit or concurrent registration in Astronomy 101.
Demonstration of astronomical principles through observations with astronomical instruments and analysis of astronomical data.

112. Elementary Navigation (3)
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)
Prerequisites: Three units of lower division physical science.
Einstein's theory of general relativity applied to problems of gravitational collapse (stellar evolution, neutron stars, black holes) and cosmology (origin and evolution of the universe).

305. Historic Development of Astronomy (3) I
Prerequisite: Astronomy 101.
Theories and advancements which have shaped our concepts of the universe. Contributions of major astronomers.

320. Solar System Astronomy (3)
Prerequisites: Astronomy 101 and Physics 197, 197L.
Structures of the planets, their atmospheres and satellite systems, asteroids, comets, and meteoroids, and the interplanetary medium, including the sun's influence in the system. (Formerly numbered Astronomy 520.)

340. Spherical Astronomy (3) I
Prerequisites: Credit or concurrent registration in Mathematics 252 and Physics 197.
Problems in spherical astronomy, astronomical coordinate systems, time, general precession, and introduction to astronomy. (Formerly numbered Astronomy 304A.)

350. Astronomical Techniques (3) II
Prerequisite: Astronomy 340.
Data acquisition and data reduction for current instrumentation including photoelectric photometry, photographic photometry, and spectroscopy. Techniques for obtaining precise measurements. (Formerly numbered Astronomy 304B.)

440. Astrophysics of Stars (3) I
Prerequisites: Credit or concurrent registration in Mathematics 253 and Physics 354A.
Radiative transfer theory, atmospheres of stars and the emergent spectrum, interior structure and evolution of stars, stellar pulsations. (Formerly numbered Astronomy 312A.)

450. Astrophysics of Star Systems (3) II
Prerequisites: Credit or concurrent registration in Mathematics 253 and Physics 354A.
Applications of physics in study of binary stars, star clusters, the interstellar medium and galactic structure, galaxies, and cosmology. (Formerly numbered Astronomy 312B.)

498A. Senior Project (1) I, II
Prerequisite: An acceptable master plan for graduation within one year.
Selection and design of individual projects.

498B. Senior Project (2) I, II
Six hours of laboratory.
Prerequisite: Astronomy 498A.
Individual research project culminating in a final written report.

499. Special Study (1-3) I, II
Prerequisite: Consent of instructor.
Individual study. Maximum credit six units.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

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

596. Advanced Topics in Astronomy (2 or 3) I, II
Prerequisite: Consent of instructor.
Selected topics in theoretical astronomy or astrophysics. May be repeated with new content upon approval of instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

Refer to the Graduate Bulletin.

Biology

In the College of Sciences

Faculty

Emeritus: Alexander, Bohnsack, Clark, Crouch, Hazen, Huffman, Kelly, McBlair, Norland, Olson, Ratty, Taylor, Walch, Wedberg

Chair: Paolini

Professors: Archibald, Atkins, Awbrey, Barnett, Baxter, Brandt, Carpenter, Chen, Cohn, Collier, B., Collier, G., Cooper, Cox, Dexter, Ebert, Estes, Etheridge, Farris, Ford, Hunsaker, Hurlbert, Inesi, Johnson, A., Johnson, G., Johnson, K., Krekorian, Krisans, Kummerow, McClenaghan, McLean, Monroe, Moore, Neel, Oechel, Paolini, Parsons, Perrault, Rayle, Reynolds, Rinehart, Sabbadini, Schapiro, Shepard, Sloan, Steenbergen, Weiss, Wilson, Zedler, J., Zedler, P., Zyskind

Associate Professors: Allen, Avila, Bernstein, Breindl, Daugherty, Diehl, Frey, Futch, Glembotski, Hanscom, Hemmingsen, Phelps, Plymale, Simpson, Thwaites, Tsoukas, Virginia

Assistant Professors: Carmichael, Clouse, Davis, Williams

Lecturers: Berta, Lewis, Mathewson

Offered by the Department

Doctor of Philosophy degree in biology and ecology.

Master of Arts degree in biology.

Master of Science degree in biology.

Master of Science degree in microbiology.

Major in biology with the 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. deree 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.

The Majors

Biology. The Department of Biology offers a dynamic and modern program in biology which prepares students both academically and practically for vocations in science and science-related fields or for entry into graduate studies. The major is designed to present a basic background in modern biology and in the supportive disciplines of chemistry, mathematics and physics, and to provide specialized training selected by the student from a variety of areas. The wide range of faculty expertise and research interest allows the department to offer a curriculum which includes general and advanced courses in plant and animal sciences, marine sciences, genetics and physiology, ecology, molecular biology, microbiology, immunology, endocrinology, entomology, and evolution and systematics. Special studies opportunities with SDSU faculty and scientists at cooperating institutions allow qualified students to gain research experience on an individual basis.

The department offers a specific program of courses to fulfill the state of California's science requirements for the Single Subject Teaching Credential in the life sciences. Students successfully completing this program are granted waivers from the National Teacher Examination and in their senior year may enter the Department of Education's credential program.

The department also offers a program leading to the Recombinant DNA Technology Certificate. The purpose of this program is to prepare undergraduate and graduate students for employment in public and private organizations utilizing recombinant DNA technology.

The department's formal Emphasis in Entomology is designed to prepare students for vocations or further academic training in this field. Subspecialties within the emphasis allow students to focus on agricultural entomology or human and animal health entomology.

The rapid advances in theoretical and applied biology, the growing demands in health care and the expansion of general interest in and concern for the environment are just a few of the factors which continue to increase society's need for biologists. Some examples: a biology degree is the common precursor for the medical, dental, veterinarian and allied health professions; government agencies involved in environment protection, public health and conservation need ecologists, inspectors, laboratory technicians and wildlife, forest, coast and park managers; government and private agriculture agencies need entomologists and botanists; private companies, government laboratories and universities involved in biotechnology need microbiologists and molecular biologists; zoos, wild animal parks and aquaria need zoologists; the secondary school system needs biology teachers; textbook and scientific supply companies need science majors. Whether your goal is to work in a laboratory or a forest, there is opportunity for fulfillment and growth in the field of biology.

Environmental Health. Those who are interested in such problems as solid waste disposal, air pollution, hazardous materials and similar environmental concerns, may want to choose a major in environmental health.

The major includes preparatory coursework in biology, chemistry, mathematics, and physics. Upper division students are exposed to a variety of areas concerned with environmental health such as epidemiology, which studies the transmission, distribution and control of diseases; pathogenic bacteriology, which studies agents of disease; and a civil engineering course which examines the treatment of water and wastewater.

Employment opportunities for graduates are keeping pace with the growth of public and legislative interest in environmental health and are plentiful in both the public and private sectors. Graduates may find positions in housing and land development, housing inspection, vector control, safety inspection, environmental impact, industrial hygiene, and occupational health.

The Environmental Health program is approved by the California Department of Health Services to satisfy the academic requirements for registration as a sanitarian. After six months of experience as an assistant sanitarian in a local public health department, an environmental health graduate will be able to take the State of California examination to become a Registered Sanitarian. Registered Sanitarians, also known as public health inspectors, are involved in restaurant inspection, communicable disease investigation, and water and wastewater disposal and management. These individuals, who normally belong to state and national environmental health associations, may also be involved in the areas of food safety, radiation, vector control, and environmental impact.

Microbiology. Microbiology is the study of bacteria, viruses, yeasts, molds, algae and protozoa. These microorganisms are found associated with plants and animals, in soil, and in fresh and marine waters. Many of the free-living species participate in maintaining the quality of our environment. Certain species affect the health and well-being of plants and animals, including humans, by causing infectious diseases. Microorganisms are often used in the molecular biology laboratory as research tools, for experiments in genetic engineering, and in the manufacture of food and chemicals.

The microbiology major is designed to provide the student with a background in basic biology, microbiology, and the disciplines of chemistry, mathematics and physics. The curriculum includes introductory and advanced courses (most with laboratories) in general and pathogenic microbiology, immunology, virology, physiology, and genetics as well as courses in food and industrial microbiology, marine microbiology, and molecular biology.

Microbiologists find positions with governmental agencies, in university and private research laboratories, in biotechnology, medical and industrial laboratories, in schools as teachers, with scientific supply companies, or with textbook companies. Depending on the situation, a microbiologist may conduct fundamental and applied research, identify disease-causing microorganisms in medical or veterinary specimens, participate in studies of the environment (e.g., soil, ocean, lakes), aid in the manufacture of pharmaceuticals, food, or beverages, or provide quality and safety control. The microbiology major is excellent preparation for entrance into medical, dental, veterinarian, and graduate schools. The degree also prepares students to become, after a postgraduate internship, licensed medical technologists or certified public health microbiologists.

Biology Major

With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 04011)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." A total of 45 upper division units must be taken, of which 24 must be selected from the General Biology Degree Requirements and the list of courses acceptable for electives.

A minor is not required with this major.

Foreign Language Requirement. Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Biology Major

With the B.S. Degree in Applied Arts and Sciences
(Major Code: 04011)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." A total of 36 upper division units must be selected from the General Biology Degree Requirements and the list of courses acceptable for electives.

A minor is not required with this major.

General Biology Degree Requirements

Preparation for the Major. Biology 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; 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 to include Biology 352, 354, 356, 462, 462L, 502, and Chemistry 361A or 560A. The remaining 15 units must be selected from Biology 460, 500, 501, 506, 529, 530, 533, 546, 548, 563, 563L, 586, 588, and 597; Chemistry 361B or 560B, 431, and 567; and Geological Sciences 505.

Environmental Health Major

With the B.S. Degree in Applied Arts and Sciences
(Major Code: 12142)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

Preparation for the Major. Biology 200A-200B; Biology 215 or Mathematics 250; Chemistry 200, 201, and 230 or 231, and 250 or 251; Mathematics 121 and 122, or 150; Physics 180A-180B and 182A-182B; Psychology 101 or Sociology 101. (46-47 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 36 upper division units to include Biology 350, 464A-464B, 466, 468A-468B, 561, 586, and 589; Civil Engineering 555; Sociology 410 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
(Major Code: 04111)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

Preparation for the Major. Biology 200A-200B; Biology 215 or Mathematics 250; Chemistry 200, 201, and 230 or 231, and 250 or 251; Mathematics 121 and 122, or 150; Physics 180A-180B and 182A-182B. (43-44 units.)

Foreign Language Requirement. Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. It is recommended that students select French, German or Russian to satisfy this requirement. Refer to section of catalog on "Graduation Requirements."

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 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
(Major Code: 04111)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

Preparation for the Major. Biology 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. (43-44 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 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 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 With the B.S. Degree in Applied Arts and Sciences
(Major Code: 04011)

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 or 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.

At least two courses selected from Biology 307, 324, 330, 336, 362, 454, 462, 524, 527. Anthropology 500 or Psychology 417 may be included in the 20-unit biology requirement.

Cell Biology and Genetics

Prerequisites: Biology 200B and 215; Chemistry 200, 201, 230 or 231, and 361A or 560A.

At least two courses selected from Biology 350, 352, 356, 532, 550, 556, 563, 576, 590. Chemistry 361A or 560A may count toward the 20-unit biology requirement.

Ecology

Prerequisite: Biology 354 or 454.

At least two courses selected from Biology 140, 304, 324, 330, 339, 358, 359, 361, 462, 513, 544.

Evolutionary Biology

Prerequisite: Biology 319 or 354 or 532.

At least two courses selected from Biology 304, 321, 352, 358, 359, 471, 522, 526. Natural Science 431 may be included in the 20-unit biology requirement.

Human Biology

Prerequisite: Biology 261 or 336 or 410.

At least two courses selected from Biology 307, 321, 327, 350, 362, 365, 474, 480, 577, 580, 590.

Marine Biology

Prerequisite: Biology 324 or 515.

At least two courses selected from Biology 339, 454, 513, 514, 515, 516, 517, 518, 519, 520, 524.

Plant Biology

Prerequisite: Biology 358 or 533.

At least two courses selected from Biology 324, 330, 359, 362, 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. A minimum of six upper division units must be completed at San Diego State University.

Recombinant DNA Technology Certificate

Matriculated students must apply for admission to the program before completion of 15 certificate units and must complete all prerequisite and required courses with a GPA of 2.5 or better and required courses Biology 550, 551, and 551L with grades of B or better.

The certificate requires 16 prerequisite units—Biology 350, 352, 356; Chemistry 250 or 251; and 30 certificate units—Biology 498 (5 units), 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.

Courses in the certificate may not be counted toward the minor.

Courses

LOWER DIVISION COURSES

100. General Biology (3) I, II
Prerequisite recommended: Concurrent registration in Biology 100L.
A beginning course in biology stressing processes common to living organisms. Not open to biological sciences majors.

100L. General Biology Laboratory (1) I, II
Three hours of laboratory.
Prerequisite: Credit or concurrent registration in Biology 100.
A laboratory course in biology stressing processes common to living organisms.

110. Evolution and Diversity of Animals (3)
Animal adaptation and diversity and their relationship to the development of evolutionary theory. Not open to biological sciences majors. (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 nursing, foods and nutrition, and biological sciences majors. (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. (Formerly numbered Microbiology 110L.)

130. Plants and Man (3) I, II
Basic structure and function of plants with emphasis on the interrelationships of plants and man. Not open to biological sciences majors. (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)
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. Not open to biological sciences majors. (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. Not open to biological sciences majors. (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 biological sciences 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. Not open to biological sciences majors. (Formerly numbered Biology 200.)

200A-200B. Principles of Biology (4-4) I, II
Three lectures and three hours of laboratory.
Prerequisites: A college course in chemistry is prerequisite to Biology 200A; 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.

210. Fundamentals of Microbiology (4) I, II
Two lectures and six hours of laboratory.
Prerequisites: Chemistry 100 and 130, or 200 and 201. Students with credit in Biology 120 may enroll but will receive only one additional unit of credit.
A course for nursing and foods and nutrition majors. Study of the microorganisms of the environment, including the disease-producing organisms, their actions and reactions. (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 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 open to biological sciences majors. (See Biology 590).

291. Biology Laboratory (1) I, II
Prerequisites: Recommendation by department and consent of instructor.
Special course to allow makeup of program laboratory deficiencies. Student will be assigned to the laboratory portion of appropriate course.

296. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

UPPER DIVISION COURSES
(Intended for Undergraduates)

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. Not applicable to the biological sciences majors. (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 biological sciences majors. (Formerly numbered Biology 351.)

307. Biology of Sex (3) I, II, S
Prerequisite: Completion of the General Education requirement in Foundations, II.A. Life Sciences.
Reproductive adaptations in humans, and comparatively in other species. Topics include sex differences, mate choice and mating behavior, fertility regulation, fertilization and embryonic development, sex ratios, parental investment, effects of aging, and life history strategies. Not applicable to the biological sciences majors. (Formerly numbered Biology 310.)

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 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. Not applicable to the biological sciences majors. (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. Not open to biological sciences majors. (Formerly numbered Microbiology 305.)

330. Natural History of Animals and Plants (3)
Prerequisite: A college course in biological sciences.
Ecology, behavior, and diversity of animals and plants and their interactions; the evolution of natural history characteristics. Emphasis on local species. Not applicable to the biological sciences majors. (Formerly numbered Zoology 314.)

330L. Natural History of Animals and Plants Laboratory (1)
Three hours of laboratory.
Prerequisite: Credit or concurrent registration in Biology 330.
Laboratory in natural history of animals and plants, with emphasis on field observations of the local species. Not applicable to the biological sciences majors. (Formerly numbered Zoology 314.)

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. Not open to students with credit in Biology 261, 410 or 590. Not applicable to the biological sciences majors. (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. Not applicable to the biological sciences majors. (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 applicable to the biological sciences majors. (Formerly numbered Zoology 340.)

341. The Human Body (3) I, II
Survey of the human body with emphasis on intricacy of the design and integration of the various organ systems. Not open to nursing, physical education, and biological sciences majors. (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
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.)

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.

352L. Experimental Genetics (2)
Three hours of laboratory and one hour of discussion.
Prerequisite: Credit or concurrent registration in Biology 352.
Laboratory experience in genetic and molecular analysis of prokaryotic and eukaryotic systems. (Formerly offered as laboratory segment of Biology 503.)

354. Ecology and Evolution (3) I, II
Prerequisites: Biology 200A-200B, 215.
Fundamental concepts in population and community ecology and evolutionary biology. Not open to students with credit in Biology 353.

354L. Experimental Ecology and Evolution (2) I, II
One hour of discussion and three hours of laboratory.
Prerequisite: Credit or concurrent registration in Biology 354.
Methods of research in ecology and evolutionary biology; approaches to analysis of populations and communities.

356. Cell Biology (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.

358. California Flora (3)
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.)

361. Energy and Environment (3)
Prerequisites: A college course in biological sciences and a college course in physical sciences (chemistry preferred).
Ecological implications of energy extraction, use, and development. Emphasis on policy issues. (Formerly numbered Biology 316 and 330.)

362. Plants, Medicines, and Drugs (3)
Prerequisite: A college course in biological sciences.
Medicinal plants, toxic-poisonous plants, herbal medicines, psychoactive plants, preparation of medicines and mechanisms of action; current research results on medicinal plants and drugs used in diseases such as diabetes, cancer, and heart diseases.

365. Microorganisms in Human History (2)
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)
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. Not applicable to the biological sciences majors.

452. Bioscience Methodology (3)
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)
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 and Economic Botany (4)
Three lectures and three hours of laboratory.
Prerequisite: Biology 200B.
Plants of agricultural, economic, and historical importance. Topics include plant genetics, agricultural breeding and propagation techniques, vegetables and fruits, spices and herbs, beverage plants, wood, and plant fibers. Plant morphology, anatomy, and taxonomy. (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 (1)
Three 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)
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)
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)
Three lectures and three hours of laboratory.
Prerequisite: Biology 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)
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.)

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 200B.
Concepts and theories of aging in biological systems from the population to the molecular level.

495. Methods of Investigation (2)
One discussion and three additional hours to be arranged.
Prerequisites: Consent of instructor and senior standing.
Selection and design of individual research in biology or microbiology; oral and written reports. See Class Schedule for specific content. Maximum credit four units. (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 Cr/NC
Up to 20 hours per week in academic year, 40 hours per week in summer or winter sessions.
Prerequisites: Fifteen upper division units in biological sciences with grades of A or B and consent of instructor.
Practical laboratory experience in local industrial laboratories or in SDSU campus laboratories emphasizing current technology. Maximum credit five units.

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.)

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

513. Marine Microbiology (2)
Prerequisites: Biology 350 or an introductory course in microbiology and consent of instructor.
Microbiological population of estuary and ocean waters; interrelationships with other organisms and the physical and chemical environment. (Formerly numbered Microbiology 560.)

513L. Marine Microbiology Laboratory (2)
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 to 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)
Prerequisites: Biology 350 or an introductory course in microbiology and consent of instructor.
Taxonomy, comparative physiology and ecology of representative microorganisms found in various natural environments. (Formerly numbered Microbiology 510.)

521L. Advanced General Microbiology Laboratory (2)
Six hours of laboratory.
Prerequisite: Credit or concurrent registration in Biology 521.
Methods and procedures for the selective isolation and characterization of important groups of soil and water bacteria. (Formerly numbered Microbiology 510L.)

522. Evolution of Vertebrate Structure (4)
Two lectures and six hours of laboratory.
Prerequisite: Biology 200B.
Structural changes that have occurred in organ systems of vertebrates during the course of evolution. (Formerly numbered Zoology 506.)

523. Herpetology (4)
Three lectures and three hours of laboratory.
Prerequisites: Boology 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 211 and 260 for psychology majors.
Biological bases of animal behavior with emphasis on the ethological approach, including the evolution and adaptive significance of behavior. (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)
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.)

532. Genetics and Evolution (3)
Prerequisites: Biology 352 and 354.
Contributions of genetics to theory of evolution. Processes of microevolution and speciation. Topics include cytogenetics, and population, quantitative, molecular, and behavior genetics. (Formerly numbered Biology 549.)

533. Plant Structure and Function (3)
Two lectures and three hours of laboratory.
Prerequisite: 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.)

534. Plant-Soil Ecology (3)
Prerequisite: Biology 200B. Recommended: Geography 505.
Plant-soil relationships from an ecological perspective. Biotic interactions controlling soil fertility and plant growth.

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

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.
Prerequisite: Biology 354.
Biological, chemical, and physical considerations of inland waters. (Formerly numbered Biology 530.)

546. Population Biology (4)
Two lectures and six hours of laboratory.
Prerequisite: Biology 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.)

550. Prokaryotic and Eukaryotic Molecular Biology (4) I, II
Prerequisites: Biology 352 or 556; Biology 356 or 554; Chemistry 361A and 361B.
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)
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)
Six hours of laboratory.
Prerequisite: Credit or concurrent registration in Biology 552.
The culture, isolation, and characterization of viruses. (Formerly numbered Microbiology 535L.)

553. Molecular Approaches in the Medical Laboratory (3) I
One lecture and six hours of laboratory.
Prerequisites: Biology 350; 356 or 554 and 554L; Chemistry 361A, 361B.
Application of recombinant DNA and molecular cell biology techniques in modern medical laboratory: theory and practice.

554. Microbial Physiology (2) I, II
Prerequisites: Biology 350; 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)
Prerequisites: Chemistry 361A; Biology 350.
The genetics of bacteriophages and bacteria. (Formerly numbered Microbiology 515.)

556L. Bacterial and Viral Genetics Laboratory (2)
Six hours of laboratory.
Prerequisite: Credit or concurrent registration in Biology 556.
Experimental techniques in prokaryote and bacteriophage genetics. (Formerly numbered Microbiology 515L.)

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.)

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. Maximum credit six units. (Formerly numbered Biology 561.)

565. Topics in Comparative Physiology (3)
Prerequisite: Biology 356.
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. Maximum credit six units. See Class Schedule for specific content. (Formerly numbered Biology 562.)

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

569. Molecular Pharmacology (3)
Prerequisite: Biology 356. Recommended: Biology 567.
Molecular mechanisms of pharmaceutical agents. Emphasis on drugs that interact with nervous and endocrine systems.

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) 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)
Prerequisite: Biology 584 or 585.
Biology of the immune response and experimental basis for modern cellular immunology.

580. Advanced Anatomy (4)
Two lectures and six hours of laboratory.
Prerequisite: Biology 150 or 522.
Comprehensive dissection and study of human and cat cadavers with major emphasis on the regional approach. (Formerly numbered Zoology 507.)

581. Animal Viruses (4)
Two lectures and six hours of laboratory.
Prerequisite: Biology 552. Recommended: Biology 552L, 585, 589.
Animal virus identification and investigation, emphasizing cell culture, cytopathic effects and serology. (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)
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: Chemistry 361A.
Structure and function of the immunoglobulins and the chemical and physical nature of the antigen-antibody reaction. (Formerly numbered Biology 568.)

585. Immunology (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. (Formerly numbered Microbiology 540.)

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

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

592. Electron Microscopy (4)
Two lectures and six hours of laboratory.
Prerequisites: Physics 180A-180B and 182A-182B; Biology 350. Recommended: Biology 474 and 552.
Principles and techniques in the biological application of the electron microscope. (Formerly numbered Microbiology 590.)

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

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

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

597. Statistical Methods in Biology (3)
Two lectures and three hours of laboratory.
Prerequisite: Biology 350 or 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.)

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

GRADUATE COURSES
Refer to the Graduate Bulletin.

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, External Relations: Brown
Director, Graduate Programs: Barber
Director, Undergraduate Programs: 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, decision systems, finance, financial services, human resource management, information systems, management, marketing, production and operations management, real estate.

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

Minors in the following fields: accounting, business management, decision systems, finance, human resource management, information systems, marketing, production and operations management, real estate, small business management (available at Imperial Valley Campus only).

Certificate in accounting.

Certificate in business administration (available at Imperial Valley Campus only).

Certificate in personal financial planning.

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 nine lower division preparation for the business major courses — Accountancy 201, Financial Accounting Fundamentals; 202, Managerial Accounting Fundamentals; Finance 140, Business Law; Economics 101, Principles of Economics (Macro); Economics 102, Principles of Economics (Micro); Information and Decision Systems 180, Principles of Information Systems; Information and Decision Systems 290, Business Communication (not required for accounting majors); Mathematics 119, Elementary Statistics for Business; and Mathematics 120, Calculus for Business Analysis. These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C–. All students must achieve a passing score on a quantitative competency examination. Students must have completed 56 college units.

Supplemental admissions criteria must be met before students may declare an upper division major and be eligible for upper division courses. For current information concerning admissions criteria and procedures, contact the Undergraduate Planning and Advising Center in the College of Business Administration.

Transfer Credit

Lower Division: Courses clearly equivalent in scope and content to San Diego State University courses required for minors or as preparation for all business majors will be accepted from regionally accredited United States institutions and from foreign institutions recognized by San Diego State University and the College of Business Administration.

Upper Division: It is the policy of the San Diego State University College of Business Administration to accept *upper division transfer credits* where (a) the course content, requirements, and level are equivalent to San Diego State University courses and (b) where the course was taught in an American Assembly of Collegiate Schools of Business accredited program. Exceptions require thorough documentation evidencing the above standards.

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 coursework 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 four-point scale) or better in (a) all units attempted, (b) all units in the major, and (c) all units attempted at this college.
4. A maximum of six lower division units of accountancy courses may be used to satisfy degree requirements.
5. A minimum of 45 upper division units for the B.S. degree. (A minimum of 60 upper division units required for majors in Finance and Financial Services.)
6. One major.
7. Satisfactory completion of competency tests in mathematics and writing, or completion of appropriate courses designated in lieu thereof.
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. 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.
11. Application for graduation.

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–. Additional progress requirements must be met before a student is admitted to an upper division major. Also, before enrolling in one of the college's upper division classes, students must be competent in the operation of personal computers, including word processing and spreadsheets. These skills are required in upper division business courses.

Business administration majors may not complete a minor in the College of Business Administration.

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 coursework 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 24 units to include Economics 101, 102; Accountancy 201, 202; Management 350, 450; Marketing 370; and three units selected from Finance 323, Information and Decision Systems 360, Management 352.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Certificate in Business Administration

(Imperial Valley Campus)

This certificate is designed primarily for persons who want to gain an increased understanding of essential principles through upper division business courses, and for students who decide to go on to pursue the B.S. degree with a major in either management, finance, accounting, marketing, information systems, insurance, or real estate at the San Diego campus. For those not seeking the B.S. degree it provides a program designed to give self-improvement opportunities for the purpose of securing employment, promotion or upward mobility on the job.

All students seeking admission to the program must have successfully completed 56 transferable lower division units with a grade point average of 2.0. This includes completion of the lower division preparation required for any business administration major, i.e., Accountancy 201, 202; Finance 140; Information and Decision Systems 180, 290; Economics 101 and 102; Mathematics 119 or Economics 201, and Mathematics 120.

The Certificate will be awarded upon successful completion of the following courses: Finance 323; Information and Decision Systems 301 or 302; Management 350; Marketing 370; and three units selected from Finance 321, 589; or Management 356. (15 units.)

Courses

UPPER DIVISION COURSES
(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; Information and Decision Systems 301 or 302; Management 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; Information and Decision Systems 301 or 302; Management 350; Marketing 370; and consent of instructor.
Counseling of existing small businesses in conjunction with the Small Business Administration. Application of principles from all fields of business administration. Maximum credit six units.

499. Special Study (1-3) I, II
Prerequisite: Consent of instructor.
Individual study. Maximum credit six units.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Accountancy

Faculty

Emeritus: Brodshatzer, Brown, Dodds, Ferrel, Harned, Meier, Odmark, Snudden, Wright

Director: Capettini

The Vern Odmark Professor: Chow

Professors: Bailey (Dean), Ballew, Barnett, Butler, Capettini, Lamden, Lightner, K., Meigs, Samuelson, Shields, Toole, Whittenburg, Whittington, Williamson

Associate Professors: Lightner, S., Oestreich, Wong-Boren

Assistant Professors: Houston, Totterdale, Venable

Lecturers: Beanston, Ferrara, Tarantino

Offered by the Department

Master of Science degree in accountancy.

Major in accounting with the B.S. degree in business administration.

Teaching major in business for the single subject teaching credential.

Minor in accounting.

Certificate in accounting.

The Major

The major in accountancy provides basic concepts of accounting and business knowledge to students seeking professional careers in the field and the opportunity to gain the knowledge necessary to pass professional examinations in accounting.

There are three kinds of accountants: public, management, and government. Public accountants work for themselves, in partnerships, or with public accounting firms. Management accountants, also known as industrial or private accountants, work on salary for a single company or corporation. Government accountants are employed by federal, state and local governments to supply accounting services, or serve as investigators, bank examiners, and auditors.

The curriculum has been designed to offer courses in these three areas of specialization, as well as provide students with the essential principles of accounting.

The Certificate in Accounting program provides professional certification and training necessary for candidates preparing for the C.P.A. examination. Thirty units of coursework are required. Matriculated SDSU students may not enroll in this program. Enrollment is through the College of Extended Studies.

Growing with the increased complexity of the business world, accounting continues to offer a wide choice of careers and opportunities. Some of the more common specialities for accounting majors include auditors, cost accountants, controllers, systems and procedures accountants, and tax accountants.

Accounting Major

With the B.S. Degree in Business Administration
(Major Code: 05021)

Preparation for the Major. Accountancy 201 and 202; Economics 101 and 102; Economics 201 or Mathematics 119; Mathematics 120; Finance 140; Information and Decision Systems 180. (24 units.) These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C–. Additional progress requirements must be met before a student is admitted to an upper division major.

Upper Division Writing Requirement. Information and Decision Systems 490W with a grade of C (2.0) or better.

Major. A minimum of 55 upper division units to include Accountancy 310, 311, 312, 320, 410, 414, and 418; Finance 323; Information and Decision Systems 301, 302, and 490W; Management 350 and 405 or Business Administration 404; Marketing 370; Economics 320 or 321 or Finance 321; and at least one course selected from Accountancy 511, 512, 514, and 515. A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of business administration and economics. No more than 25 percent (32 units) of the student's degree requirements may be in upper division accounting courses.

Business Major

For the Single Subject Teaching Credential
With the B.S. Degree in Business Administration

All candidates for the single subject teaching credential in business must complete all requirements for the applicable specialization as outlined in this section of the catalog under the College of Education. Students must complete the requirements for a major in one of the five departments within the College of Business Administration. In consultation with the single subject credential adviser in the College of Business Administration, undergraduate students must develop programs which fulfill the State credential requirements. All undergraduate majors must demonstrate office skills proficiency. Finance 589, Personal Financial Planning, is required of all teaching credential majors.

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. (Information and Decision Systems 301 and 302 are required 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. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Permission to take business minors must be obtained from the business minor adviser in the college of the student's major.

Accounting Certificate

The purpose of the Accounting Certificate is to provide professional and postbaccalaureate certification to accounting and nonaccounting professionals in San Diego.

Students must apply and be admitted to the program before the completion of 18 certificate units. The certificate requires 30 units to include Accountancy 201, 202, 310, 311, 312*, 410, 414* (26 units) and electives selected from Accountancy 511, 512, 514, 515 (4 units). Accountancy 201 and 202 must be completed with a minimum grade of C and the certificate coursework must be completed with a minimum grade point average of 2.0.

Courses with relevant content may be substituted for the courses listed above with the approval of the certificate adviser. Courses in the certificate may not be counted toward the major or minor.

* Prerequisites waived for students in this program.

Courses

LOWER DIVISION COURSES

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. Financial Accounting Fundamentals (3) I, II, S

Theory and practice of accounting applicable to recording, summarizing, and reporting of business transactions for external reporting and other external uses. Asset valuation; revenue and expense recognition; various asset, liability, and capital accounts. Not open to students with credit in Accountancy 100, 210A, 210B, or 212. Preparation requirement for business majors.

202. Managerial Accounting Fundamentals (3) I, II, S

Prerequisite: Accountancy 201.

Selection and analysis of accounting information for internal use by managers. Using financial information for planning and control purposes.

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
(Intended for Undergraduates)

310. Intermediate Accounting I (4) I, II, S

Prerequisites: Minimum grade of C in Accountancy 201, 202.

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, 202; Information and Decision Systems 301, 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.

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.

320. Accounting Information Systems (4) I, II, S

Prerequisite: Information and Decision Systems 180.

Information systems requirements relevant to integrated accounting systems. Emphasis on accounting systems, designs, and controls.

410. Federal Income Tax I (4) I, II

Prerequisite: Minimum grade of C in Accountancy 310.

Taxation of individuals, including income, deductions, credits, social security taxes, and property transactions.

414. Auditing (4) I, II

Prerequisites: Information and Decision Systems 301, Accountancy 311, 320. Recommended: Accountancy 514.

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.

418. Economic, Political, and Control Issues in Accounting (4) I, II, S

Prerequisites: Accountancy 311, 312, 320, 410; concurrent registration in Accountancy 414.

Macro-accounting issues. Political environment under which financial statements are prepared. Economic consequences of accounting standards. Ethical and social issues in financial reporting. Objectives and economic consequences of tax policy. Regulation of auditors. Management control systems.

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

Prerequsite: 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
(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

Prerequisite: Accountancy 312.

Use of accounting information systems for managerial decision making. Introduction to decision-making situations which use accounting information for full or partial resolution. Consideration of uncertainty, decision theory and specific decision contexts. (Formerly numbered Business Administration 412.)

514. Advanced Accounting Problems (4)

Prerequisite: Credit or concurrent registration in Accountancy 311.

Problems involved in partnerships, consignments, consolidations, receiverships, foreign exchange, fund accounting, and other specialized areas. (Formerly numbered Accountancy 314 and 632.)

515. Accounting for Not-For-Profit Organizations (3) I, II

Prerequisite: Accountancy 310.

Principles of fund accounting useful in state and local governmental units, hospitals, 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 of six units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

Refer to the Graduate Bulletin.

Finance

Faculty

Emeritus: Fisher, H., Hungate, Schmier, Wijnholds
Chair: Vandenberg
Professors: Hippaka, Hutchins, Nye, Reints, Salehizadeh, Short, Sterk, Vandenberg, Warschauer (Associate Dean, Academic Affairs)
Associate Professors: Block, Bost, Cherin, Haddad, Sachdeva, Wilbur
Assistant Professors: Ely, Hanson, Hittle, Houston, Lenowitz, Weaver

Offered by the Department

Master of Science degree in business administration.
Master of Business Administration.
Major in finance with the B.S. degree in business administration.
Major in financial services with the B.S. degree in business administration.
Major in real estate with the B.S. degree in business administration.
Teaching major in business for the single subject teaching credential.
Minor in finance.
Minor in real estate.
Certificate in personal financial planning.

The Major

All forms of human endeavor involve finance to some degree. Within our economic system, finance is concerned with capital, which is money or property owned or used in business. Finance majors study both the sources and the uses of capital. The finance curriculum revolves around the valuation process in a free market system. Once an individual or company can value various alternatives, the allocation of resources and the decision process in business becomes much simpler.

Students who are interested in business should have a thorough understanding of the financial process. Upon graduation, students accept a wide variety of positions with business in general. The curriculum of the finance major is designed to give the student breadth in a variety of fields in addition to finance and business.

Employment prospects for graduates with finance majors are very good and forecasts remain encouraging. Graduates are typically found in six types of employment: large and small industrial firms (manufacturers of automobiles, steel, household appliances, and electronic equipment); service oriented firms (electric power, real estate and retail firms); financial institutions (banks, state and federally chartered savings and loan associations, and insurance companies); nonprofit enterprises (universities, labor unions, and foundations); and private businesses.

The diversity of entry level positions obtained by finance majors makes it difficult to describe a typical position. A major in finance does not limit career potential to banking or to any single area of business. A large number of individuals go to work for industrial companies in a variety of entry level positions that allow them to develop into top decision-making positions with those companies. A significant number of chief executive officers and other top officers of corporations have followed the "finance path" to the top.

Finance Major

With the B.S. Degree in Business Administration
(Major Code: 05041)

Preparation for the Major. Finance 140; Accountancy 201, 202; Economics 101, 102; Information and Decision Systems 180, 290; Mathematics 120 or 150; and Economics 201 or Mathematics 119. (27-29 units.) These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C−. Additional progress requirements must be met before a student is admitted to an upper division major.

Upper Division Writing Requirement. 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 Finance 321, 323, 325, 327, 329 or 425, 423; Accountancy 310; Economics 490; Information and Decision Systems 302; Management 350, 405; Marketing 370; and three units of electives selected from Finance. A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of business administration and economics. Of the 128 units required for the degree, at least 60 units must be at the upper division level.

Financial Services Major

With the B.S. Degree in Business Administration
(Major Code: 05043)

Preparation for the Major. Accountancy 201 and 202; Economics 101 and 102; Economics 201 or Mathematics 119; Finance 140; Information and Decision Systems 180 and 290; Mathematics 120 or 150. (27-29 units.) These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C−. Additional progress requirements must be met before a student is admitted to an upper division major.

Upper Division Writing Requirement. 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 46 upper division units to include Finance 323, 326, 327, 331, 542, 589; Accountancy 410*; Information and Decision Systems 302; Management 350, 405; Marketing 370; twelve units selected from Finance 421, 425, 431, 433, 435, 445, 521, 525; Accountancy 310, 511; and Economics 490. A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of business administration and economics. Of the 128 units required for the degree, at least 60 units must be at the upper division level.

* Prerequisite waived for this course.

Real Estate Major

With the B.S. Degree in Business Administration
(Major Code: 05111)

Preparation for the Major. Accountancy 201 and 202; Finance 140; Information and Decision Systems 180, 290; Economics 101 and 102; Economics 201 or Mathematics 119; and Mathematics 120 or 150. (27-29 units.) These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C−. Additional progress requirements must be met before a student is admitted to an upper division major.

Upper Division Writing Requirement. 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 Finance 323, 331, 335, 433, 435; Information and Decision Systems 302; Management 350, 405; Marketing 370; Public Administration 320; and 9-10 units selected from Accountancy 410; Finance 333, 340, 431, 437, 542; Marketing 373; Economics 422, 490; Geography 354, 559. A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of business administration and economics.

Business Major

For the Single Subject Teaching Credential
With the B.S. Degree in Business Administration

All candidates for the single subject teaching credential in business must complete all requirements for the applicable specialization as outlined in this section of the catalog under 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 589, 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 21 units to include Accountancy 201; Finance 321, 323, 326, 327, and 329; Mathematics 119.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Permission to take business minors must be obtained from the business minor adviser in the college of the student's major.

Real Estate Minor

The minor in real estate consists of a minimum of 18 units to include Economics 102; Finance 140, 331, 335, 433; and three units selected from Finance 333, 431, and 435.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Permission to take business minors must be obtained from the business minor adviser in the college of the student's major.

Personal Financial Planning Certificate

The purpose of this program is to provide a strong educational basis for persons desiring careers in the field of personal financial planning. Two categories of students are admitted: Matriculated students who have been admitted to an upper division College of Business Administration major and nonmatriculated students who work in the financial services industry may take the courses on a space-available basis.

Prerequisites to the program include Finance 140; Accountancy 201, 202; Economics 101, 102; Family Studies and Consumer Sciences 240; and Mathematics 119. (21 units.)

The certificate requires 25 units to include Accountancy 410*, Finance 323, 327, 445, 521, 525, 542, and 589.

Advising is provided by the Assistant Dean for Undergraduate Affairs for the College of Business Administration. All course units may be used for business majors where programmatically specified. Courses in the certificate may not be counted toward the minor.

* Prerequisite waived for students in this program.

Courses

LOWER DIVISION COURSE

140. Business Law (3) I, II
Legal institutions, nature and sources of law; product liability, contracts, sales, agency, partnership and corporation law. Ethical considerations with social and economic influences on domestic and foreign law in business torts.

UPPER DIVISION COURSES
(Intended for Undergraduates)

317. Individual Investing (3) I, II
Prerequisite: Upper division standing.
Investment alternatives. Financial institutions related to individual investing. Consumer protection and investing. Tax considerations. Building portfolios. Not open to business majors.

321. Managerial Economics (3) I, II
Prerequisite: Completion of lower division course requirements in major or minor.
Role of economic analysis in management decisions. Study of demand, cost, supply theories from a business viewpoint. Emphasis on managerial decision making.

323. Fundamentals of Finance (3) I, II
Prerequisite: Approved upper division business major, business minor, or another major approved by the College of Business Administration. Proof of completion of prerequisite required.
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. Intermediate Finance (4) I, II
Prerequisites: Finance 323 with minimum grade of C and Information and Decision Systems 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. Agency theory, option pricing, and arbitrage pricing in the decision process.

326. Financial Institutions Management (3)
Prerequisite: Finance 323 with minimum grade of C.
Management of financial institutions including savings and loan associations, mutual savings banks, credit unions, private pension plans, brokerage houses, investment companies, consumer credit institutions, federal credit agencies, and commercial banks. Emphasis on internal financial management of these institutions.

327. Investments (3) I, II
Prerequisite: Finance 323 with minimum grade of C.
Measures of risk and return. Methods of security analysis, valuation, and capital asset pricing model. Portfolio theory and management; stocks, bonds, options, and futures; hedging; mutual funds and partnerships; and investment taxation.

329. International Business Finance (3) I, II
Prerequisite: Finance 323 with minimum grade of C.
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.

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, 323, and 335.
Legal concepts and cases involving business ethics, professional liability, sales, negotiable instruments, property, security devices, federal and state securities regulation, creditors' rights, bankruptcy, insurance, wills, trusts, estates, and suretyship. Problem-solving techniques.

421. Portfolio Management and Security Analysis (3) I, II
Prerequisite: Finance 327.
Market efficiency. Risk and utility analysis. Portfolio theory. Security analysis under modern investment theory. Advanced debt management and options techniques. Financial options and futures. Asset allocation and performance evaluation. Limited partnership investment analysis.

423. Financial Analysis and Management (4) I, II
Prerequisites: Finance 325 and Economics 490.
Integration of various aspects of finance, application of financial theory. Financial decision making in the firm. Case study.

425. Business Forecasting (3) I, II
Prerequisites: Finance 323 with minimum grade of C, Information and Decision Systems 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 with minimum grade of C and 433.
Theories and methods of investment analysis applied to real estate. Integration of various aspects of real estate from the investors perspective. Use of computer models for investment decision making.

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
Prerequisite: Finance 323.
Fundamentals of estate planning, social and family implications of federal/state taxation of transfers of wealth by gift or at death. Study of trusts, conservatorships, guardianship and postmortem planning. How planning is affected by business assets, employee benefits, and insurance.

496. Selected Topics in Finance (1-4) 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
(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 with minimum grade of C.
Nature, construction, administration, and evaluation of employee benefit plans. Disability plans. Use of retirement plans. Social security and its integration with employee plans. Tax treatment of retirement plans.

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.

589. 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 Finance 389.)

GRADUATE COURSES
Refer to the Graduate Bulletin.

Information and Decision Systems

Faculty
Emeritus: Archer, Crawford, Gibson, Langenbach, LeBarron, Spaulding, Straub
Chair: Lackritz
Professors: Beatty, Chen, Flatley, Galbraith, Hatch, Lackritz, Sherrard, Sondak, Vik
Associate Professors: Feeney, Koster, Raafat, Schlesinger, Smith
Assistant Professors: Addo, Corbitt, Norman, Rittenhouse, Schooley
Lecturers: Briggs, Dalbey, Fisher, Wendelmoot

Offered by the Department
Master of Science degree in business administration.
Master of Business Administration.
Major in decision systems with the B.S. degree in business administration.
Major in information systems with the B.S. degree in business administration.
Major in production and operations management with the B.S. degree in business administration.
Teaching major in business for the single subject teaching credential.
Minor in decision systems.
Minor in information systems.
Minor in production and operations management.

The Majors

Good business decisions require good information. The purpose of an information system is to provide management with the information that is essential to decision making and to assist in interpreting that information.

Decision Systems. Decision systems, which has often been referred to as management science, quantitative methods, or operations research, continues to occupy an important role in many types of organizations. Most large organizations employ specialists with analytic skills beneficial to the decision-making process, and well-trained decision scientists are increasingly in demand. Decision scientists have backgrounds in decision systems, quality and productivity, quantitative methods related to business research, research design, statistical modeling, regression analysis, and hypothesis testing.

Students graduating with a major in decision systems can be expected to occupy jobs in both the public and private sectors: in major industries such as aerospace, computers, electronics, and other highly technical fields; in government; and in research settings.

Information Systems. Students interested in using computers to solve business problems and in devising new and more efficient solutions, should consider a major in information systems. The major is intended to prepare students for their first job in information systems, which is normally as a systems analyst. The systems analyst studies problems, designs solutions, and implements those solutions using computer hardware and software. The major will also prepare students for continued growth as a manager in information systems.

The employment outlook for information systems specialists is currently very good. Positive projections continue into the future. Many graduates who major in information systems assume the following positions: systems analysts plan the activities necessary to solve a business problem by structuring the problem in logical form, identifying the data needed, and specifying the procedures to be followed in programming the data processing; information systems specialists represent various departments of a business in assuring that each department's information processing needs are provided for effectively and efficiently; programmers and analysts plan and write computer programs to process business information; computer center managers direct the work of information processing in a company; and technical marketing specialists sell and coordinate the installation of computer systems.

Typical places of employment for information systems graduates include large businesses, government agencies, computer manufacturers, universities, and independent computer service organizations.

Production and Operations Management. Production and operations management majors develop the technical knowledge and skills necessary for professionals in production, production management, and operations management. Most organizations of any significant size have a departmental unit which performs this specialized function. Demand for well-trained production managers has steadily increased due to the need for more technical expertise in our changing sociotechnical world. Production and operations management specialists must have a background in material requirements planning, forecasting, aggregate planning, facility layout, scheduling, inventory control, quality control, and computer operations and capabilities.

Students graduating with a major in production and operations management would typically find employment in positions such as production manager, production specialist, operations manager, distributions specialist, operations specialist, or other related positions. Work settings include major manufacturing, financial service, and service industries.

Decision Systems Major

With the B.S. Degree in Business Administration
(Major Code: 05072)

Preparation for the Major. Accountancy 201, 202; Economics 101, 102; Finance 140; Information and Decision Systems 180, 290; Mathematics 119 or Economics 201; Mathematics 120 or 150. (27-29 units.) These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C−.

Upper Division Writing Requirement. Information and Decision Systems 396W with a grade of C (2.0) or better.

Major. A minimum of 42 upper division units to include Information and Decision Systems 301, 302, 306, 366, 385, 407, 463, 464, 465; Finance 323; Management 350, 405; Marketing 370; and three units selected from Information and Decision Systems 360, 406, 408, 461, 462, 480; Economics 307, 541; Finance 321, 425; Management 452, 458; Mathematics 362; and Psychology 470.

A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of economics and business administration.

Information Systems Major

With the B.S. Degree in Business Administration
(Major Code: 07021)

Preparation for the Major. Accountancy 201, 202; Finance 140; Information and Decision Systems 180, 280, 290; Economics 101 and 102; Mathematics 120 or 150; and Economics 201 or Mathematics 119. (30-32 units.) These prerequisite courses, except for Information and Decision Systems 280, may not be taken Cr/NC; the minimum grade in each class is C−, except for Information and Decision Systems 280. Additional progress requirements must be met before a student is admitted to an upper division major.

Upper Division Writing Requirement. Information and Decision Systems 396W with a grade of C (2.0) or better.

Major. A minimum of 51 upper division units to include Finance 323; Information and Decision Systems 301, 302, 306, 360, 384, 385, 396W, 406, 407, 480, 483, 492; Management 350, 405; Marketing

370; and three units of electives selected from Information and Decision Systems 383, 388, 391, 408, 463, 482, 491.

A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of business administration and economics.

Production and Operations Management Major

With the B.S. Degree in Business Administration
(Major Code: 05064)

Preparation for the Major. Information and Decision Systems 180, 290; Accountancy 201, 202; Economics 101, 102; Finance 140; Mathematics 119 or Economics 201; Mathematics 120. (27 units.) These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C−. Additional progress requirements must be met before a student is admitted to an upper division major.

Upper Division Writing Requirement. Information and Decision Systems 396W with a grade of C (2.0) or better.

Major. A minimum of 36-37 upper division units to include Information and Decision Systems 301, 302, 360, 385, 461, 462; Finance 323; Management 350, 405; Marketing 370; and six to seven units selected from Information and Decision Systems 306, 366, 388, 407, 463, 464, 465, Accountancy 312, Management 452, 453, Mechanical Engineering 546*.

A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of economics and business administration.

* Additional prerequisites required.

Business Major

For the Single Subject Teaching Credential
With the B.S. Degree in Business Administration

All candidates for the single subject teaching credential in business must complete all requirements for the applicable specialization as outlined in this section of the catalog under 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 589, 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.

Decision Systems Minor

The minor in decision systems consists of a minimum of 21 units to include Information and Decision Systems 301, 302; Mathematics 119, 120, and nine units selected from Information and Decision Systems 180, 366, 463, 464, 465.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Permission to take business minors must be obtained from the business minor adviser in the college of the student's major.

Information Systems Minor

The minor in information systems consists of a minimum of 21 units to include Information and Decision Systems 180, 280, 306, 385, 480; and six units selected from Information and Decision Systems 383, 384, 388, 391, 396W, 406, 407, 463, 482, 483, 491, 492.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. 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 21 units to include Accountancy 201; Economics 101, 102; Information and Decision Systems 301 or 302, 360; Management 350; and three units selected from Information and Decision Systems 461, 462, 464. Prerequisites to the minor include Economics 201 or Mathematics 119, and Mathematics 120.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Permission to take business minors must be obtained from the business minor adviser in the college of the student's major.

Courses

LOWER DIVISION COURSES

(Information and Decision Systems courses previously listed under the rubric of Information Systems)

180. Principles of Information Systems (3) I, II
Applications of computerized systems in business organizations. Basic concepts of computer organization, data processing systems, decision support systems, systems analysis, and computer programming. Programming in a computer language to solve business problems.

280. COBOL Programming (3) I, II
Prerequisite: Information and Decision Systems 180.
Introduction to COBOL programming. Emphasis on coding techniques, file organization, and report preparation.

290. Business Communication (3) I, II
Principles of effective communication applied to business and industrial messages. Organization and presentation of written and oral reports.

UPPER DIVISION COURSES
(Intended for Undergraduates)

(Information and Decision Systems courses previously listed under the rubric of Information Systems)

301. Statistical Analysis for Business (3) I, II
Prerequisites: Mathematics 120; Economics 201 or Mathematics 119. Approved upper division business major, business minor, or another major approved by the College of Business Administration. Proof of completion of prerequisites required.
Statistical methods applied to business decision making. (Formerly numbered Management 301.)

302. Introduction to Production and Operations Management (3) I, II, S
Prerequisites: Mathematics 120; Economics 201 or Mathematics 119. Approved upper division business major, business minor, or another major approved by the College of Business Administration. Proof of completion of prerequisites required.
Production and operations management. Master scheduling, material requirements planning, inventory management, capacity planning, production activity control, location analysis, automation, computerized systems, layout planning, linear programming, decision making, queuing, simulation, quality control, project planning.

306. Information Systems Analysis (3) I, II, S
Prerequisite: Credit or concurrent registration in Information and Decision Systems 385.
Systems development life cycle concept, with emphasis on analysis of requirements using structured methodology. Feasibility study, needs assessment, prototyping, application design alternatives. (Formerly numbered Information Systems 380.)

360. Project Management (3) I, II
Prerequisite: Credit or concurrent registration in Information and Decision Systems 302.
Management of small and large projects. Work breakdown structure milestones, project cost estimating and reporting, and single and multiple resource allocation/leveling. Computerized project management software. (Formerly numbered Management 360.)

366. Statistical Methodology for Business Research (3)
Prerequisite: Information and Decision Systems 301.
Design and application of quantitative methods related to business research, with an applied emphasis on factorial analysis of variance, covariance, experimental design, multiple regression, research reporting, and analysis of methodology appearing in business literature. (Formerly numbered Management 366.)

383. Advanced COBOL Programming (3)
Prerequisite: Information and Decision Systems 280.
Advanced application program development in COBOL emphasizing structured programming, table handling, and file access methods.

384. Comparative Programming Languages (3) I, II
Prerequisite: Information and Decision Systems 280.
Basic principles of programming language syntax and semantics. Background for learning new programming languages; understanding of specific environments into which programming languages fit.

385. Information Systems Software and Hardware Organization (3) I, II
Prerequisite: Completion of lower division courses required for majors and minors in the Department of Information and Decision Systems.
Functional characteristics and organization of hardware components; assembly language programming concepts; principles and functions of operating systems; system software and control of applications program environment. Not open to students with credit in Information Systems 485.

388. Office Automation Systems and Technologies (3)
Prerequisite: Credit or concurrent registration in Information and Decision Systems 385.
Basic concepts, tools, technologies, and techniques for improvement of office information systems. Office information systems including technological, organizational, managerial, engineering, implementation, and evaluation aspects.

391. System Documentation (3) I, II
Prerequisites: Information and Decision Systems 306 and 396W.
Structured approach to system documentation, documentation standards and control, on-line and automatic documentation, user interfacing in software documentation, electronic and nontraditional documentation techniques.

396W. Reporting Techniques for Business Professionals (3) I, II
Prerequisite: Information and Decision Systems 290. Proof of completion of prerequisite required.
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.)

406. Information Systems Design (3) I, II
Prerequisite: Information and Decision Systems 306.
Business information systems design, installation, and implementation as part of the systems development life cycle, with emphasis on structured design methodology.

407. Artificial Intelligence Applications in Business (3) I, II
Prerequisite: Credit or concurrent registration in Information and Decision Systems 385.
Basic artificial intelligence concepts, knowledge acquisition and representation, automated problem-solving and goal-seeking techniques, applications of artificial intelligence in business, expert systems, differences between data processing and artificial intelligence methodologies.

408. Computer Graphics in Business (3) I, II
Prerequisite: Information and Decision Systems 385.
Application of computer graphics to business, graphics in business reporting, graphics equipment and technology, graphics software, algorithmic manipulation of images, picture processing, principles of graphics interfaces. Case studies.

461. Operations Management (3) I, II
Prerequisite: Information and Decision Systems 360.
Use of tools for effective utilization of resources in manufacturing and service activities. Includes industrial engineering, project management, linear programming, waiting line models, learning curves, inventory models, and logistics. (Formerly numbered Management 461.)

462. Operation Scheduling and Control Systems (3) I, II
Prerequisite: Information and Decision Systems 360.
Materials management to include forecast error analysis, distribution requirements planning, capacity planning and control, cumulative charting, and shop floor control. (Formerly numbered Management 462.)

463. Management Science and Decision Systems (3)
Prerequisite: Information and Decision Systems 301 or 302.
Application of management science techniques in design of computerized decision support systems. Cases and examples from industry. (Formerly numbered Management 463.)

464. Quality and Productivity (3)
Prerequisite: Information and Decision Systems 301 or 302.
Applications of operations management techniques to improvement of quality and productivity. Total quality control and just-in-time systems. Cases from American and Japanese companies. (Formerly numbered Management 464.)

465. Simulation and Stochastic Modeling in Business (3)
Prerequisite: Credit or concurrent registration in Information and Decision Systems 302.
Applications of computer simulation and stochastic modeling techniques in business. Emphasis on queuing systems, inventory simulation, corporate planning, and other stochastic modeling techniques. Cases and examples from industrial applications.

480. Data Management Systems (3) I, II
Prerequisite: Information and Decision Systems 385.
Methodology for applying data base management systems in design of information systems. Analysis of data base applications from perspectives of system users and systems analysts.

482. Information and Decision Systems Practicum (3) Cr/NC
Prerequisites: Information and Decision Systems 385 and six additional upper division units in information and decision 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) I, II
Prerequisite: Information and Decision Systems 385.
Data communication system components; common carrier services and local area networks; economic, legal and technical issues in distributed information processing; analysis and design of data communication network applications; management and control of distributed data processing environment.

490W. Reporting Techniques for Accountants (3) I, II
Prerequisite: Twelve upper division units in accounting. Proof of completion of prerequisite required.

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.

491. Advanced Data Management Systems (3) I, II
Prerequisite: Information and Decision Systems 480.

Database management concepts; logical database design and entity/relationship model. Relational databases: data normalization; user's view implementation; evolution of commercial DBMS products. CODASYL databases: efficiency and complexity. Issues in database administration, concurrency control, recovery from failure, functions of database administrator.

492. Management of Information Systems (3) I, II
Prerequisites: Information and Decision Systems 306, credit or concurrent registration in Information and Decision Systems 480 and 483.

Role of information systems in organizations from management perspective: information systems administration, quality assurance, risk management, countermeasure components, security, and control.

496. Selected Topics in Information Systems (1-4) I, II
Prerequisite: Consent of department chair.

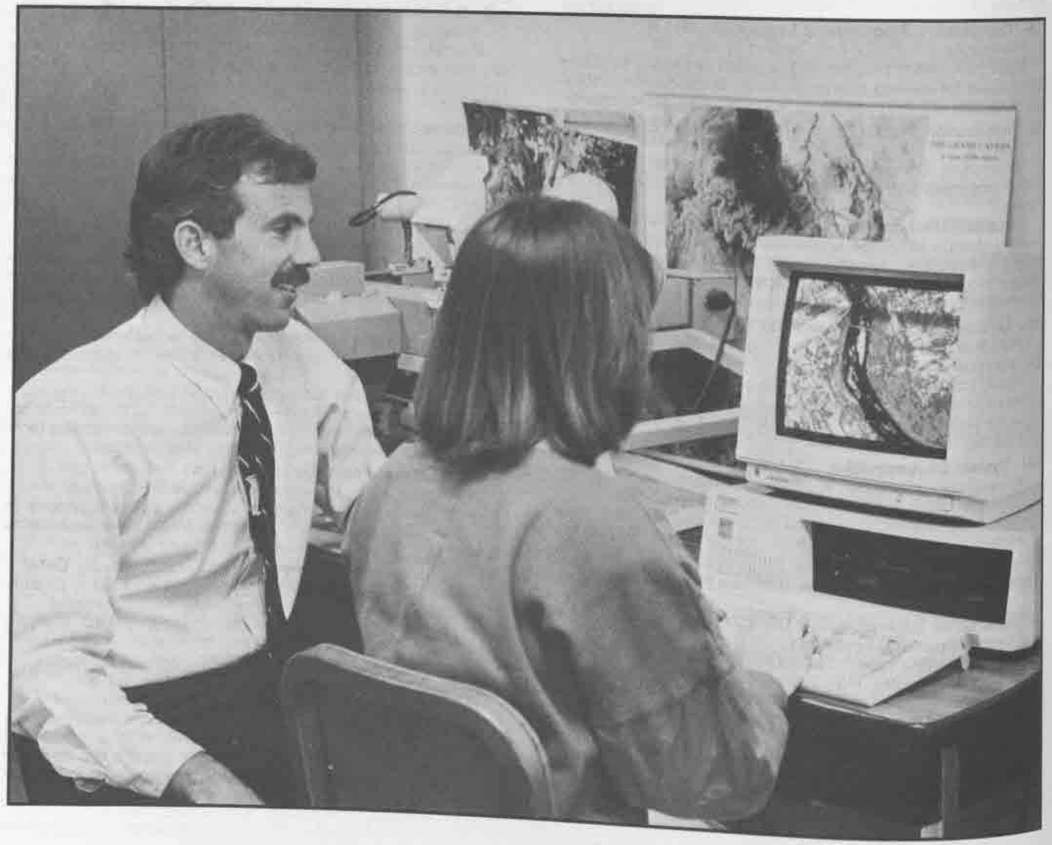
Selected areas of concern in information systems. See Class Schedule for specific content. May be repeated with new content with consent of department chair. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

498. Investigation and Report (1-3) I, II
Prerequisites: Senior standing and consent of instructor.

May be repeated with new content. Maximum credit six units.

A comprehensive and original study of a problem connected with information systems under the direction of one or more members of the information systems staff.

GRADUATE COURSES
Refer to the Graduate Bulletin.



Management

Faculty
Emeritus: Belcher, Pierson, Srbich
Chair: Wright
Professors: Atchison, Belasco, Ghorpade, Hampton, Mitton, Peters, Robbins, Unterman
Associate Professors: Brady, Butler, Hergert, Marino, Rhyne, Wright
Assistant Professors: De Noble, Ehrlich, Hatch
Lecturers: Grant, Teagarden

Offered by the Department.
Master of Science degree in business administration.
Master of Business Administration.
Major in human resource management with the B.S. degree in business administration.
Major in management with the B.S. degree in business administration.
Teaching major in business for the single subject teaching credential.
Minor in management.
Minor in human resource management.

The Majors

Managers are responsible for achieving organizational objectives by coordinating money, materials, machines, and most important of all, the efforts of people. Managers set objectives, establish policies, plan, organize, direct, communicate, and make decisions. Since their principal concern is solving problems, managers are continually defining problems and seeking solutions.

To be an effective manager, an individual needs a broad knowledge of the practice of management, the workings of business and the economy, and the behavior of people. The knowledge obtained in the bachelor's degree should be sufficient to qualify the student for a broad range of beginning managerial positions in business organizations. The graduate in management is prepared not only for managerial functions, but for those functions set within the context of a particular type of operation.

Recent government and private manpower studies indicate that the demand for professional managers should continue to increase. While the types of employment secured by management graduates are varied, a recent study conducted by the management department showed that many graduates have gone into the following types of positions:

Production and operations managers supervise manufacturing and service operations, and are responsible for scheduling production and operations activities and controlling operational costs;

Sales managers, hire, train, and supervise sales personnel, evaluate the work of sales people, and develop incentive programs;

Financial managers supervise operations in banks, security exchanges, credit unions, and savings and loan associations;

Merchandising managers supervise operations in retail stores;

Organization and management analysts design and evaluate organizational structures and jobs.

International managers supervise foreign-based manufacturing and/or marketing operations for American companies; and

Corporate planners develop strategic plans for corporations.

Human Resource Management is a functionally oriented major which prepares graduates to work in personnel departments as employment specialists, recruiters, job evaluators, compensation specialists, benefits analysts, training officers, labor relations specialists, and industrial relations and human resource managers. Human resource managers are concerned with human problems in business and government organizations. They work on problems concerning employee selection, union relations, pay/benefit scales, leadership, motivation, affirmative action, and equal opportunity.

Human Resource Management Major

With the B.S. Degree in Business Administration
(Major Code: 05151)

Preparation for the Major. Accountancy 201, 202; Economics 101,102; Finance 140; Information and Decision Systems 180, 290; Economics 201 or Mathematics 119 and 120 or 150. (27-29 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 Management 350, 352, 356, 405, 451, 452, 453, 454, 460; Finance 323; Information and Decision Systems 301, 302; Marketing 370; and six units from Management 456, 465, 467; Economics 380, 482, 483; Finance 525; Information and Decision Systems 366, 461, 462; Psychology 326, 470; Sociology 531.

A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of business administration and economics.

Management Major

With the B.S. Degree in Business Administration
(Major Code: 05061)

Preparation for the Major. Accountancy 201, 202; Finance 140; Information and Decision Systems 180, 290; Economics 101, 102; Economics 201 or Mathematics 119 and 120 or 150. (27-29 units.) Additional progress requirements must be met before a student is admitted to an upper division major.

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 45 upper division units to include Management 350, 352, 356, 405, 451, 454; Finance 323; Information and Decision Systems 301, 302; Marketing 370; and fifteen units selected with the approval of an adviser from the management faculty. Within this area, students may specialize in entrepreneurship, international business, organization and management analysis, management of not-for-profit organizations, small business management, and strategic management.

A minimum of 52 units of coursework applicable to the bachelor's degree must be completed outside the areas of business administration and economics.

Business Major

For the Single Subject Teaching Credential
With the B.S. Degree in Business Administration

All candidates for the single subject teaching credential in business must complete all requirements for the applicable specialization as outlined in this section of the catalog under 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 589, 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.

Human Resource Management Minor

The minor in human resource management consists of a minimum of 21 units to include Accountancy 201; Economics 101, 102; Management 350, 352; and six units selected from Management 452, 453, and 460.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Permission to take business minors must be obtained from the business minor adviser in the college of the student's major.

Management Minor

The minor in management consists of a minimum of 21 units to include Accountancy 100; Economics 101, 102; Management 350, 352, 356, and three units of 400-level management courses.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. 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.

Courses

LOWER DIVISION COURSE

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 (Intended for Undergraduates)

350. Management and Organization (3) I, II

Prerequisite: Approved upper division business major, business minor, or another major approved by the College of Business Administration. Proof of completion of prerequisite required.

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.

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. Not open to students with credit in Public Administration 330.

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.

405. Business Strategy and Integration (3) I, II

Prerequisites: Management 350, Finance 323, Information and Decision Systems 301 or 302, 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 Design and Change (3) I, II

Prerequisite: Management 350.

Management of organization design and development. Internal and external organizational factors such as environment, size, technology, power, politics, strategy, human resources, job design, and organization culture.

452. 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. Organizational Behavior and Interpersonal Processes (3) I, II, S

Prerequisite: Management 350.

Human behavior in organizations at the individual, interpersonal, and group level. Interpersonal skills as they relate to human motivation, influence, leadership, communication, group dynamics, and conflict resolution.

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.

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.

465. Formal Planning Systems (3)

Prerequisite: Management 350.

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 350.

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 350.

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.

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

Refer to the Graduate Bulletin.

Marketing

Faculty

Emeritus: Akers, Darley, Hale, McFall, Settle
Chair: Vanier
Professors: Barber (Director, Graduate Programs), Belch, G., Belch, M., Haas, Lindgren, Sciglimpaglia, Tyagi, Vanier, Wotruba
Associate Professor: Krentler
Assistant Professors: Apple, Kanwar, Saghafi, Varvoglis
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.

The Major

Marketing is defined as "the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods and services to create exchanges that satisfy individual and organizational objectives." (American Marketing Association, 1986)

The marketing major studies how products and services are developed, priced, promoted, distributed and sold. The process requires an understanding of buyer and seller behavior within the context of the overall market environment. Added emphasis is given to the important area of global markets with their own particular nuances.

Marketing is an essential part of every business. Not-for-profit organizations also have to market their products/services, and the marketing discipline addresses the special needs of such organizations.

The employment outlook for graduates in marketing continues to be very favorable in all areas, especially in sales for those who hold the bachelor's degree. Some of the more common career opportunities for marketing graduates include:

Sales, which is the most common source of employment for recent marketing graduates. Sales people supervise retailing operation in large department stores, serve as sales representatives for manufacturers and wholesalers, and sell a variety of services and equipment.

Advertising and promotion specialists such as copywriters assemble information on products and services, study the characteristics of potential consumers, and prepare written materials to attract attention and stimulate interest among customers; advertising managers supervise the promotional activities of retailers, wholesalers, or manufacturers; account executives represent advertising agencies in negotiating contracts with clients for advertising services, offer advice in problem areas, and serve as troubleshooters in disputes between clients and the agency; media directors coordinate the purchasing of space in newspapers and magazines and arrange for commercials on radio and television; and production managers supervise the work of copywriters, artists, and other members of an advertising team.

Market research specialists collect, analyze, and interpret data to determine potential sales of a product or a service. They organize and supervise surveys, study the results by using statistical tests, and prepare reports with recommendations for management.

Product specialist/managers plan and coordinate the marketing functions specific to particular product(s)/brands.

Physical distribution specialists are responsible for the warehousing of products, the packing of shipments, and the delivery of orders to retailers or consumers.

Purchasing specialists, commonly known as buyers, acquire the materials and the services that are essential to the operation of a business or organization.

Marketing Major

With the B.S. Degree in Business Administration
(Major Code: 05091)

Preparation for the Major. Accountancy 201, 202; Finance 140; Information and Decision Systems 180, 290; Economics 101, 102; Mathematics 120 or 150; and Economics 201 or Mathematics 119. (27-29 units.) These prerequisite courses may not be taken Cr/NC; the minimum grade in each class is C−. Additional progress requirements must be met before a student is admitted to an upper division major.

Upper Division Writing Requirement. 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 46 upper division units to include Finance 323; Information and Decision Systems 301, 302; Management 350, 405; Marketing 370, 371, 470, 471, 479; eighteen units selected from Marketing 372, 373, 375, 376, 377, 472, 473, 474, 475, 476, and 477. A minimum of 52 units of coursework 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
With the B.S. Degree in Business Administration

All candidates for the single subject teaching credential in business must complete all requirements for the applicable specialization as outlined in this section of the catalog under 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 21 units to include Accountancy 201; Marketing 370; Economics 102; and 12 units selected from Information and Decision Systems 301, Marketing 371, 372, 373, 375, 376, 377, 470, 472, 473, 474, 475, 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. A minimum of six upper division units must be completed at San Diego State University. Students with a major in the College of Business Administration may not complete a minor in the College of Business Administration. Permission to take business minors must be obtained from the business minor adviser in the college of the student's major.

Courses

LOWER DIVISION COURSE

201. Fundamentals of Personal Selling (3) I, II
Personal selling process and skills needed for effective selling. Traditional steps in selling, communications skills, ethics, and time management for salespersons. May not be used to complete the major in business administration.

UPPER DIVISION COURSES
(Intended for Undergraduates)

370. Marketing (3) I, II
Prerequisite: Approved upper division business major, business minor, or another major approved by the College of Business Administration. Proof of completion of prerequisite required. Marketing majors must complete this course with a minimum grade of C (2.0).
Function of marketing in the organization and in society. Topics include market analysis and consumer behavior, product planning, pricing, promotion, distribution, and international marketing.

371. Consumer Behavior (3) I, II
Prerequisite: Marketing 370 with a minimum grade of C (2.0).
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 (2.0).
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 (2.0).
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.

375. Purchasing and Buying (3) I, II
Prerequisites: Marketing 370 with a minimum grade of C (2.0) 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 (2.0).
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 (2.0).
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 (2.0) in Information and Decision Systems 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 (2.0).
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 (2.0) 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 (2.0).
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 (2.0).
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
Refer to the Graduate Bulletin.

Chemistry

In the College of Sciences

The Department of Chemistry is on the approved list of the American Chemical Society.

Faculty

Emeritus: Harrington, Isensee, Joseph, Rowe, Spangler, Walba, Wick

Chair: Stewart

Professors: Abbott, Bennett, Cobble, Coffey, Dahms, Grubbs, Hellberg, Jensen, Jones, Landis, Laub, Lebherz, Malik, Malley, Mathewson, O'Neal, Richardson, Ring, Roeder, Sharts, Stewart, Stumph, Wadsworth, Woodson

Associate Professors: Chatfield, Cole, Tong

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.

The Major

Through the study of chemistry students can better understand their environment and develop new materials that provide for a higher quality of life. Chemists are involved in a wide range of careers in research, development and the production of new goods. Basic chemical research provides society with discoveries of new substances and the means to predict their chemical and physical properties. In developmental chemistry, professionals find ways to put them to use. There are careers in methods of production to provide these materials to society in a cost-effective way. In each of these areas, there are subspecialties in analytical, biochemical, inorganic, organic, and physical chemistry.

The Department of Chemistry offers five degree programs leading to the Bachelor of Arts degree, the Bachelor of Science degree, the Master of Arts degree, the Master of Science degree, and the Doctor of Philosophy degree (with the University of California, San Diego).

There are several options available in the undergraduate program for those wishing either a major or a minor in chemistry. A chemistry major with the Bachelor of Science degree and certificate of the American Chemical Society is designed to qualify students for many types of positions as chemists and for admission to graduate study.

The chemistry major with the Bachelor of Arts degree and certificate of the American Chemical Society is specifically designed to prepare students for careers and graduate work requiring a strong chemistry background. This program requires preparatory courses in botany and zoology, in addition to chemistry, physics, and mathematics classes. With an appropriate choice of electives, graduates can meet the requirements for admission to medical, dental and pharmaceutical schools. A minor in biology is recommended.

The use of chemistry electives allows a student to focus on a particular area in chemistry such as analytical chemistry, biochemistry, bioinorganic chemistry, chemical physics, inorganic chemistry, organic chemistry, or physical chemistry.

Chemical Physics Major

With the B.S. Degree in Applied Arts and Sciences (Major Code: 19081)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." Individual master plans for each student are filed with the chemistry and physics undergraduate advisers and the Evaluations Office.

Preparation for the Major. Chemistry 200, 201, 231, 251; Mathematics 150, 151, 252, 253; Physics 195, 195L, 196, 196L, 197, 197L (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 42 upper division units to include Chemistry 410A-410B, 431, 457, 520A, 550; Mathematics 341A; Physics 311, 350A, 354A-354B, 357, 400A, 460. Recommended: Mathematics 341B.

Chemistry Major

With the B.S. Degree in Applied Arts and Sciences (Major Code: 19051) and Certificate of the American Chemical Society

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

Preparation for the Major. Chemistry 200, 201, 231, 237, and 251; Mathematics 150, 151, and 252; and Physics 195, 195L, 196, 196L, 197, 197L. (45 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 36 upper division units to include Chemistry 410A-410B, 417, 431, 437, 457, 520A-520B, 550, 560A, one unit of 497, and eight units of upper division electives in chemistry. Six of the eight units may be in related subjects with the approval of the department.

NOTE: See following page for recommended sequence of courses for the **B.S. DEGREE AND CERTIFICATE.**

Emphasis in Biochemistry

Preparation for the Major. Chemistry 200, 201, 231, 237, 251; Mathematics 150, 151, 252; Physics 195, 195L, 196, 196L, 197, 197L; Biology 200A, 200B. (53 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 36 upper division units to include Chemistry 410A-410B, 431, 457, 550, 560A-560B, 567; Biology 352*; one unit of Chemistry 497 or 498; and nine units selected from Chemistry 520A, 537; Biology 350, 550, 551, 551L, 552, 552L, 556, 560, 561, 561L, 563, 563L, 564, 576, 577, 581, 582, 590, 592, 593, 594.

* Chemistry 560A replaces Chemistry 361A as a prerequisite; Chemistry 410A replaces Biology 215 as a prerequisite.

OUTLINE FOR THE B.S. DEGREE AND CERTIFICATE

First year	Units 1st Sem.	Units 2nd Sem.
Chemistry 200	5	—
Chemistry 201	—	5
† Mathematics 150, 151	5	4
Physics 195, 195L	—	4
# General Education	6	3
	16	16

Second year	Units 1st Sem.	Units 2nd Sem.
Chemistry 231, 237	5	—
Chemistry 251	—	5
Chemistry 431, 437	—	5
Mathematics 252	4	—
Physics 196, 196L	4	—
Physics 197, 197L	—	4
# General Education	3	3
	16	17

Third year	Units 1st Sem.	Units 2nd Sem.
Chemistry 410A-410B	4	3
Chemistry 560A	3	—
Chemistry Elective	—	3
© American Institutions	3	3
# General Education	6	6
	16	15

Fourth year	Units 1st Sem.	Units 2nd Sem.
Chemistry 417	—	2
Chemistry 457	2	—
Chemistry 497	1	—
Chemistry 520A-520B	3	3
Chemistry 550	2	—
Chemistry Electives	3	2
General Electives	—	5
# General Education	6	3
	17	15

Refer to catalog section on General Education requirements. The department strongly recommends that students take German 100A-100B for seven units of credit under the Humanities section of General Education.

† Some students will be required to take Mathematics 104 or 140 or both in their first semester because of failure to qualify on the mathematics placement examination. The appropriate number of units should then be subtracted from General Electives.

© 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.

OUTLINE FOR THE A.B. DEGREE AND CERTIFICATE

First year	Units 1st Sem.	Units 2nd Sem.
Chemistry 200	5	—
Chemistry 201	—	5
† Math. 104, 140, 150	5	5
Physics 195, 195L	—	4
# General Education	6	3
	16	17

Second year	Units 1st Sem.	Units 2nd Sem.
Chemistry 231, 237	—	5
Chemistry 251	5	—
Mathematics 151, 252	4	4
Physics 196, 196L	4	—
Physics 197, 197L	—	4
# General Education	3	3
	16	16

Third year	Units 1st Sem.	Units 2nd Sem.
Chemistry 410A-410B	4	3
Chemistry 431, 437	5	—
© American Institutions	3	3
# General Education	3	9
	15	15

Fourth year	Units 1st Sem.	Units 2nd Sem.
Chemistry 417	—	2
Chemistry 457	2	—
Chemistry 497	1	—
Chemistry 520A-520B	3	3
Chemistry 550	2	—
General Electives	4	3
# General Education	3	6
	15	14

Refer to catalog section on General Education requirements. The department strongly recommends that students take German 100A-100B for seven units of credit under the Humanities section of General Education.

† Students eligible to take Mathematics 150 in their first semester should do so and substitute for Mathematics 104 and/or 140 two to five units of general electives.

© 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
(Major Code: 19051)
and Certificate of the American Chemical Society

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

Preparation for the Major. Chemistry 200, 201, 231, 237, 251; Mathematics 150, 151, 252; and Physics 195, 195L, 196, 196L, 197, 197L. (45 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 25 upper division units in chemistry to include Chemistry 410A-410B, 417, 431, 437, 457, 520A-520B, 550; one unit of 497.

NOTE: See preceding page for recommended sequence of courses for the **A.B. DEGREE AND CERTIFICATE.**

Chemistry Major

With the A.B. Degree in Applied Arts and Sciences
(Major Code: 19051)

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. Chemistry 200, 201, 231, 237, 250; Physics 195, 195L, 196, 196L, 197, 197L; Mathematics 104, 140, 150, 151, 252; Biology 200A, 200B. (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 24 upper division units in chemistry to include Chemistry 410A-410B, 417, 431, 457, 550, and seven units of electives in chemistry. Chemistry 361A-361B or 560A-560B is recommended for all premedical students.

Minor. A minor in biology is expected for preprofessional students.

Chemistry Major

For the Single Subject Teaching Credential in Physical Sciences With the A.B. or B.S. Degree in Applied Arts and Sciences
(Major Code: 19051)

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. A minimum of six upper division units must be completed at San Diego State University.

** Additional prerequisites in mathematics and physics required for these courses.

Graduation with Distinction

A student desiring to graduate with Distinction in Chemistry must meet the university requirements listed in the section of this catalog on "Graduation Requirements" and in addition have completed four units of Chemistry 498 by the time of graduation and be recommended by the faculty member directing the Chemistry 498 project.

Courses

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.

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)

361A-361B. Fundamentals of Biochemistry (3-3) I, II
Prerequisites: Chemistry 230 or 231. Chemistry 361A is prerequisite to Chemistry 361B.
The chemistry of intermediary metabolism and its regulation. Not open to students with credit in Chemistry 560A-560B.

402. Chemical Literature (2)
Prerequisite: Upper division standing in chemistry.
Availability, type, scope, and use of chemical literature with emphasis on chemical abstracts, Beilstein, Gremlin, science citation indexes, patent literature, and secondary review literature. Description of computerized chemistry data bases and use of remote terminals to access data bases. (Formerly numbered Chemistry 502.)

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.)

417. Advanced Physical Chemistry Laboratory (2) II
Six hours of laboratory.
Prerequisites: Chemistry 410B, 457, and 550.
Experimental physical chemistry. Emphasis on use of instruments, record keeping, report writing, and individual initiative in observing results. (Formerly numbered Chemistry 457B.)

431. Organic Chemistry (4) I, II
Three lectures and three hours of laboratory.
Prerequisite: Chemistry 231.
Continuation of Chemistry 231.

437. Organic Chemistry Laboratory (1) I, II
Three hours of laboratory.
Prerequisite: Open only to students enrolled concurrently in Chemistry 431.
Theory and practice of laboratory operations.

457. Instrumental Methods of Chemical Analysis Laboratory (2) I
Six hours of laboratory.
Prerequisites: Chemistry 431 and credit or concurrent registration in Chemistry 410B; concurrent registration in Chemistry 550.
Application of instrumental methods of chemical separations and analysis frequently used in all subdisciplines of chemistry. (Formerly numbered Chemistry 457A.)

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.

497. Senior Laboratory Project (1-3) I, II, S Cr/NC
Three hours of laboratory per unit.
Prerequisite: Three one-year chemistry courses which have an associated laboratory.
Individual laboratory investigation in analytical, inorganic, organic, or physical chemistry or in biochemistry using advanced laboratory techniques with a final written report of the investigation.

498. Senior Project (1-3) I, II Cr/NC
Prerequisite: Three one-year courses in chemistry.
An individual investigation and report on a problem. Maximum credit six units.

499. Special Study (1-3) I, II
Prerequisite: Consent of instructor. Open only to students who have shown ability to do A or B work in Chemistry.
Individual study. Maximum credit six units.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

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 410A.
Industrial stoichiometry; fluid flow and heat transfer as applied to unit operations such as evaporation, distillation, extraction, filtration, gas-phase mass transfer, drying, and others. Problems, reports, and field trips.

501. Chemical Oceanography (3)
Three lectures and occasional field trips.
Prerequisites: Chemistry 201 and 231. Strongly recommended: Chemistry 250 or 251. Recommended: Chemistry 410B and Oceanography 320 or 541.
The application of the fundamentals of chemistry to the study of oceans.

510. Advanced Physical Chemistry (3)
Prerequisite: Chemistry 410B.
Mathematical tools essential to solving problems in chemical thermodynamics, statistical mechanics, chemical kinetics, quantum chemistry and molecular structure and spectroscopy, with applications.

520A. Inorganic Chemistry (3) I
Prerequisite: Credit or concurrent registration in Chemistry 410B.
The physical basis of the periodic system, complex inorganic compounds, and the nature of the chemical bond.

520B. Inorganic Chemistry (3) II
Prerequisite: Chemistry 520A.
An advanced systematic study of representative and transition elements and their compounds.

530. Theoretical Organic Chemistry (3)
Prerequisites: Chemistry 410A and 431. Recommended: Credit or concurrent registration in Chemistry 410B.

Electronic and physical properties of organic molecules; structure-reactivity correlations: Electronic structure of molecules (qualitative molecular orbital theory); stereochemistry; and linear free energy relationships.

537. Organic Qualitative Analysis (4)
Two lectures and six hours of laboratory.

Prerequisites: Chemistry 431 and credit or concurrent registration in Chemistry 410A. Chemistry 417 and 457 recommended.

Chemical, physical, and spectral methods discussed and employed to determine structure of organic compounds. Purification and separation techniques stressed.

550. Instrumental Methods of Chemical Analysis (2) I
Prerequisites: Chemistry 431 and credit or concurrent registration in Chemistry 410B; concurrent registration in Chemistry 457 for undergraduate students only.

Theory and application of those instrumental methods of chemical separation and analysis most frequently used in all subdisciplines of chemistry.

551. Advanced Analytical Chemistry (3) II
Prerequisite: Chemistry 550.

Expanded treatment of instrumental methods for separation and quantification not covered in Chemistry 550. Non-instrumental separations, quantitative organic microanalysis, sampling theory and techniques, reaction rate applications and interpretation of experimental data.

560A-560B. General Biochemistry (3-3)
Prerequisites: Chemistry 431 and credit or concurrent registration in Chemistry 410A.

The structure, function, metabolism, and thermodynamic relationships of chemical entities in living systems. Not open to students with credit in Chemistry 361A-361B.

567. Biochemistry Laboratory (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 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 of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Chinese

In the College of Arts and Letters

Faculty
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 coursework is Chinese 101, 202, and 303. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

High School Equivalents

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high school courses will not count as college credit toward graduation.

Secondary school language courses can be used as follows:

1. The first ***two years*** of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.
2. The first ***three years*** of high school level language count as the equivalent of the first two college semesters, although students with fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not receive credit for the first semester college course unless at least five years separate the last high school course and the first college course.
3. ***Four years*** of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

Courses

LOWER DIVISION COURSES

Native speakers of 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
Chair: Genovese
Professors: Eisner, Genovese, Hamilton, Schaber
Lecturer: Gingras

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.

The Major

Classics literally means works of the first class or rank. As a university discipline, classics is the study of the languages, literatures, and civilizations of ancient Greece and Rome.

Classics is the oldest formal academic curriculum and was the basic curriculum for students at Harvard College when it was founded as America's first institution of higher learning. Just as the Romans drew inspiration from the poets, philosophers, artists, and heroes of Greece – Homer, Plato, Praxiteles, Alexander – so too medieval Europeans studied the Romans – Vergil, Cicero, Caesar. Then, after ancient Greek was reintroduced in the Renaissance, the classical model was established as the standard for modern Western civilization.

We see the living results today in republican democracy, in drama and literature, in traditional art and architecture, and even in religion and customs. The languages of most of the Western world are descendants of Latin, and English itself derives most of its vocabulary from Latin and Greek.

Because of the basic truths and disciplined proportions cultivated by classical authors and artists, their simple yet powerful themes have assured their works lasting relevance through the centuries. Classics students share with the greatest hearts and minds of Europe and America the oldest traditions of the humanities and the liberal arts, that is, the study of uniquely human accomplishments and the skills of free citizens able to choose their futures as truly educated persons, not merely as trained graduates.

Although the prime purpose of a major in classics is to satisfy the quest for values by orienting one to the fundamental intellectual and spiritual legacy of Western civilization, classics graduates enjoy a wide range of professional career choices. Aside from preparation for graduate degrees in history, language, literature, and philosophy, as well as classics, majors in this field may look forward to renewed demands for teaching Latin and the classical world in the high schools.

Many classics majors find themselves incomparably prepared for law school, and with supplementary coursework in business, economics, or information systems, a classics graduate is very competitive in the world of business. In fact, the best firms now seek out broadly educated graduates from challenging programs for their greater executive potential.

Classics graduates also have a distinct advantage in the world of the printed word as editors, librarians, journalists, and technical writers. Opportunities are also available in public relations, mass communications, government, and other fields where general knowledge, insight, perspective, and a facility with language serve not only the public good but one's own success.

High School Equivalents

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high school courses will not count as college credit toward graduation.

Secondary school language courses can be used as follows:

1. The first ***two years*** of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.
2. The first ***three years*** of high school level language count as the equivalent of the first two college semesters, although students with fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not receive credit for the first semester college course unless at least five years separate the last high school course and the first college course.
3. ***Four years*** of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

Advising

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

Classics Major

With the A.B. Degree in Liberal Arts and Sciences (Major Code: 15041)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

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 coursework for preparation for the major plus one language course in the major.

Upper Division Writing Requirement. Passing the University Writing Examination or one of the following courses with a grade of C (2.0) or better: English 304W, History 430W.

Major. A minimum of 30 upper division units to include Classics 320, 330, History 500A-500B, and Philosophy 401 (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 coursework for preparation for the major plus one language course in the major.

Upper Division Writing Requirement. Passing the University Writing Examination or one of the following courses with a grade of C (2.0) or better: English 304W, History 430W.

Major. A minimum of 30 upper division units to include Classics 320 and History 500A; 9-12 additional units selected from classics, History 500B, or Philosophy 401; 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 coursework for preparation for the major plus one language course in the major.

Upper Division Writing Requirement. Passing the University Writing Examination or one of the following courses with a grade of C (2.0) or better: English 304W, History 430W.

Major. A minimum of 30 upper division units to include Classics 320 and History 500B; 9-12 additional units selected from classics, History 500A, or Philosophy 401; 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 coursework for preparation for the major plus one language course in the major.

Upper Division Writing Requirement. Passing the University Writing Examination or one of the following courses with a grade of C (2.0) or better: English 304W, History 430W.

Major. A minimum of 30 upper division units to include Classics 320; nine additional units selected from classics, History 500A, 500B, or Philosophy 401; nine units of Greek; and nine units of Latin.

Minor. A minor in art (history), comparative literature, English, foreign language, history, philosophy, or religious studies is recommended with this major.

Classics Major

For the Single Subject Teaching Credential in Foreign Languages With the A.B. Degree in Liberal Arts and Sciences (Major Code: 15041)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under 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.

Concentration in Latin

Preparation for the Major. Classics 101L-202L or 250L. (8-10 units.)

Foreign Language Requirement. The foreign language requirement is automatically fulfilled through coursework for preparation for the major plus one language course in the major.

Upper Division Writing Requirement. Passing the University Writing Examination or one of the following courses with a grade of C (2.0) or better: English 304W, History 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, 496C (maximum of 9 units for 496C and 496L), History 500A, or Philosophy 401.

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 (nonlanguage) and three to six units from Anthropology 478, Art 568, History 500A, 500B, Philosophy 401, 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. A minimum of six upper division units must be completed at San Diego State University.

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 (nonlanguage), History 500A, 500B, or Philosophy 401.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Foreign Language Requirement for the 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.

Courses

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) I

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. Our Classical Heritage (3) I, II
Greek and Roman art, literature, and institutions as reflected in the Western tradition.

202G. Elementary Greek II (5) II
Prerequisite: Classics 101G.
Continuation of Greek grammar with selections illustrating syntax and style. Not open to students who have completed four years of high school ancient Greek unless the fourth course was completed five or more years ago. Not open to students with credit in Classics 250G.

202L. Elementary Latin II (5) II
Prerequisite: Classics 101L.
Continuation of Latin grammar with selections illustrating syntax and style. Not open to students who have completed four years of high school Latin unless the fourth course was completed five or more years ago. Not open to students with credit in Classics 250L.

250G. Accelerated Elementary Greek (8) Extension S
Offered only in Extension.
Intensive one-semester introduction to ancient Greek, emphasizing basic grammar, vocabulary, syntax. Preparation for Classics 303G. Not open to students who have completed three years of high school ancient Greek unless the third course was completed five or more years ago. Not open to students with credit in Classics 101G and 202G.

250L. Accelerated Elementary Latin (8) Extension S
Offered only in Extension.
Intensive one-semester introduction to Latin, emphasizing basic grammar, vocabulary, syntax. Preparation for Classics 303L. Not open to students who have completed four years of high school Latin unless the fourth course was completed five or more years ago. Not open to students with credit in Classics 101L and 202L.

296. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.
C. Experimental Topics in Classics.
G. Experimental Topics in Greek.
L. Experimental Topics in Latin.

UPPER DIVISION COURSES
(Intended for Undergraduates)

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. Classical 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.

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 Health and Human Services

The clinical services area is accredited by the American Speech-Language-Hearing Association.

Faculty
Emeritus: Earnest, Kopp, Pfaff
Chair: Seitz
Professors: Hodson, Muller, Nichols, Riedman, Seitz, Thile
Associate Professors: Allen, Christensen, Jones, Kramer, Novak
Assistant Professors: Cheng, Davies, Williams
Lecturers: Fischer, Frank, Launer, Woolf
Adjunct: Murry, Ruhm, Schiff, Singh

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.

The Major

Speech and language pathology, audiology, and education of the hearing impaired are professions which identify, help, and study persons with communicative disorders. Those entering these professions should possess a strong motivation to help individuals with genetically, physically, or psychologically caused communication problems. Preparation involves acquiring the knowledge and skills necessary to assume responsibility for assessment, education and rehabilitation of the speech, language, and hearing handicapped.

The bachelor's degree serves as the basis for graduate and professional study in communicative disorders. There are no employment opportunities for holders of the bachelor's degree. A school credential or a master's degree, national certification and state licensure are needed for professional practice.

The undergraduate curriculum is broad, intensive, and rigorous, involving coursework on normal and disordered speech, language, and hearing, as well as clinical procedures. All communicative disorders majors cover a set of general studies in early coursework (16 units) before specialization (24 upper division units). Students interested in the communicative disorders program are advised to take college level courses in anatomy, biology, psychology, English, physiology, linguistics, physics, and mathematics. Studies leading to private practice, hospital work, industrial work, work in school settings, or preparation for the master's degree are similar in many ways; it is the area of specialization that serves to differentiate courses of study.

The communicative disorders minor is open to all majors but is strongly recommended for those in special education or the social and behavioral sciences who wish to broaden their competencies in a related applied discipline.

The master's degree is an advanced degree for those wishing to work professionally as a speech-language pathologist, speech and hearing scientist, audiologist and/or deaf educator.

The Bilingual Certificate Program provides the theoretical background and practical experience that will enable qualified speech-language pathologists to work effectively with children from bilingual and multicultural communities.

Positions in communicative disorders are available in many public and private settings working with the speech, language, and hearing impaired and the deaf-blind. Graduates with certification or licensure work in rehabilitation centers, schools, hospitals, private agencies, private practice, industry, research, and university teaching and research centers. Career opportunities are particularly good for minority, bilingual or bicultural persons.

Communicative Disorders Major

With the A.B. Degree in Applied Arts and Sciences
(Major Code: 12201)

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 Departmental Placement Examination, Part I; Communicative Disorders 106 and 205; Physics 201; Psychology 101 and 260. (16 units.) Psychology 270 is recommended for students planning to apply for the graduate program in communicative disorders.

Upper Division Writing Requirement. Communicative Disorders 396W with a grade of C (2.0) or better, or passing the University Writing Examination.

Major. A minimum of 24 upper division units in communicative disorders to include Communicative Disorders 320, 321, 322, 340, 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. A minimum of six upper division units must be completed at San Diego State University.

* Prerequisites for this course waived for students in this minor.

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 coursework 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 451; 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. Courses in the certificate may not be counted toward the minor.

Credentials

The Department of Communicative Disorders offers academic and practica coursework applicable to two credentials in the Ryan Credential Program. Students desiring to work in the public schools with speech, language, or hearing-impaired pupils may choose the Special Education Specialist Credential for the Communication Handicapped (CH) or the Clinical-Rehabilitative Services Credential (C-RS). Each credential is competency-based, that is, specified competencies have been identified as requirements for areas of specialization by the Commission for Teacher Credentialing. Candidates may satisfy institution requirements, therefore, by either satisfactory completion of required courses or their equivalency, or by demonstrating equivalent competencies by experience or examination. Candidates may enter the CH or C-RS credential programs at undergraduate or graduate levels.

Each credential has designated areas of specialization. Students wishing to prepare to be Teachers of the Deaf or Deaf-Blind are obliged to meet the requirements of the CH credential. Students preparing to serve as School Audiologists must follow the C-RS credential program. Students desiring preparation as itinerant Language, Speech and Hearing Specialists or as Classroom Teachers of Severe Language Handicapped (or Aphasic) (Special Class Authorization) (SCA) pupils may pursue either the CH or C-RS Credential Program.

Special Education Specialist Credential for the Communication Handicapped
(Credential Code: 00461)

The Special Education Specialist Credential for the Communication Handicapped prepares students for an emphasis in one or more of the following areas of handicap:

Deaf and Severely Hard of Hearing
Deaf-Blind
Severe Oral Language (including aphasia) (Special Class Authorization) (SCA)
Speech and Hearing

The Special Education Specialist Credential for the Communication Handicapped specifies a sequence of communicative disorders courses plus a sequence of education courses.

Admission Requirements

1. Formal application to the Department of Communicative Disorders.
2. Interview with a faculty member in the Department of Communicative Disorders.
3. Admission to the program for the Single Subject Credential (Secondary) or Multiple Subjects Credential (Elementary)

   – or –

   A basic teaching credential.
   Students should consult with appropriate advisers in the College of Education for specific requirements.
4. Students applying to the program at the postbaccalaureate level must satisfy the admission requirements of the department for classified graduate standing.
5. Completion of Special Education 500 and 501.

Program

Persons interested in the Special Education Specialist Credential shall:

1. Concurrently or prior to completion of the specialist credential, complete the single subject credential (preliminary or clear) or the multiple 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, 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 which may include courses applicable toward the master's degree if approved by the candidate's adviser) is required of all candidates.

* Additional prerequisites required for this course.

Clinical-Rehabilitative Services Credential
(Credential Code: 00900)

Clinical-Rehabilitative Services (C-RS) Credentials are available in the following areas:

Language, Speech and Hearing (LSH)
Audiology
Severe Language Handicapped/Aphasic (SLH) (Special Class Authorization) (SCA)

A postbaccalaureate year (minimum of 30 semester units which may include courses applicable toward the master's degree if approved by the candidate's adviser) is required of all candidates. The following generic courses within the Department of Communicative Disorders are required: Communicative Disorders 106, 110, 205, 320, 321, 322, 340, 341, 423, 524, 526, 527, 530, 531, 546, 551, 552, and 553. Courses from other departments include: Psychology 101; Psychology 260 or Biology 150; Psychology 330 or Family Studies and Consumer Sciences 270 and 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, 554, 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, 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, 545, 547, 550, 600*, 644, 649 (Pediatrics), 656* and 657.

* Consent of instructor.
* See Department Credential Coordinator for options.

Certificates and Licensure

Preparation Leading to the Certificate of Clinical Competence from the American Speech-Language-Hearing Association

Students may complete the academic and clinical practice requirements leading to the Certificate of Clinical Competence in Speech-Language Pathology (CCC-Sp) or to the Certificate of Clinical Competence in Audiology (CCC-A) given by the American Speech-Language-Hearing Association (ASHA). The certificate requires 60 units of coursework, 30 units of which must be completed at the graduate level; 300 clock hours of supervised clinical experience, 150 hours of which must be completed at the graduate level; a clinical fellowship year; and a national examination. The academic and practica requirements must meet certain specifications. Consult an adviser in the area in which certification is desired for specific information.

Preparation Leading to the Professional Certificate from the Council on Education of the Deaf

Students may complete the academic and practica requirements leading to the Professional Certificate given by the Council on Education of the Deaf. The Professional Certificate requires a specific pattern of courses and teaching experiences. Consult an adviser in the Program for Education of Hearing Impaired for more information.

Preparation Leading to State Licensure in Speech Pathology or Audiology

Students may complete the academic and clinical practicum requirements leading to California State Licensure in Speech Pathology or in Audiology, a legal requirement for all individuals professionally employed in nonpublic school settings. The Speech Pathology and Audiology Examining Committee which operates within the California State Board of Medical Quality Assurance requires evidence of completion of 24 semester hours of coursework in the area (Speech Pathology or Audiology) in which the license is to be granted, 275 clock hours of clinical experience, nine months of full-time experience (Required Professional Experience), and a national examination. Most Licensure and ASHA Certification requirements may be fulfilled concurrently. Consult an adviser in the area in which licensure is desired for specific information.

Courses

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 field of speech pathology and audiology. Survey of communicative disorders, covering all areas of exceptionality, normal growth and development as it relates to speech and language. Waiver of this course is permitted only upon satisfactory passage of a competency examination.

107. Management of Clinical Activities (1) I, II Cr/NC
Assisting in the operations of the speech and hearing clinic. Maximum credit two units.

108. Oral Communication Laboratory (1) I, II Cr/NC
Two hours of laboratory.
Prerequisite: Consent of instructor.
Individual laboratory training on specific speech problems. Student chosen through testing by Department of Communicative Disorders.

110. Observation: Communicative Disorders (2) I, II Cr/NC
One lecture and two hours of observation per week.
Prerequisites: Credit or concurrent registration in Communicative Disorders 106; affidavit for Certificate of Clearance.
Observation and discussion of diagnosis and remediation with speech-disordered and hearing-impaired children in varied clinical settings. Observation in the public schools. Satisfies credential and certification requirements.

205. Introduction to Audiology (3) I, II
Prerequisites: Communicative Disorders 110 and credit or concurrent registration in Physics 201.
Audiology in diagnosis and rehabilitation of hearing impairment, medical practice, hearing conservation and research. Includes physics of sound, decibel, and ear anatomy as applied to fundamentals of audiologic assessment and tuning fork tests.

296. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

UPPER DIVISION COURSES
(Intended for Undergraduates)

305. Speech and Language Development and Communication Disorders (3) I, II
Normal development and processes of speech, language and hearing. Identification, prevention and remediation of speech, hearing and language disorders. Five hours of observation required. Not open to communicative disorders majors.

320. Phonetics (3) I, II
Two lectures and three hours of laboratory.
Prerequisite recommended: Communicative Disorders 104.
Auditory, kinesthetic and visual analysis of the sounds of the English language, including regional and foreign dialect and disordered speech. Competency in I.P.A. broad transcription and introduction to narrow transcription.

321. Anatomy 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 (1-3) Cr/NC
Two hours of activity per unit of credit and one hour of staffing.
Prerequisites: Communicative Disorders 106, 110; affidavit for Certificate of Clearance when required for public school fieldwork.
Field observation and interaction under direct supervision in private and public school practicum settings, to include hospitals and clinics, with small groups or individuals with communicative disorders. 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
Two hours of activity per unit of credit and one hour of staffing.
Prerequisite: Credit or concurrent registration in Communicative Disorders 106. Recommended: Communicative Disorders 205.

Field observation and participation under supervision in school settings with small groups of hearing impaired youngsters. Maximum credit three units.

358. Beginning Sign Language (3) I, II
Prerequisites: Demonstrated professional need and consent of instructor. Recommended: Communicative Disorders 106 or 205; credit or concurrent registration in Communicative Disorders 357.

Receptive and expressive sign language skills. American Sign Language (ASL) and Sign Language Systems.

396W. Writing in Health and Human Services (3) II
Prerequisites: An introductory level course from one department or school within the College of Health and Human Services. Students must have completed 60 units, fulfilled the Writing Competency requirement, and completed the General Education requirement in written communication.

Theory and practice of clinical writing, including reports, individual educational and therapeutic plans, communication samples, and educational ethnography.

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.

Survey of cleft palate, cerebral palsy and neuromotor disorders, adult aphasias, 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.

433. Clinical Practice in Public Schools (4 or 5) I, II Cr/NC
Prerequisites: Credit or concurrent registration in 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.

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 (2) I, II
Prerequisites: Communicative Disorders 322, 423, 552, 553; credit or concurrent registration in Communicative Disorders 527.

Remediation models and clinical approaches, procedures, and techniques. Integration of theoretical information and clinical applications.

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.

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.
Prerequisites: 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.
Prerequisite: Communicative Disorders 527.

Participation in Central Intake process of SDSU Clinical Training Center, including diagnostic team assessments and staffings.

529. Orientation to Public School Practicum (1)
Prerequisites: Communicative Disorders 524 and 527. Minimum of 50 hours of supervised clinical practicum, plus departmental approval. Concurrent registration in Communicative Disorders 433 or 453.

Goals, materials and procedures for organizing and administering speech, language and hearing programs in the schools.

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)
Prerequisites: Communicative Disorders 106 and 320.

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)
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.

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.

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 electroacoustical 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.

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.

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. Education of the Hearing Impaired (3) II
Prerequisite: Communicative Disorders 106.

Educational programs, services and resources for hearing impaired; historical background, philosophy, sociological and psychological problems.

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.

552. Articulation Disorders and Methods (3)
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. School Age Language: Development and Disorders (3)
Prerequisite: Communicative Disorders 526.
Contrastive study of normal and disordered language development in children five years through adolescence, including syntax, semantics, pragmatics, figurative language, and metalinguistics. Integration of assessment and intervention for language disorders and associated speech- and language-based reading and writing disorders. Not open to students with credit in Communicative Disorders 554A-554B-554C.

555. Curriculum for the Communicatively Handicapped (3)
Prerequisites: Communicative Disorders 526 or 556; 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.

558. Advanced Sign Language (2) I, II
Prerequisite: Communicative Disorders 458.
Theory of sign language for the classroom interpreter. Emphasis on conceptual sign, signed idioms and appropriate usage for the academic setting.

560. Motor Speech Disorders (3)
Prerequisite: Communicative Disorders 539.
Dysarthrias and apraxia of speech. Techniques of differential diagnosis and treatment of these motor speech disorders.

562. Oral Communication for the Hearing Impaired (3)
Prerequisites: Communicative Disorders 550 and 552.
Current methods for developing oral/aural communication skills with hearing-impaired children and youth. Differential problems of acquisition of communicative competence. Assessment and intervention procedures for classroom and clinical settings.

565. Augmentative Communication (3)
Prerequisites: Communicative Disorders 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.

566. Assistive Device Assessment Program for Communicatively Handicapped (2) I, II
One lecture and two hours of activity.
Prerequisite: Communicative Disorders 528.
Assessment of communication skills of disabled individuals, environmental needs and appropriateness of augmentative communication aids. Remediation recommendations. Maximum credit four units.

568. Spanish and Sign Language (2)
Prerequisite: Demonstrate competence at the intermediate level in either Spanish or sign language.
Rudiments of sign language taught to Spanish speakers and the basics of Spanish to users of sign language. Emphasis on communication needs within health care setting, public school setting and informal social setting.

571. Assessing the Bilingual Child with Communicative Disorders (3)
Prerequisites: Communicative Disorders 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 an appropriate major.
Normal communication processes and aging, including memory and cognition for speech and language, and physiological changes; speech and language pathologies; hearing problems and rehabilitation, including hearing aids, psychosocial aspects of communication, including family dynamics; and resources available within the community. Open to majors and nonmajors.

596. Selected Topics in Communicative Disorders and Science (1-4) I, II, S
Prerequisite: Twelve units in communicative disorders and science courses.
Specialized study of selected topics from the area of speech-language pathology, audiology, education of the hearing impaired, and speech and hearing science. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596. Maximum credit of three units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Comparative Literature

In the College of Arts and Letters

Faculty
Faculty assigned to teach courses in comparative literature are drawn from departments in the College of Arts and Letters.

Offered by the Department of English and Comparative Literature
Major in comparative literature with the A.B. degree in liberal arts and sciences.
Teaching major in comparative literature for single subject teaching credential in English.
Minor in comparative literature.

The Major

Comparative literature is the study of literature from around the world, transcending the restrictions of national and linguistic boundaries. Traditionally, comparative study has been based on literary movements, periods and lines of influence, as well as on genres, themes, myths, and legends. In recent years comparative literature has come to include the comparison of literature with other areas of human experience.

Comparative literature offers students the opportunity to study an extremely broad range of literary subjects from various cultures throughout the world, with all reading done in English translation. Courses are offered in traditional, mainstream European literature from ancient to contemporary times; in the literature of Asia, Africa, Latin America; in folk literature, mythology, fantasy, and science fiction; and in many special topics such as prison literature, Marxism and the arts, Third World literature and film, travel literature, literature and existentialism, rock poetry, and many others.

Because the field covers so wide a range, the comparative literature student does not acquire a comprehensive knowledge of any basic list of "great works." Such a list, for all of world literature, would be far too long. Instead, students learn various approaches to literature, along with specialized knowledge of areas which particularly interest them.

Comparative literature is an excellent major for anyone desiring a broadening and enriching liberal arts education. Its application to foreign cultures is particularly useful for careers in government service, diplomacy, and international trade. Translating, editing and publishing, journalism and the media are other possibilities, as well as advertising and public relations, free-lance writing, and criticism. Comparative literature is also, like English, an excellent foundation for careers in the professions, especially law.

The comparative literature major may also be used as preparation for the Single Subject (high school) Teaching Credential in English. Graduate study in comparative literature may lead to teaching at more advanced levels; however, extensive preparation in foreign languages is required.

Finally, comparative literature, like all liberal arts majors, is a good preparation for careers in general business: sales, marketing, management, personnel, as well as some of the areas already mentioned. Most business firms do not restrict their recruiting to business majors; many actually prefer liberal arts majors.

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
(Major Code: 15031)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in comparative literature and English courses can apply to the degree.
A minor is not required with this major.

Preparation for the Major. 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 With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 15031)

For a description of the single subject teaching credential in English with a major in comparative literature, refer to this section of the catalog under English.

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, 561, 562, 563, 571, 580, 596.

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, 561, 562, 563, 571, 577, 580, 581, 596.

The comparative literature minor is not available to students majoring in English.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

Since all reading assigned for classes in comparative literature is in English, knowledge of a foreign language is not required.

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.

296. Topics in Comparative Literature (3) I, II
An introduction to the subject matter of comparative studies in literature. Focus on a specific movement, theme, figure, genre, etc. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units. (Formerly numbered Comparative Literature 200.)

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.

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.

560. The Epic (3)
Selected epic poems from world literature; emphasizes the Western epic tradition from Homer to the present. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

561. Fiction (3)
A comparative approach to themes and forms in fiction (novel and short story). Focus of course to be set by instructor. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

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 to a master's degree.

563. Poetry (3)
A comparative approach to themes and forms in poetry. Focus of course to be set by instructor. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

571. Literary Use of Legend (3)
Literary treatment of such legendary figures as Don Juan, Faust, and Ulysses, in a wide range of literature and genres. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

577. Major Individual Authors (3)
In-depth study of the works of a major author, such as Sophocles, Dante, Cervantes, Goethe, 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.

596. Topics in Comparative Literature (3)
An intensive study of a topic to be selected by the instructor. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units. (Formerly numbered Comparative Literature 550.)

Criminal Justice Administration

In the School of Public Administration and Urban Studies
In the College of Professional Studies and Fine Arts

Faculty
Professors: Boostrom, Gitchoff, Sutton
Associate Professor: Henderson

Offered by the School of Public Administration and Urban Studies
Major in criminal justice administration with the B.S. degree in applied arts and sciences.

The Major

The purpose of the criminal justice administration program is to provide current and future decision-makers in criminal justice with the foundation for critical and balanced as well as responsible and effective administrative responses. As the systems designed to deliver justice services are continually asked to accomplish more with fewer resources, the need for able and professional administrators becomes more and more pressing. The mission of the department is to provide graduates with the background and ability to meet this challenge.

Criminal justice administration majors with the B.S. degree have typically found employment at entry-level positions in local, state, and federal criminal justice agencies or in private business or security positions (e.g., loss prevention officer). At the local level, graduates can begin service in various capacities with police, sheriff's and marshal's offices, probation, county supervisors, city administration, and criminal justice planning agencies. At the state level, graduates may enter the Highway Patrol, Alcohol Beverage Control, Attorney General's Office, Department of Corrections, California Youth Authority, or related agencies. At the federal level, graduates are employed in agencies such as the FBI, Customs Service, Border Patrol, Secret Service, Drug Enforcement Agency, Naval Intelligence Service, Defense Investigative Services, CIA, and Department of Agriculture.

A significant number of graduates of this degree program also enter law school after graduation.

Criminal Justice Administration Major

With the B.S. Degree in Applied Arts and Sciences (Major Code: 21051)

All candidates for a degree in applied arts and sciences must complete the graduation requirements in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

Preparation for the Major. Criminal Justice Administration 200, Political Science 102, Sociology 101 and 150, and a three-unit course in elementary statistics (e.g., Sociology 201, Mathematics 250). (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.

Courses

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.

305. Professions, Practices and Ethics in Criminal Justice Administration (3) I
Prerequisite: Criminal Justice Administration 301.
Professional roles and responsibilities of practitioners and administrators in criminal justice agencies, including consideration of the ethical responsibilities of criminal justice practitioners.

310. Law Enforcement Administration (3)
Administrative relationships within the criminal justice process with special reference to problems of courts and police and probation agencies.

320. The Administration of Criminal Law (3)
Prerequisite: Criminal Justice Administration 301.
Constitutional law principles as implemented in criminal courts with emphasis on critical analysis of factual situations and the argument of legal issues in criminal cases from both defense and prosecution perspectives.

321. Juvenile Justice Administration (3)
Prerequisite: Criminal Justice Administration 301.
Assessment of the structure and functions of agencies and institutions which comprise the juvenile justice system in America; evolution of policies and programs for prevention of delinquency and treatment of the juvenile offender.

330. Contemporary Correctional Administration (3)
Prerequisite: Criminal Justice Administration 301.
Contemporary policies and practices of local, state and federal correctional agencies, the influence of reform movements, and the interrelationship of corrections with other criminal justice system components.

333. Judicial Administration (3)
Prerequisites: Criminal Justice Administration 301 and Public Administration 301.
Review of significant developments at the state and federal levels, including court unification and financing, leadership, congestion, training, selection, tenure, discipline, removal and retirement of court-related personnel; and technological applications.

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, Sellman
Chair: Annas
Professors: Annas, Harvey, M., Lessley, McKerrow, Owen, Salzer, Stephenson
Associate Professors: Christian, Harvey, A.C., Larlham, O'Donnell, Wolf
Assistant Professors: Bellinghiere, Reid
Lecturers: Gray, Holly

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.

The Major

The bachelor's degree in drama prepares students for excellence as professional actors, directors, costume, lighting, and scenic designers. To achieve that goal, the department offers not only a rich diversity of course offerings, but also an eight-play season open to the San Diego public with many performance and design opportunities for the student. In addition, lectures and professional growth opportunities are provided through interaction with guest artists and professionals from many different areas of the industry: theatre management and marketing, directors, scenic designers, lighting designers, costume designers, playwrights, and actors. The program is structured in a way that ensures that each student, prior to graduation, will have been exposed to all the backstage areas that support a theatre performance.

The drama major serves as preparation for professional work in various fields of theatre arts (acting, directing, children's theatre, design, technical theatre), teaching positions in various levels of educational theatre, and participation in civic and community theatre work.

The Drama Department offers students a wide variety of courses and several degree programs in theatre. The mission of the department is twofold. First of all, we wish to provide quality education on the undergraduate and graduate levels for students who desire to pursue a career in theatre, whether that career be in acting, directing, design, technical theatre, or teaching. Our second, and equally important mission, is a strong commitment to the philosophy of the University as a liberal arts institution. We want to provide undergraduate students with an opportunity to enrich their present and future lives by learning to understand and enjoy the art of theatre.

The faculty of the Drama Department believe that theatre is a rewarding undergraduate major, even for those who do not plan a career in the field. The study of theatre enriches the lives of men and women because it helps them to know themselves and to interact effectively with one another. Theatre is the fine art which is often considered to be a combination of all the arts. Through it, we experience the work of some of the greatest writers and thinkers and artists our civilization has ever known. As we learn about theatre, we understand more about ourselves and develop a remarkable respect for the human spirit.

The Drama Department's training is specifically geared toward assisting students in their efforts to seek professional work in various fields of theatre arts, to seek teaching positions in various levels of educational theatre, to contribute to the cultural life of the community by participating in civic and community theatre work, and to further their awareness of drama as a significant art form in order to become informed and discriminating members of the theatre public.

In addition, the Drama Department offers a wide variety of courses which provide excellent enrichment opportunities for the non-drama major. Students pursuing study in "people/service related" disciplines such as education, business administration, telecommunications and film, counseling, advertising, journalism, and prelaw are encouraged to explore the many courses available in the department's curriculum which will prove rewarding and beneficial to their career objectives.

Drama Major

With the A.B. Degree in Applied Arts and Sciences
(Major Code: 10071)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

General

Preparation for the Major. Drama 105, 110, 120, 130, 231, 240, 245, 249, and 250. (27 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 upper division units in drama selected with the approval of the adviser.

Emphasis in Acting

Preparation for the Major. Drama 105, 110, 120, 130, 231, 232, 240, 245, 249, and 250. (30 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, 320, 330, 350, 351, or 431.

Emphasis in Children's Drama

Preparation for the Major. Drama 105, 110, 120, 130, 231, 240, 245, 249, and 250. (27 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 46 upper division units to include Drama 310, 315, 329A or 329B, 420, 440, 442 (eight units of Drama 442 must be taken prior to graduation), 457, 460A, 460B, 480, 511, 515; Teacher Education 530; and three units selected from Drama 431, 434, 458, 532.

Emphasis in Design for Drama

Preparation for the Major. Drama 105, 110, 120, 130, 231, 240, 245, 249, and 250. (27 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 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, 551, or 554.

Emphasis in Design for Television

Preparation for the Major. Drama 105, 120, 240, 245, 249, 250; Telecommunications and Film 120. (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 41 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, 325, 401, 550; and three units must be selected from Drama 475, 546, or Telecommunications and Film 551.

Emphasis in Directing

Preparation for the Major. Drama 105, 110, 120, 130, 231, 240, 245, 249, and 250. (27 units)

Upper Division Writing Requirement. Passing the University Writing Examination or English 305W or 500W with a grade of C (2.0) or better.

Major. A minimum of 47 upper division units in drama to include Drama 420, 440, 442 (eight units of Drama 442 must be taken prior to graduation), 452, 457, 459, 460A, 460B, 532, 533A-533B, 551, 552, and three units selected from Drama 320, 350, 351, 515, or 559.

Drama Major

For the Single Subject Teaching Credential in English With the A.B. Degree in Applied Arts and Sciences (Major Code: 10071)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under 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, 572; 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. A minimum of six upper division units must be completed at San Diego State University.

Courses

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 (CAN DRAM 6)
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 (CAN DRAM 8)
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
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 and Stagecraft (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 University productions.

245. Elementary Stage Lighting (3) I, II
Two lectures and two hours of activity.
Prerequisite: Drama 105.
Concepts and technologies in stage lighting: emphasis on mechanics of stage lighting, color, instrumentation, control. Production crew assignment in lighting required.

249. Theatrical Makeup (3) I, II
Two lectures and two hours of activity.
Prerequisite: Drama 105.
Planning and application of makeup for stage, film, and television. Classroom exercises and production-related activities.

250. Elementary Stage Costume (3) I, II
Two lectures and three hours of laboratory.
Prerequisite: Drama 105.
Concepts, materials and technologies of costume production and design. Classroom projects and production-related activities.

296. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

UPPER DIVISION COURSES
(Intended for Undergraduates)

310. Creative Drama (3) I, II, S
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.

315. Theatre for Young Audiences (3) II
Prerequisite: Drama 105.
Current philosophies and practices in theatre for young people. Techniques of selecting and producing plays for youth. Understanding of theatrical forms, and functions of production team members. (Formerly numbered Drama 255.)

320. Speaking the Classic Theatre (3) 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.

328A-328B. Musical Theatre Touring Company (3-3) I, II Cr/NC
More than 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 315 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)
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
Two lectures and two hours of activity.
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 management: stage, house, and box office; 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 and Stagecraft (3) I
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. Fundamentals of Stage Direction (3) I, II
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 460A is not prerequisite to 460B.

475. Theatre Management: Production Applications (3) I
Prerequisite: Drama 105.
Human resource management for theatre production with emphasis on role of technical director, production manager, stage manager, house manager, box office personnel, theatrical unions.

476. Theatre Management: Audience Development (3) II
Prerequisite: Drama 105.
Development of an audience for theatrical productions with emphasis on subscription campaigns, publicity, brochures, budgeting, public relations, ticket sales.

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)
Prerequisite: Drama 310.
Advanced techniques and procedures in the teaching of creative drama. Lectures and reading on the application of creative drama with emphasis on the different styles of creative drama available to the practitioner. Practical experience through work with children.

515. Directing for Children's Theatre (3) II
Prerequisite: Drama 315.
Staging and technical problems relative to the production of plays for children; casting procedures, blocking and characterization principles, rehearsal and scenic techniques.

520. History of Musical Theatre (3) I
Prerequisite: Drama 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.

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.
Prerequisites: Drama 245. Drama 545A is prerequisite to 545B.
Light, color, lighting instruments, and control equipment, including the design and planning of lighting for plays.

546. Computer Systems and Special Effects Techniques in Stage and Television Lighting (3)
Two lectures and three hours of laboratory.
Prerequisite: Credit or concurrent registration in Drama 545B.
Functional study of computer systems in stage and television lighting with emphasis on realizing effective methods of using such systems in production.

551. Costume, Movement, and Manners (3) I
Prerequisite: Drama 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, II
Four hours of activity.
Prerequisite: By audition only prior to beginning of semester.
Musical theatre dance repertory styles and forms for actor-singer-dancer-director as they pertain to arranged composition of a musical theatre production. Maximum credit six units.

559. Musical Theatre Stage Direction (3) II
One lecture and four hours of activity.
Prerequisite: Drama 459.
Experience and group evaluation in performance and direction of musical theatre scenes; attendance at musical theatre performances and other selected musical presentations. Problems confronting a musical theatre stage director.

560. Rendering for Theatrical Designer (1)
Prerequisites: Drama 250, 440.
Development of skills necessary for theatrical designer to complete successful set and costume renderings. Techniques, media, and portfolio presentation. Maximum credit three units.

596. Selected Topics in Drama (1-3) I, II
Prerequisite: Twelve units in drama.
A specialized study of selected topics from the areas of drama. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Economics

In the College of Arts and Letters

Faculty

Emeritus: Anderson, Barckley, Chadwick, Flagg, Jencks, Neuner, Poroy, Sebold, Turner
Chair: Gifford
Professors: Babilot, Boddy, Clement, Frantz, Gifford, Green, Kartman, Leasure, Madhavan, Nam, Popp, Thayer, Venieris
Associate Professors: Grossbard-Shechtman, Hageman, Hambleton, Stewart
Assistant Professors: Gerber, Naughton, Seidman, Singh, Thomas, Vogt
Lecturer: Steinberg

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.

The Major

Economics is the science which studies the production, distribution, and consumption of goods and services. Economics majors explore how producers, distributors, and consumers make their decisions. Majors also analyze the events that shape and result from these decisions. Inflation, unemployment, taxation, money and banking, efficiency, international exchange, and growth are some of the many parts of this complex system studied through the economics major at SDSU.

The curriculum in economics satisfies a wide range of career goals and student interests. Majors may find employment in government positions, financial institutions, business firms, and international agencies. The combination of an economics major with a business minor provides a foundation for a variety of careers. And, students interested in studying the third world, the environment, government policies, or population will find that economics is a useful approach.

Many beginning positions in business and government are available to students with a bachelor's degree in economics. A graduate may find employment as a research, statistical, data, or pricing analyst. There are management trainee positions with banks, savings and loan associations, or other lending institutions. Economics majors may also be employed as sales representatives for firms which produce both "high tech" and consumer-related goods. A student contemplating graduate study in the field of economics should consider a career as an economics consultant, or as an economist for banks, investments, or industry.

Advising

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

Economics Major

With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 22041)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."
A minor is not required with this major.

Preparation for the Major. Economics 101, 102, 201; one course from Mathematics 120, 121, 141 or 150; and Mathematics 106 or three units of Social Science 201. (15-17 units.)

Foreign Language Requirement. Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 24 upper division units to include Economics 320, 321, 341 or 541*, plus 15 units of electives. Six units of upper division credit in related fields may be counted toward the major with prior approval of the department's undergraduate adviser. Students are encouraged to complete the required courses during their junior year.

* Additional prerequisites required for this course.

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, 441, 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 or 476, 380, 401, 422, 452, 453, 454, 458, 474, 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 or 476, 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 or 476, 401, 420, 422, 452, 453, 454, 458, 474, 477, 484, 489, 490, 502, 555.

Students considering graduate school should consult an adviser.

Economics Minor

Prerequisites to the minor include Economics 100 or 101.
The minor in economics consists of a minimum of 15 units in economics, 12 units of which must be in upper division courses. Students must select their 12 upper division units from the economics courses in one of the four areas described in the major. In addition, students may include Economics 320, 321, 341 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. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

100. Contemporary Economic Problems (3) I, II
Investigates economic bases for such current problems as inflation, unemployment, economic power, consumer protection, poverty, discrimination, urban and environmental deterioration, and international domination. Examines such policies as fiscal-monetary policy, tax reform and government controls and provision of services.

101. Principles of Economics (3) I, II (CAN ECON 2)
Prerequisites: Satisfactory completion of the English Placement Test, Writing Competency, Entry-Level Mathematics Examination, 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 (CAN ECON 4)
Prerequisites: Satisfactory completion of the English Placement Test, Writing Competency, Entry-Level Mathematics Examination, 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
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 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.

341. Introduction to Econometrics (3) I
Prerequisites: Economics 101, 102, 201; Mathematics 120 or 121 or 141 or 150; Social Science 201 or Mathematics 106. Recommended: Economics 320 or 321.
Econometric techniques with emphasis on single-equation models. Applied skills learned through computer assignments. Not open to students with credit for Economics 541.

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. Not open to students with credit in Economics 476.

380. Labor Problems (3) I, II
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 307, 320 and 321.
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 307 and 321.
Consumer and producer behavior using mathematical optimization techniques. Mathematical approaches to oligopoly, bargaining theory and to policy issues.

422. Business Cycles (3)
Prerequisites: Economics 101 and 102.
Fundamental factors in economic fluctuations. Examination of business cycle theories, and various policy proposals for economic stabilization. A consideration of current economic conditions and an examination of methods employed in preparing national economic forecasts.

441. Research Design and Method (1-3) II
Prerequisites: Economics 341; 320 or 321.
Modular course. The first module (1 unit) covers time series and forecasting. The second (2 units) covers simultaneous equations or other econometric techniques which will then be applied in an independent research project. (Formerly numbered Economics 347.)

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. Industrial Organization (3) I
Prerequisites: Economics 101 and 102.
Causes and implications of economic concentration and monopoly power. Evaluation of industry structure, conduct, and performance in terms of social and economic goals.

476. Economics of Antitrust and Regulation (3) II
Prerequisites: Economics 101, 102, and 474 or 321.
Attempts to control monopoly power through antitrust laws and government regulation. Not open to students with credit in Economics 370.

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.
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 welfarefunctions.

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 141.
Measurement in economics. The construction and testing of simple economic hypotheses. Use of economic models involving multiple-regression analysis. Not open to students with credit for Economics 341.

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.

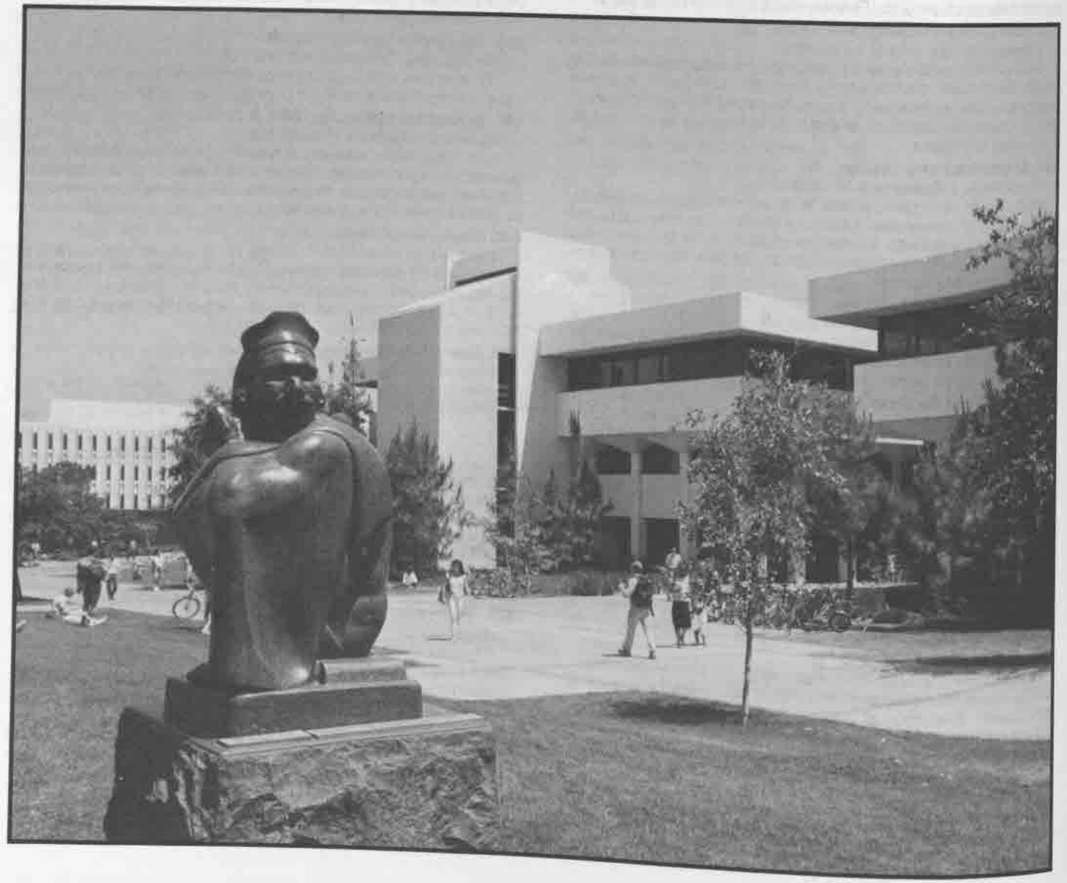
562. International Economic Expansion and Dependence (3)
Prerequisite: Economics 313 or 365 or 464.
Explores various theories of imperialism and dependence, the behavior of multinational corporations, and role of state from Marxian and other perspectives. Theories examined in terms of experience of specific 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 of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.



College of Education

A Member of the American Association of Colleges for Teacher Education

Faculty
Dean: Morey
Associate Dean: Chamley
Assistant Dean: Block

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 microcomputer software design.
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:

Credential Program	School Service Authorized
1. Multiple Subject	Teach in any self-contained classroom, kindergarten through twelfth grade.
2. Single Subject	Teach single subject area in grades kindergarten through twelve.
3. Community College Instructor	Teach in grades thirteen and fourteen, any course in an occupational or subject matter area which appears on the credential document.

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 Subject Credential and the Single Subject Credential are to be completed through the School of Teacher Education. For information regarding bilingual credentials, contact the Department of Policy Studies in Language and Cross-Cultural Education.

Courses

LOWER DIVISION COURSE

296. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

UPPER DIVISION COURSES
(Intended for Undergraduates)

350. Education in American Society (3) I, II, S
Philosophical, historical and psychological roots of education in America; current models, instructional designs and strategies of education. Contemporary concerns in education. Not open to students with credit in Teacher Education 356.

397. Problems in Education (Credit to be arranged) I, II
Offered only in Extension.
Prerequisite: Consent of instructor.
Class study of specially selected problems in education. Does not apply to pattern requirements for credentials. Credit earned in this course not applicable to a bachelor's degree.

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
Refer to the Graduate Bulletin.

Administration, Rehabilitation and Postsecondary Education

Faculty

Emeritus: Holt, Lienert, Warburton, Wetherill
Chair: McFarlane

Community College/Vocational Education
Associate Professors: Behm, Piland

Educational Administration
Professors: Coleman, Latta, Merino
Assistant Professor: Stevens
Lecturer: Frase

Rehabilitation Counseling
Professors: Jacobs, Jones, McFarlane

Offered by the Department

Master of Arts degree in education.
Concentration in community college curriculum and instruction.
Concentration in educational administration and supervision.
Master of Science degree in rehabilitation counseling.
Bachelor of Vocational Education degree.
Administrative Services credential.
Community College Instructor credential.

Bachelor of Vocational Education Degree

(Major Code: 08395)

Instructors of Occupational Education are encouraged to complete the B.V.E. and to enroll in the program leading to the Master of Arts in Education with a concentration in community college curriculum and instruction. For further information, students are advised to consult with the 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:
ARP 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/her major to arrange a program for completion of coursework. A series of elective courses that will support the professional responsibilities of the candidate will be recommended. Furthermore, 30 units must be in residency at SDSU, of which 24 must be upper division.

Total ..... 124 units

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): Administration, Rehabilitation and Postsecondary Education 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.

Courses

General

UPPER DIVISION COURSES
(Intended for Undergraduates)

496. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. (Formerly numbered Educational Technology and Librarianship 496 and Development, Administration and Technology 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 and Development, Administration and Technology 499.)

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

596. Topics in Administration, Rehabilitation and Postsecondary Education (1-3)
Selected problems in administration, rehabilitation and postsecondary education. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree. (Formerly numbered Education 596, Educational Technology and Librarianship 596, and Development, Administration and Technology 596.)

Community College/Vocational Education

UPPER DIVISION COURSES
(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 and Development, Administration and Technology 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 and Development, Administration and Technology 381.)

382. Directed Teaching (2-4) I, II, S Cr/NC
Prerequisite: Administration, Rehabilitation and Postsecondary Education 380, 381, or 565.
Systematic observation, participation, and teaching under supervision in an occupational subject matter area. Application to take this course must be made in preceding semester. (Formerly numbered Education 382 and Development, Administration and Technology 382.)

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

565. Psychological Foundations of Adult and Vocational Education (3) S
Prerequisite: Administration, Rehabilitation and Postsecondary Education 380 or 381.
Learning processes of adult and vocational education students in relationship to theories of learning and methods of teaching. (Formerly numbered Education 565 and Development, Administration and Technology 565.)

GRADUATE COURSES
Refer to the Graduate Bulletin.

Counselor Education

Faculty

Emeritus: Cochran, Hawley, Malcolm, Manjos
Chair: Thompson
Professors: Bruce, Carnevale, Chamley, Cummins, Feinberg, Miller, Ramage, Senour
Associate Professors: Cook, Howard, Robinson, Thompson
Assistant Professors: Grant-Henry, Ingraham, Velasquez

Offered by the Department

Master of Arts degree in education with a concentration in counseling.
Master of Science degree in counseling.
Pupil Personnel Services Credential.
School Psychology Credential.

Courses

UPPER DIVISION COURSES
(Intended for Undergraduates)

310. Group Leadership in Educational Settings (3)
Two lectures and two hours of activity.
Prerequisites: Anthropology 102 or Psychology 101 or Sociology 101; and completion of 60 units.
Identifying, classifying, and analyzing the components essential to the development of leadership in educational settings. Simulation activities assist students in acquisition of group leadership skills. Not applicable to a B.S. degree in Business Administration.

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 (1-3)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degrees.

499. Special Study (1-3) I, II
Prerequisite: Consent of instructor. Open only to senior and graduate students in education who have shown ability to work independently.
Individual study. Maximum credit six units.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

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 of six units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree. (Formerly numbered and entitled Counselor Education 506, Guidance Conference.)

GRADUATE COURSES
Refer to the Graduate Bulletin.

Educational Technology

Faculty

Emeritus: McAllister, Weir
Chair: Rossett
Professors: Anthony, Harrison, Rossett
Associate Professors: Allen, Dodge, Saba

Offered by the Department

Master of Arts degree in education.
Concentration in educational technology.
Specialization in educational computing.
Minor in educational technology.
Certificate in instructional microcomputer software design.
Certificate in instructional technology.

Educational Technology Minor

The minor in educational technology consists of a minimum of 15 units, 12 of which must be upper division selected from Educational Technology 471A*, 471B*, 540, 541, 544, 553, 572, and 596 (when applicable).
Courses in the minor may be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Instructional Technology Certificate

To receive a certificate in instructional technology, candidates must meet departmental admission requirements which include relevant work experience or academic preparation, letters of recommendation, and a writing sample, and must complete the following 14 units of coursework: Educational Technology 471A*, 471B*, 540, 544; plus six units selected from Educational Technology 541, 553, 596.

* Additional prerequisite may be required.

Courses

LOWER DIVISION COURSE

97. Introduction to Educational Computing (1) I, II, S
One and one-half hours of lecture and three hours of activity for five weeks.
Prerequisite: Teaching experience.
Educational uses of microcomputers. Instructional software and uses of applications software in an educational context. Credit earned in this course not applicable to a bachelor's degree or General Education. Fulfills portion of State computer literacy requirement (AB 1681) and may be waived through examination available in the Test Office, LE-460. (Formerly numbered Development, Administration and Technology 271 and Educational Technology 271.)

UPPER DIVISION COURSES
(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 and Development, Administration and Technology 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 and Development, Administration and Technology 404.)

471A. Educational Computing: Communication Tools (1) I, II, S
One and one-half hours of lecture and three hours of laboratory for five weeks.
Prerequisite: Educational Technology 97.
Use of word processing and telecommunications systems in education and training. Prompted writing, templates, educational electronic bulletin boards, information utilities. Fulfills portion of State computer literacy requirement (AB 1681) and may be waived through examination available in the Test Office, LE-460. (Formerly numbered Development, Administration and Technology 471 and Educational Technology 471A.)

471B. Educational Computing: Inquiry Tools (1) I, II, S
One and one-half hours of lecture and three hours of laboratory for five weeks.
Prerequisite: Educational Technology 97.
Use of data base management and spreadsheet software in education and training. Problem-solving and inquiry techniques. Fulfills portion of State computer literacy requirement (AB 1681) and may be waived through examination available in the Test Office, LE-460. (Formerly numbered Development, Administration and Technology 471 and Educational Technology 471B.)

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 and Development, Administration and Technology 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 and Development, Administration and Technology 499.)

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

532. Production of Instructional Materials (3) I, II
Nine hours of laboratory.
Instructional media production for professionals in organizational settings such as hospitals, law offices, accounting firms, publishing Scompanies. Use of videotape, laser disc, multi-image and digital telecommunications for training. Not open to students in educational technology degree and certificate programs or to students with credit in Educational Technology 541. (Formerly numbered Educational Technology and Librarianship 532 and Development, Administration and Technology 532.)

540. Instructional Technology (3) I, II, S
Six hours of activity.
Role of instructional systems development in education and training. Issues in instructional technology, self-instructional programs, competency-based instruction, new technologies of instruction and training. (Formerly numbered Educational Technology and Librarianship 540 and Development, Administration and Technology 540.)

541. Media Production (3) I, II
Nine hours of laboratory.
Prerequisite recommended: Educational Technology 404.
Design and production of instructional materials. Use of computers for graphics, scriptwriting, production management, and control systems for media presentations. Audio recording techniques with digital control. Not open to students with credit in Educational Technology 532. (Formerly numbered Educational Technology and Librarianship 541 and Development, Administration and Technology 541.)

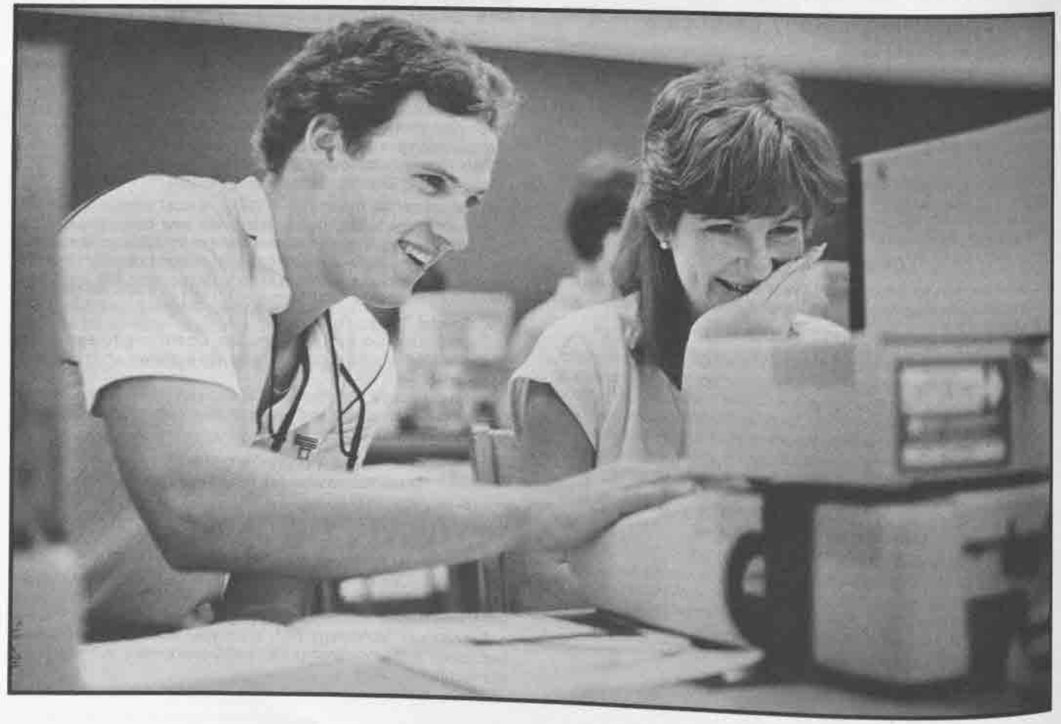
544. Instructional Design (3) I, II
Six hours of activity.
Prerequisite recommended: Educational Technology 540.
Systematic approach to instructional design. Review of research and theory in instructional strategy development. Analysis, design and development of instructional and training products and programs. (Formerly numbered Educational Technology and Librarianship 544 and Development, Administration and Technology 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 and Development, Administration and Technology 553.)

572. Computer Solutions to Instructional Problems (3) I, II
One lecture and six hours of laboratory.
Prerequisites: Educational Technology 471A-471B; admission to a credential program or a teaching credential or experience in teaching.
Using the computer, especially the microcomputer, as an instructional tool. (Formerly numbered Education 590 and Development, Administration and Technology 590.)

596. Topics in Educational Technology (1-3)
Selected problems in educational technology. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree. (Formerly numbered Education 596, Educational Technology and Librarianship 596, and Development, Administration and Technology 596.)

GRADUATE COURSES
Refer to the Graduate Bulletin.



Policy Studies in Language and Cross-Cultural Education

Faculty
Chair: Ochoa
Professors: Espinosa, Ochoa
Associate Professors: Kuhlman, Pacheco, Rodríguez
Assistant Professor: Caballero-Allen
Lecturer: Tran

Offered by the Department
Master of Arts degree in education.
Bilingual/Cross-Cultural Specialist credential.
Multiple Subject with Bilingual Emphasis credential.
Single Subject with Bilingual Emphasis credential.
Language Development Specialist certificate.

The Major

Policy Studies offers programs leading toward the Multiple Subject with Bilingual Emphasis Credential (for elementary teachers) and Single Subject with Bilingual Emphasis (for secondary teachers), as well as the more advanced Bilingual/Cross-Cultural Specialist credential (for K-12).

For students who want to teach English as a Second Language (ESL), SDSU offers the Language Development Specialist Certificate, a 24-unit program. This is a California State Department of Education approved program. It is appropriate for anyone who wishes to teach English, literacy, or language development in a classroom to a minority language population. After completing the certification program, the prospective ESL teacher must pass an examination offered by the Commission for Teacher Credentialing. SDSU provides the only such certificate program in San Diego County.

This program is offered jointly by the Policy Studies and Linguistics departments. Students take courses in curriculum development, teaching methods, and linguistics — all applied to classroom teaching. Field experience is also included in the program.

The Bilingual/Cross-Cultural Specialist Credential program builds practicum into every course. Students conduct training workshops for teachers and supervise lessons for pupils out in the community. The program offers instruction in how language is acquired and how learning is influenced by sociocultural background; language assessment; and methods of teaching where delivery is in the primary language of the pupils, including the content areas of mathematics, science, social studies, language arts, and reading.

Multiple Subject with Bilingual Emphasis Credential

(Credential Code: 00200)

The Multiple Subject with Bilingual Emphasis Credential is available to students interested in teaching in a bilingual elementary school classroom. This credential authorizes the holder to teach in any self-contained bilingual or regular classroom in which one teacher is responsible for all the subjects commonly taught in the elementary schools. Because courses on methods of teaching subject areas are taught in Spanish as well as English, candidates must pass the Spanish Language Proficiency and Cultural Awareness Examination.

Standards for Admission

1. **CBEST.** Students must pass the California Basic Educational Skills Test prior to admission to the Multiple Subject with Bilingual Emphasis Credential program. This examination is required by the Commission on Teacher Credentialing. Booklets containing registration forms and test information are available from the Test Office in LE-560 (265-5216).
2. **Major.** The Liberal Studies Major, Option 2 or 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 National Teacher Examination (NTE) Core Battery Section. Information may be obtained through the Test Office (LE-560) or through advisers in the Policy Studies in Language and Cross-Cultural Education Department, ED-154.
3. **Prerequisite Courses.** Courses are required for admission:

Policy Studies in Language and Cross-Cultural Education 451	3 units
Health Science 101 or 320	3 units
Mathematics 210A*	3 units
Physical Education 241	2 units
Art or Drama or Music – Art 100, 101, 157; Drama 105; Music 102	3 units

* With approval of the mathematics adviser, any of the following mathematics courses may be substituted for Mathematics 210A: Mathematics 121, 150, 310A.

4. **Grade Point Average.** Students must have a grade point average (GPA) within the top half of students having a similar major. For CSU graduates completing 30 units or more at the graduating campus, the GPA is calculated on units completed at that institution only. For CSU graduates with fewer than 30 units at the graduating campus, the GPA is calculated on the cumulative units completed at all schools attended. The GPA for non-CSU graduates is computed on overall college units completed. CSU graduates' minimum GPA must be at or above the median GPA as posted by major and by campus. Non-CSU graduates must meet or exceed the CSU system average as posted by major. A "B" (3.0) GPA must be maintained throughout the credential program once a student is admitted.
5. **Letters of Recommendation.** Three letters of recommendation must be submitted attesting to the applicants following characteristics: (a) attitude, aptitude and ability to teach children; (b) personality and character; (c) academic ability. At least one letter should be from an elementary school teacher the student has worked with and the others may be from faculty and administrators.
6. **U.S. Constitution.** Knowledge of U.S. Constitution, as demonstrated by successful completion of an approved course. (See the section of this catalog on "Graduation Requirements.")
7. **Tuberculin Clearance.** Provided through SDSU Health Services or family physician.

8. **Health Clearance.** Provided through SDSU Health Services, Public Health Clinic, or family physician.
9. **Early Field Experience.** A minimum of 60 hours in a typical elementary classroom with University supervision within the five years preceding admission.
10. **Oral English and Written Statement.** Have an interview with the Admissions Committee of the PLC Department and write, under supervision, a statement of professional goals and philosophy.
11. **Certificate of Clearance.** The State of California requires that credential candidates possess a valid Certificate of Clearance before admission to the program. Forms and fingerprint cards are available in the department's application package.
12. **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.
13. **Language and Culture.** Passage of the Spanish Language Proficiency and Cultural Awareness Examination prior to entering the credential program. Please call 265-5155 for test date.
14. **Application.** Applicants should complete application procedures the semester prior to beginning the credential program.

Preliminary Credential Requirements

1. A bachelor's degree (or higher) with any major other than education.
2. Completion of an approved program of professional education. (See Department of Policy Studies in Language and Cross-Cultural Education for further information.)
3. Passage of subject matter examination (National Teacher Examination, Core Battery, General Knowledge Section) or approved waiver program (Liberal Studies major, Option 2 or 3).
4. Passage of the Spanish Language Proficiency and Cultural Awareness Examination.
5. Completion of a course in teaching reading.
6. Knowledge of U.S. Constitution, as demonstrated by successful completion of an approved course. (See the section of this catalog on "Graduation Requirements.")
7. Knowledge of health education in California, including substance abuse and nutrition.
8. Passage of California Basic Educational Skills Test (CBEST).

Clear Credential Requirements

1. Completion of an approved fifth year program (a minimum of 30 upper division or graduate-level postbaccalaureate units).
2. Coursework/fieldwork to satisfy PL 94-142: Needs of, and methods of providing educational opportunities to individuals with exceptional needs (mainstreaming).
3. Coursework/training in computer literacy (effective July 1, 1988).

New Students Who Seek to Complete a Credential

Teachers with preliminary credentials who are working toward clear credentials may have programs designed to fit their individual backgrounds. Evaluations of college credit and arrangements for programming should be made through the University Credentials Office, CL-100; telephone 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.

Program

		Units
First Semester		
PLC 323	Psychological Foundations of Education and Bilingual Students	3
PLC 360	Student Teaching Seminar for Bilingual Elementary Students	2
PLC 431	Skills in Teaching Reading to Bilingual Elementary Students	3
PLC 460	Student Teaching for Bilingual Elementary Students	6
EDTEC 404	Instructional Media, Equipment and Production	1
Second Semester		
PLC 360	Student Teaching Seminar for Bilingual Elementary Students	2
PLC 410	Teaching Mathematics to Bilingual Elementary Students	3
PLC 411	Teaching Social Studies to Bilingual Elementary Students	2
PLC 412	Teaching Science to Bilingual Elementary Students	2
PLC 460	Student Teaching for Bilingual Elementary Students	6
PLC 496	Skills in Teaching Reading in Spanish to Bilingual Elementary Students	3

Single Subject with Bilingual Emphasis Credential (Credential Code: 00100)

The Single Subject with Bilingual Emphasis Credential is available to students interested in teaching in a bilingual secondary school classroom. This credential authorizes the holder to teach in any self-contained bilingual or regular classroom in which one teacher is responsible for teaching the given subject area.

Standards for Admission

1. **CBEST.** Students must pass the California Basic Educational Skills Test prior to admission to the Single Subject Bilingual Emphasis Credential program. This examination is required by the Commission on Teacher Credentialing. Booklets containing registration forms and test information are available from the Test Office in LE-560 (265-5216).
2. **Major.** Students must have a major in an acceptable single subject credential area or pass the commission-approved National Teacher 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, ED-154.
3. **Prerequisite Courses:**

PLC 400	The Secondary School and Bilingual Education	3 units
PLC 451	Introduction to Multicultural Education	3 units
PLC 515	Bilingual Teaching Strategies	3 units

4. **Grade Point Average.** Students must have a grade point average (GPA) within the top half of students having a similar major. For CSU graduates completing 30 units or more at the graduating campus, the GPA is calculated on units completed at that institution only. For CSU graduates with fewer than 30 units at the graduating campus, the GPA is calculated on the cumulative units completed at all schools attended. The GPA for non-CSU graduates is computed on overall college units completed. CSU graduates' minimum GPA must be at or above the median GPA as posted by major and by campus. Non-CSU graduates must meet or exceed the CSU system average as posted by major. A "B" (3.0) GPA must be maintained throughout the credential program once a student is admitted.
5. **Letters of Recommendation.** Three letters of recommendation must be submitted attesting to the applicant's following characteristics: (a) attitude, aptitude and ability to teach children; (b) personality and character; (c) academic ability. At least one of these letters should be from a school teacher the student has worked with and the others may be from faculty and administrators.
6. **U.S. Constitution.** Knowledge of U.S. Constitution, as demonstrated by successful completion of an approved course. (See the section of this catalog on "Graduation Requirement.")
7. **Tuberculin Clearance.** Provided through SDSU Health Services or family physician.
8. **Health Clearance.** Provided through SDSU Health Services, Public Health Clinic, or family physician.
9. **Early Field Experience.** Applicants must provide evidence of a minimum of 45 hours of experience with students in typical classroom settings within the last five years. Such evidence consists of a description and evaluation of the experience by a supervisor. Education courses to satisfy this requirement are available.
10. **Oral English and Written Statement.** Have an interview with the Admissions Committee of the PLC Department and write, under supervision, a statement of professional goals and philosophy.
11. **Character and Identification Clearance.** The State of California requires that credential candidates possess a valid Certificate of Clearance before admission to the program. Forms and fingerprint cards are available in the department's application package.
12. **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.
13. **Language and Culture Examination.** All candidates must pass the Spanish Language Proficiency and Cultural Awareness Examination.
14. **Application.** Applicants should complete application procedures the semester prior to beginning the credential program.

Preliminary Credential Requirements

1. A bachelor's degree with one of the approved single subject majors listed in the School of Teacher Education Single Subject Teaching Credential catalog section. Credentials can be granted only in the designated single subject credential areas.
2. Completion of an approved program of professional education. (See Department of Policy Studies in Language and Cross-Cultural Education for further information about the approved programs.)
3. Additional required course is Educational Technology 404 (1 unit).
4. MAJOR ADVISER'S RECOMMENDATION. 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.
5. Passage of the Spanish Language Proficiency and Cultural Awareness Examination.
6. Knowledge of U.S. Constitution, as demonstrated by successful completion of an approved course. (See the section of this catalog on "Graduation Requirements.")

Persons whose programs allow them to meet these requirements would be eligible for a preliminary credential at the same time they finish a four-year college program.

NOTE: *Undergraduate students in their final semester prior to obtaining a baccalaureate degree may sign up for concurrent postbaccalaureate credit as explained in the section of this catalog on "General Regulations."*

Clear Credential Requirements

1. Completion of an approved fifth year program (a minimum of 30 upper division or graduate-level postbaccalaureate units).
2. Knowledge of health education in California, including substance abuse and nutrition.
3. Coursework/fieldwork to satisfy PL 94-142: Needs of, and methods of providing educational opportunities to individuals with exceptional needs (mainstreaming).
4. Coursework/training in computer literacy (effective July 1, 1988).

New Students Who Seek to Complete a Credential

Teachers with preliminary credentials who are working toward clear credentials may have programs designed to fit their individual backgrounds. Evaluations of college credit and arrangements for programming should be made through the University Credentials Office, CL-100; telephone 265-5964.

Program

		Units
Prerequisite		
PLC 400	The Secondary School and Bilingual Education	3
PLC 451	Introduction to Multicultural Education	3
PLC 515	Bilingual Teaching Strategies	3
First Semester		
PLC 423	Behavioral and Psychological Aspects of Teaching in the Bilingual Classroom	4
PLC 454	Humanistic and Social Aspects of Teaching in the Bilingual Classroom	4
PLC 463	Student Teaching for Bilingual Secondary Students I	3-4
Second Semester		
PLC 403	Bilingual Student Teaching Seminar	3
PLC 433	Skills in Teaching Reading to Bilingual Secondary Students*	3
PLC 464	Student Teaching for Bilingual Secondary Students II	9-12
EDTEC 404	Instructional Media, Equipment, and Production	1

* Except for majors in art, music, and physical education, reading requirement may also be satisfied by completion of reading section of NTE test.

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 methodology for linguistically diverse students in grades K–12.

Requirements to exit the program:

1. Valid California teaching credential.
2. Six units of an appropriate foreign language at the college level.
3. Admission to the certificate program before officially beginning program.

The certificate program includes Linguistics 520, 550, 551, 552, and Policy Studies in Language and Cross-Cultural Education 553, 602*, 650*, 651.

A grade point average of 3.0 must be obtained in the eight courses. Students who complete the certificate program are not eligible to receive the Basic Certificate in Applied Linguistics and English as a Second Language (ESL). This is a California State Department of Education approved program.

* Prerequisites waived for students in this program.

Courses

UPPER DIVISION COURSES
(Intended for Undergraduates)

323. Psychological Foundations of Education and Bilingual Students (3) I

Two lectures and two hours of activity.

Prerequisite: Admission to Multiple Subject 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 Subject with Bilingual Emphasis credential program.

Bilingual instructional practices, classroom management, Scurricula 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) 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) II

Two lectures and two hours of activity.

Prerequisite: Admission to Multiple Subject 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) II

One lecture and two hours of activity.

Prerequisite: Admission to Multiple Subject 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) 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

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) II

Two lectures and two hours of activity.

Prerequisite: Admission to Multiple Subject 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) 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.

451. Introduction to Multicultural Education (3) I, II

Overview of cultural pluralism in education, industry, business, other institutions, and society at large. (Formerly numbered Multicultural Education 551 and Policy Studies in Language and Cross-Cultural Education 551.)

454. Humanistic and Social Aspects of Teaching in the Bilingual Classroom (4) I

Prerequisites: 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 Subject 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.

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. (Formerly numbered Multicultural Education 499.)

UPPER DIVISION COURSES
(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.)

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)

Prerequisite: Policy Studies in Language and Cross-Cultural Education 554.

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)

Two lectures and three hours of laboratory.

Prerequisite: Educational Technology 471A-471B.

Computer applications for bilingual instructional setting including examination and evaluation of instructional software and authoring systems for developing curriculum for limited English proficient (LEP) students.

596. Special Topics in Bilingual and Multicultural Education (1-3)

Prerequisite: Consent of instructor.

Selected topics in bilingual, cross-cultural education and policy studies. See Class Schedule for specific content. Maximum credit of six units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Special Education

Faculty

Emeritus: McClard, Singer, Trimmer
Chair: Cegelka
Professors: Cegelka, Doorlag, Forbing, Lewis, Lynch, Patton
Associate Professors: Archer, Brady, Pumpian
Adjunct: Stainback

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.
Supported Employment and Transition Specialist Certificate.

Courses

LOWER DIVISION COURSE

271. Supervised Observation and Fieldwork with Exceptional Individuals (2-3) I, II Cr/NC
One lecture and three or six hours of fieldwork.
Observation and practicum with exceptional individuals including mentally retarded, learning disabled, blind, physically handicapped, emotionally disturbed, and gifted. Practicum experience in schools, agencies, and hospitals. Not open to students with credit in Special Education 471.

UPPER DIVISION COURSES (Intended for Undergraduates)

471. Fieldwork in Special Education (2-3) I, II Cr/NC
One lecture and three or six hours of fieldwork.
Supervised observation and participation in classroom and related school activities of handicapped students (e.g., mentally retarded, gifted, learning disabled, and others). Not open to students with credit in Special Education 271

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:
A. Learning Handicapped **C.** Physically Handicapped
B. Severely Handicapped **D.** Gifted

496. Selected Topics in Special Education (1-4) I, II, S
Prerequisite: Special Education 471.
Instructional sequences focusing on a single topic or competency dealing with special education. Topics differ each semester to adjust to current literature in the field, training needs, and resource availability. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

499. Special Study (1-3) I, II
Prerequisite: Consent of instructor. Open only to senior and graduate students in education who have shown ability to work independently.
Individual study. Maximum credit six units.

UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

NOTE: All 500-level courses in Special Education, with the exception of Special Education 500 and 501, are reserved for students officially admitted to one of the programs in Special Education.

500. 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: Twelve units of coursework in education.
Introduction to procedures, legal requirements, and interpersonal processes in the identification, prescription, teaching and evaluation of instructional programs for handicapped students.

502. Exceptionality and Giftedness (3) I
Prerequisite: Twelve units in education or any upper division course in teaching reading or mathematics.
Principles, procedures, and techniques for identifying and educating gifted individuals who may have handicapping conditions. Not open to students with credit in Special Education 500 and 501.

508. Characteristics and Identification of the Gifted (3) I, II
Prerequisites: Credit or concurrent registration in Special Education 502 and 12 additional units in education.
Historical and philosophical foundations of education for the gifted, including review of research on characteristics screening and identification procedures. (Formerly numbered Special Education 505G.)

524. Characteristics and Education of Learning Handicapped Students (3) I, II, S
Prerequisites: Credit or concurrent registration in Special Education 500 and 501.
Historical and philosophical perspectives of programs related to learning handicapped students including review of research, educational programs, curricular approaches and characteristics of learning handicapped individuals. (Formerly numbered Special Education 505A.)

525. Characteristics and Education of Severely Handicapped Students (3) I, II, S
Prerequisites: Credit or concurrent registration in Special Education 500 and 501.
Historical and philosophical perspectives of programs related to severely handicapped students including review of research, educational programs, curricular approaches and characteristics of severely handicapped individuals. (Formerly numbered Special Education 505B.)

526. Characteristics and Education of Physically Handicapped Students (3) I, II, S
Prerequisites: Credit or concurrent registration in Special Education 500 and 501.
Historical and philosophical perspectives of programs related to physically handicapped students including review of research, educational programs, curricular approaches and characteristics of physically handicapped individuals. (Formerly numbered Special Education 505C.)

527. Characteristics and Education of Multicultural Learning Handicapped Students (3) I, II, S
Prerequisites: Credit or concurrent registration in Special Education 500 and 501.
Historical and philosophical perspectives of programs related to multicultural learning handicapped students including review of research, educational programs, curricular approaches and characteristics of multicultural learning handicapped individuals. (Formerly numbered Special Education 505F.)

528. Early Education of Handicapped Infants and Preschoolers (3) I, II, S
Prerequisites: Credit or concurrent registration in Special Education 500 and 501.
Historical and philosophical perspectives of programs related to handicapped infants and preschool students including review of research, educational programs, curricular approaches and characteristics of handicapped infants and preschooler individuals. (Formerly numbered Special Education 505H.)

529. Characteristics and Education of Seriously Emotionally Disturbed Students (3) I, II, S
Prerequisites: Special Education 500 and 501.
Historical and philosophical perspectives of programs related to emotionally disturbed/behaviorally disordered students including review of research, educational programs, curricular approaches, and characteristics. (Formerly numbered Special Education 505E.)

534. Assessment and Evaluation of Learning Handicapped Students (3) I, II, S
Prerequisite: Special Education 524.
Tests and procedures for assessing, evaluating and monitoring progress of learning handicapped individuals to meet their physical, intellectual, social, and emotional needs. Psychoeducational diagnosis, appraisal, and assessment procedures. (Formerly numbered Special Education 510A.)

535. Assessment and Evaluation of Severely Handicapped Students (3) I, II, S
Prerequisite: Special Education 525.
Tests and procedures for assessing, evaluating and monitoring progress of severely handicapped individuals to meet their physical, intellectual, social, vocational and emotional needs. Psychoeducational diagnosis, appraisal and assessment procedures. (Formerly numbered Special Education 510B.)

542. Curriculum and Instruction for the Gifted (3) I, II
Prerequisites: Special Education 502 and 508.
Current practices, research, issues and trends regarding development of programs and curricula appropriate for gifted and talented learners. (Formerly numbered Special Education 511D.)

544. Basic Skill Instruction for Low Achieving Students (3) I, II
Prerequisite: Special Education 534.
Application of systematic instruction to the unique academic needs of learning handicapped and low achieving students in basic skill areas. Emphasis on program planning, delivery of instruction, selection of materials, and monitoring student progress. (Formerly numbered Special Education 511A.)

545. Curriculum and Instruction for Severely Handicapped Students (3) I, II, S
Prerequisite: Special Education 535.
Utilization of data for determining general and specific objectives to meet the needs unique to severely handicapped individuals. Developing and selecting materials and establishing procedures for monitoring and evaluating pupil progress. (Formerly numbered Special Education 511B.)

546. Curriculum and Instruction for Multicultural Learning Handicapped Students (3) I, II, S
Prerequisite: Special Education 500.
Utilization of data for determining general and specific objectives to meet needs unique to multicultural learning handicapped individuals. Developing and selecting materials and establishing procedures for monitoring and evaluating pupil progress. (Formerly numbered Special Education 511C.)

547. Adaptive School Behavior Instruction for Low Achieving Students (3) I, II
Prerequisites: Special Education 500 and 501.
Instructional strategies in adaptive school behaviors, social skills, study skills, learning strategies and prevocational skills. Focus on systematic instruction in these areas for low achieving students.

553. Dynamics of Behavior Change of the Exceptional Individual (3) I, II, S
Prerequisites: Special Education 500 and 501.
Management and treatment of individuals with exceptional needs. Current theories and programs in behavioral change studies, analyzed with reference to their applications for the educational environment. Not open to students with credit for Special Education 513A, 513B, or 513C.

560. Applications of Technology for Exceptional Learners (3) I
Prerequisite: Special Education 500.
Educational applications of current technologies for handicapped and gifted learners. Selection, modification, and classroom use of technologies to improve or bypass physical, sensory, communicative, learning, and social disabilities and for environmental control. (Formerly numbered Special Education 507.)

562. Teaching Partnerships in Special Education (3) I, II, S
Prerequisites: Special Education 500 and 501.
Theory and process of school-based collaboration for the special education teacher and other related professionals; interpersonal processes, communication skills, conflict resolution; decision-making models, team function collaboration models for working with aides, parents, administrators, and other professionals.

563. Career and Vocational Education for Exceptional Youth (3) I, II, S
Prerequisite: Special Education 471 or 500.
Historical and modern view of vocational development for handicapped youth; current legislative thrusts; practical application of strategies in assessing and teaching vocational and community living skills; developing community-based worksites, employer contacts, and parent involvement.

564. Supported Employment: Training and Placement Techniques (3) I, II, S
Prerequisites: Special Education 500 and 501.
Theory and process of supported employment programs for handicapped students. State-of-the-art research and applied skills related to implementing supported employment programs in the mainstream. Intensive experiential component.

571. Assessment and Programming Handicapped Infants and Preschoolers (4) I, II, S
Prerequisites: Special Education 501, 528, 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. (Formerly numbered Special Education 515.)

574. Multihandicapped Early Intervention (3) I, II, S
Prerequisites: Special Education 501; concurrent registration in Special Education 480.
Curricula, teaching methods, and assessment procedures for the multihandicapped populations related to early intervention. (Formerly numbered Special Education 523.)

596. Selected Topics in Special Education (1-4) I, II, S
Specialized study of selected topics in special education. May be offered as either a workshop or lecture/discussion. See Class Schedule for specific content. Maximum credit of six units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

Refer to the Graduate Bulletin.

Teacher Education

Faculty

Emeritus: Altamura, Anderson, Bacon, Baker, Becker, Birch, Blanc, Botkin, Bradley, Briggs, Brydegaard, Campbell, Charles, Clark, Crum, Elliott, Erickson, Fishburn, Fisher, Friedrich, Fulkerson, Gates, Gega, Gjerde, Gray, Groff, Hammack, Hill, Huls, Kinder, Klann, LaPray, LuPone, Madden, Meek, Nardelli, Person, Platz, Prouty, Riggs, Rodney, Schrupp, Smith, H., Stough, Strand, Tossas, Wilding, Yarborough

Director: Mehaffy

Professors: Ackerly, Becklund, Bee, Berg, Burnside, Cornejo, Curry, Duckworth, Fearn, Flood, Gast, Goodson, Inskeep, Kendall, Lapp, McCabe, McCormack, McCoy, Mehaffy, Moreno, Murphy, Nagel, Pehrson, Retson, Rixman, Ross, R., Rowland, Shaw, Smith, R., Stautland, Steckbauer, Strom, Treadway, Yesselman

Associate Professors: Ford, Fox, Kaatz, Lujan, Malian, Mooers, Morris, Park, Reel, Ross, P., Santa Cruz

Assistant Professors: Bezuk, Colvin-Murphy, Kramer, Mason, Mathison

Offered by the School

Master of Arts degree in education.
Multiple subject credential.
Reading specialist credential.
Single subject teaching credential.
Certificate in children's literature.

The Credentials

The Single Subject Credential qualifies graduates to teach in grades K-12 in the subject area specified. Most candidates prepare to teach in grades 7-12 (usually junior high or high school) or in a middle school setting (usually grades 6-8).

A prerequisite three-unit introductory course, TE 453, serves as an orientation to careers in secondary education. Admission to the program occurs as part of that course. Applicants must pass the California Basic Educational Skills Test (CBEST) prior to admission as well as display competency in their subject area.

Students in the program follow a sequence of courses which normally takes approximately two semesters to complete. The first semester of the program emphasizes curriculum theory and development, educational research, and foundations of secondary education and includes a part-time student teaching experience. The second semester focuses on a full-time student teaching experience and accompanying seminar.

The Multiple Subject Credential qualifies graduates to teach in any K-12, self-contained classroom (a classroom where one teacher is responsible for teaching all the subjects). For most, this means an elementary school or middle school setting. The credential program includes a study of educational psychology plus a variety of methods courses in those subjects commonly taught in elementary schools.

A full-time, two semester program is available for those wishing to prepare as rapidly as possible. The three semester, part-time program accommodates those students who may have employment or family responsibilities as well as those who may wish to resume university study more leisurely. Both programs require a daytime commitment.

The demand for elementary and secondary teachers is dramatically increasing. San Diego County has a projected need for 2400 teachers over the next two years. Current growth in student enrollment and the need to replace teachers who retire combine to forecast an increase in new teacher hiring between 13 and 18 percent during this same period. Competition among districts, as well as renewed recognition of the place of the profession, has caused marked salary increases in the last few years – with predictions of additional increases.

Multiple Subject Credential (Elementary Education)

(Credential Code: 00200)

Multiple Subject (Elementary) — Clear Credential

Persons interested in teaching in the elementary school will typically pursue the Multiple Subject Credential which authorizes the holder to teach in any self-contained classroom (K–12), 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 work).
3. Completion of an approved program of professional education. (Information on approved programs is available in the Teacher Education Admissions Office, School of Teacher Education.)
4. Passage of subject matter examination (National Teacher Examination, Core Battery, General Knowledge Section) or approved waiver program (Liberal Studies major).
5. Completion of a course in teaching reading.
6. Knowledge of U.S. Constitution demonstrated by completion of a three-unit course. (See the section of this catalog on "Graduation Requirements.")
7. Knowledge of health education in California, including substance abuse and nutrition.
8. Coursework/fieldwork to satisfy PL 94-142: Needs of, and methods of providing educational opportunities to individuals with exceptional needs (mainstreaming), TE 526.
9. Passage of California Basic Educational Skills Test (CBEST).
10. Coursework to satisfy computer literacy (Educational Technology 97, 471A, and 471B).

Multiple Subject (Elementary) — Preliminary Credential

Applicants may be granted a preliminary teaching credential if they meet requirements 1, 3, 4, 5, 6 and 9 listed above. Applicants whose program allows them to meet these requirements will be eligible for a preliminary credential at the same time they finish their four-year college program. During the next five years, such persons must complete the remaining requirements in order to become eligible for the clear credential.

NOTE: *Undergraduate students in their final semester prior to obtaining a baccalaureate degree may register for concurrent postbaccalaureate credit as explained in the section of this catalog on "General Regulations."*

Admission Standards for the Multiple Subject Credential Program

1. **CBEST Examination.** Students must pass the California Basic Educational Skills Test (CBEST) prior to admission to the Multiple Subject Credential program. Information may be obtained from the Test Office, LE-560. Students are urged to take this examination at the earliest possible time after deciding to pursue a teaching credential.
2. **Major.** The Liberal Studies Major, Option 2 or 3, may be selected in preparation for the Multiple Subject Credential program. (See Liberal Studies section of this catalog.)

   Students who have academic majors other than Liberal Studies Option 2 or 3, must pass the National Teacher Examination, Core Battery, General Knowledge Section, prior to admission to the Multiple Subject Credential program.
3. **Academic Prerequisites.** These courses or approved equivalents are required for admission to the Multiple Subject Credential program:

   Health Science 101, "Health and Lifestyle," *or* Health Science 320, "Health Education for Elementary Teachers" ..... 3 units
   Mathematics 210A*, "Structure and Concepts of Elementary Mathematics" ..... 3 units
   Music 102, "Basic Musicianship for Non-Music Majors" ... 3 units
   Physical Educ. 241, "Physical Education of Children" ..... 2 units

   * With approval of the mathematics adviser, any of the following mathematics courses may be substituted for Mathematics 210A: Mathematics 121, 150, 310A.
4. **Prerequisite Course in Education: TE 290, "Careers in Elementary Education."** This required introductory course serves as an orientation to careers in elementary education. During this course students will complete admission requirements and will participate in supervised fieldwork assignments to provide at least 30 hours experience with children in typical classroom settings. A recommendation from a TE 290 professor is a requirement for admission to the Multiple Subject Credential program. TE 290 must have been taken in spring 1986 or later. Otherwise, students should clear through the faculty adviser.

   TE 290 is open to all students and should be completed within five years prior to beginning the program.
5. **Grade Point Average.** A student must have a grade point average (GPA) within the upper one-half of undergraduate students in the candidate's discipline/major. The required GPAs, which vary with institutions, are available in the Teacher Education Admissions Office, School of Teacher Education.
6. **Health Clearance.** Tuberculin clearance and evidence of physical fitness are required.
7. **Certificate of Clearance.** Credential candidates must possess a valid Certificate of Clearance before admission to the Multiple Subject Credential program. Forms and fingerprint cards are available in the Teacher Education Admissions Office, School of Teacher Education.
8. **Credential Advising Appointment.** Each applicant must meet with a faculty adviser to file an appropriate program. Appointments may be made at the Teacher Education Admissions Office, School of Teacher Education.
9. **Application.** Candidates must complete application procedures the semester prior to beginning the credential program. If candidates are entering San Diego State University, they must also file an application for admission to the University.
10. **Student Teaching Program Selection.** Application for student teaching block assignments must be filed during the semester prior to beginning the Multiple Subject Credential program.
11. **Appeals Process.** A student who does not meet all the admission requirements may petition the School of Teacher Education Appeals Committee for individual consideration. Forms for this purpose are available in the Teacher Education Admissions Office, School of Teacher Education.

GPA Requirement for Continuation in the Multiple Subject Credential Program

A grade point average of 3.0 must be maintained each semester to permit a student to continue in the Multiple Subject Credential program.

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 and arrangements for programming should be made through the University Credentials Office, 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 evaluated and subject to reduction in credit, due to 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 degree or credential requirements.

Supplementary Authorizations

With additional units in certain curriculum areas, a Multiple Subject Credential candidate can be granted a supplementary authorization to teach departmental classes in the middle and junior high schools, grades 6–9. Information on requirements for these supplementary authorizations is available in the University Credentials Office, CL-100.

Single Subject Credential (Secondary Education)

(Credential Code: 00100)

Single Subject (Secondary) — Clear Credential

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 CREDENTIAL AREAS AND APPLICABLE MAJORS

Art: Art
Business: Accounting, Finance, Information Systems, Management, Marketing
English: Comparative Literature, Drama, English, Journalism, Linguistics, Speech Communication
Foreign Languages: Classics, French, German, Russian, Spanish
Health Science: Health Science
History: History
Home Economics: Home Economics
Industrial Arts: Industrial Arts
Life Sciences: Biology
Mathematics: Mathematics
Music: Music
Physical Education: Physical Education
Physical Sciences: Chemistry, Physical Science
Social Science: Social Science

Attainment of this credential requires:

1. A bachelor's degree (or higher) with one of the approved single subject credential areas listed above. Credentials can be granted only in the above single subject credential areas.
2. Completion of a fifth year of study (30 units of upper division or graduate work).
3. Completion of an approved program of professional education. The required courses at SDSU are Teacher Education 403, 423, 453, 454, 463, 464; Educational Technology 404; and Teacher Education 433 (see item 5. below).
4. Passage of subject matter examination(s) on the National Teacher Examination (passing scores are available at the University Credentials Office, CL-100) or approved waiver program in one of the areas listed above with a written recommendation from the department major adviser. Students passing the NTE in the specialty area of English must also pass the CLEP examination. Sign up at the Test Office, LE-560.

5. Knowledge of teaching reading as demonstrated by completion of a course in reading, TE 433. (Majors in music, art, and physical education are not required to take TE 433.)
6. Knowledge of U.S. Constitution, as demonstrated by successful completion of an approved course. (See the section of this catalog on "Graduation Requirements.")
7. Knowledge of health education in California, including substance abuse and nutrition, by successful completion of Health Science 321.
8. Course work and fieldwork to satisfy PL 94-142: Needs of, and methods of providing educational opportunities to individuals with exceptional needs (mainstreaming), TE 526.
9. Passage of California Basic Educational Skills Test (CBEST).
10. Computer literacy.

NOTE: *Undergraduate students in their final semester prior to obtaining a baccalaureate degree may register for concurrent postbaccalaureate credit as explained in the section of this catalog on "General Regulations."*

Single Subject (Secondary) – Preliminary Credential

Applicants may be granted a preliminary teaching credential if they meet requirements 1, 3, 4, 5, 6, and 9 listed above. Applicants whose program allows them to meet these requirements will be eligible for a preliminary credential at the same time they finish their four-year college program. During the next five years, such persons must complete the remaining requirements in order to become eligible for the clear credential.

Admission Standards for the Single Subject Credential Program

1. **CBEST Examination.** Students must pass the California Basic Educational Skills Test (CBEST) prior to admission to the Single Subject Credential program. Information may be obtained from the Test Office, LE-560. Students are urged to take this examination at the earliest possible time after deciding to pursue a teaching credential.
2. **Major.** Students who complete their approved teaching major from San Diego State University must obtain a recommendation from the adviser in their Single Subject Credential major. The recommendation is given on the basis of the evaluation of coursework. The requirements for the various Single Subject Teaching Credential majors are listed under the academic majors in this catalog. A PASS score in the specialty areas of the National Teacher Examination may also be used to meet this requirement. Students passing the NTE in the specialty area of English must also pass the CLEP examination. Sign up at Test Office, LE-560.

   Students who complete a major at a California institution which has approved teaching majors may obtain a recommendation from the institution's credential analyst. Forms for this recommendation are available in ED-151. Students who have completed majors at institutions of higher education which do not have approved teaching majors must obtain a recommendation from the major adviser at San Diego State University.
3. **Prerequisite Course in Education: TE 453, "The Secondary School."** This introductory course serves as an orientation to careers in secondary education. During this course students will participate in supervised fieldwork assignments, demonstrate initial professional competencies, and will complete admission requirements for the Single Subject Credential program. A recommendation from a TE 453 professor is a requirement for admission to the Single Subject Credential program.

   Teacher Education 453 is open to all students and should be completed within five years prior to beginning the program.
4. **Grade Point Average.** A student must have a grade point average (GPA) within the upper one-half of undergraduate students in the candidate's major. Required GPAs are available in the Teacher Education Admissions Office, School of Teacher Education.
5. **Appeals Process.** A student who does not meet all the admission requirements may petition the School of Teacher Education Appeals Committee for individual consideration. Forms for this purpose are available in the Teacher Education Admissions Office, School of Teacher Education.

   NOTE: An adviser is available to assist students with their credential program. Appointments may be made at the Teacher Education Admissions Office, School of Teacher Education.

Admission to Student Teaching

Admission to Student Teaching I (Teacher Education 423, 454, 463, and preferably 433 – except majors in art, music and physical education – and Educational 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 the Teacher Education Admissions Office, School of Teacher Education at least one month before the end of the semester preceding enrollment in Student Teaching I. Check deadline dates in the Teacher Education Admissions Office, School of Teacher Education.

a. Completed application.
b. A student must have a grade point average (GPA) within the upper one-half of undergraduate students in the candidate's major. Required GPAs are available in the Teacher Education Admissions Office, School of Teacher Education.
c. A recommendation 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.
d. 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).
e. Evidence of having passed CBEST.
f. Student teaching preference cards and request forms.
g. 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 Admissions Office, School of Teacher Education.

Priority for admission is based upon the date of clearance for these requirements.

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:

a. Satisfactory completion of Teacher Education 423, 454, 463, plus Educational Technology 404, and preferably Teacher Education 433 (except for music, art and physical education majors).
b. Application for enrollment in Teacher Education 464 must be made by submission of completed student teaching forms to the Teacher Education Admissions Office in ED-151. Teacher Education 403 must be taken concurrently with Teacher Education 464.
c. For a preliminary credential, the student must successfully complete coursework to clear the U.S. Constitution requirement.
d. For a clear credential, the student must successfully complete coursework to clear the health education requirement, coursework to satisfy PL 94-142 (Teacher Education 526), and coursework to satisfy computer literacy (Educational Technology 97, 471A, and 471B).

NOTE: DELAYED START OF STUDENT TEACHING will require filing of a request for Leave of Absence with the Teacher Education Admissions Office.

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 and arrangements for programming should be made through the University Credentials Office, 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.

Supplementary Authorizations

With additional units in certain curriculum areas, a Single Subject Credential candidate can be granted a supplementary authorization to teach in generalized areas in middle and junior high schools (e.g., introductory English) and specialized areas in senior high schools (e.g., psychology). Information on requirements for these supplementary authorizations is available in the University Credentials Office, CL-100.

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 (Major Code: 49012)

This program is available to all students but is not acceptable for the Multiple Subject Credential. Information regarding this option is presented in the Liberal Studies section of this catalog.

Option 2 (Major Code: 49013)

Liberal Studies with the A.B. Degree in Applied Arts and Sciences.

Option 3 (Major Code: 49014)

Liberal Studies with the A.B. Degree in Liberal Arts and Sciences.

All candidates for a degree in applied arts and sciences or 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 Option 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 Subject 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 coursework is required for acceptance into the education program and may be included in the Liberal Studies Major unless otherwise noted:

Mathematics 210A	Music 102
Health Science 101 or 320	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 Options 2 and 3 is available at the University Advising Center.

Children's Literature Certificate

This certificate attests that the student has successfully completed 18 units (minimum GPA 3.0) of planned, advised, coherent, and articulated study in the field of literature for children. Prerequisites include admission to the University and to upper division or graduate standing. The Certificate in Children's Literature may be earned with a specialization either in Education or in English and Comparative Literature.

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 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.

Courses

General

UPPER DIVISION COURSES
(Intended for Undergraduates)

303. The Teaching Profession: First Clinical Experience (4)
(Offered at IVC only)

Three lectures and three hours of laboratory.

Social science concepts and theories for the teaching profession; guided student observation and participation in public school classrooms.

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
(Also Acceptable for Advanced Degrees)

522. Substance Abuse in the Schools (3)

Prerequisite: Health Science 574.

Development of school policy and school plan to include substance abuse prevention, identification, intervention, referral, and aftercare. Collaboration with parents, schools, agencies, and local communities.

525. Discipline and Classroom Management (3) I, II

Prerequisite: Six upper division units in education, psychology or sociology.

Analysis of research and theories of classroom discipline, management, and teaching effectiveness, with practical application to the elementary classroom setting. (Formerly numbered Elementary Education 532.)

526. Teaching the Special Child in the Regular Classroom (2)
Prerequisite: Teaching credential or admission to multiple subject credential program.

Knowledge, skills, and instructional programs for teaching handicapped students in the regular classroom. Meets the mainstreaming requirements for the California Multiple Subject Credential (clear). Not open to students with credit in Special Education 550, Teaching the Special Child in the Regular Classroom. Fieldwork required. (Formerly numbered Elementary Education 550.)

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. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree. (Formerly numbered Elementary Education 596 and Secondary Education 596.)

* Specified sections.

Elementary Education

LOWER DIVISION COURSE

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
(Intended for Undergraduates)

301. Skills in Curriculum Organization (2) I, II
Four hours of activity.

Prerequisite: Admission to multiple subject credential program.

Skills in planning, following and evaluating long-range instruction in the various school subjects. (Formerly numbered Elementary Education 317.)

302. Classroom Management Skills (1) I, II
Two hours of activity.

Prerequisite: Provisional or complete admission to multiple subject credential program.

Skills in interpreting the legal aspects of education, identifying various kinds of school and classroom organization, and using instructional media and verbal stimuli to facilitate learning. (Formerly numbered Elementary Education 313 and Teacher Education 300.)

321. Skills in Applying Instructional Principles (2) I, II
Four hours of activity.

Prerequisite: Admission to multiple subject 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 subject 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 subject 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 subject credential program.

Skills in observing and interpreting professional values and the diversity of social, cultural, economic and educational values within elementary school communities. (Formerly numbered Elementary Education 312.)

360. Basic Student Teaching Seminar (1-2) I, II Cr/NC
Prerequisites: Admission to multiple subject 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 subject 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 subject credential program or possession of a teaching credential.

Developing curriculum, principles and materials of instruction, including instructional media and participation in elementary social studies education. (Formerly numbered Elementary Education 414.)

410C. Teaching Science in the Elementary School (2) I, II
Four hours of activity.

Prerequisite: Admission to multiple subject credential program or possession of a teaching credential.

Developing curriculum, principles and materials of instruction, including instructional media and participation in elementary 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 subject 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 subject 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 subject 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 subject 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 subject 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
(Also Acceptable for Advanced Degrees)

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.)

Secondary Education

UPPER DIVISION COURSES
(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, selfassessment, 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 Educational 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
(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 subject 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 subject 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 subject 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 subject 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
(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
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
Associate Dean for Special Projects: Wernicke
Assistant Dean for Student Affairs: Chou

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 coursework 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 coursework 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 coursework taken at an institution having an engineering program which has not been accredited by the Accreditation Board for Engineering and Technology, Inc., unless the student successfully completes the first 12 units of engineering work attempted at this university. At that time, and upon recommendation of the 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, of which 24 units must be in upper division courses. At least one-half of these upper division units must be required for 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. Satisfactory completion of competency tests in mathematics and writing, or completion of appropriate courses designated in lieu thereof.
6. Satisfaction of the upper division writing requirement.
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. General Education requirements (see below).
10. 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 three of the nine upper division units must be taken from Explorations; the remaining six units may be taken from Explorations or from specifically approved upper division course substitutions for Foundations areas B and C (Social and Behavioral Sciences and Humanities). No more than twelve units may be used for General Education credit from any one department or academic unit.

I. Communication and Analytical Reasoning: 15 units
- A. Written Communication (6 units to include):
  1. Composition (3 units)
  2. Intermediate Composition (3 units)
- B. Oral Communication (3 units)
- C. Mathematics (6 units) applicable to General Education
  - Mathematics 150
  - Mathematics 151

II. Foundations: 29 units
- A. Natural Science (17 units to include):
  1. Life Science (3 units)
  2. Physical Science (14 units)
     - Chemistry 200
     - Physics 195
     - Physics 196
     - Physics 197
- B. Social and Behavioral Sciences (3 units)
- C. Humanities (9 units to include three of the four areas 1., 2., 3., 4.)

III. Explorations: 6 units
This section of General Education is in the process of being revised. Consult your department.

Minor in Engineering

The minor in engineering, intended for students in other academic areas of the university, consists of 15 units in engineering, 12 units of which must be in upper division courses. The courses must be approved by the Dean of the College of Engineering.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

120. Engineering Problem Analysis (2) I, II
One lecture and three hours of laboratory.
Prerequisite: Concurrent registration in Mathematics 150.
Analysis of engineering problems and solutions using the digital computer. Fundamentals of programming and programming language commands.

140. Engineering Measurement Analysis (2) I, II
Prerequisite: Mathematics 140.
Methods of data presentation. Analysis and treatment of engineering data. Design of engineering experiments. Correlation and regression analysis. Practical applications are stressed.

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 (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.

430. Principles of Engineering Economy (3) I, II
Prerequisite: Mathematics 252.
Application of the mathematics of finance to engineering and managerial decision making.

496. Advanced Engineering Topics (1-3) I, II
Prerequisite: Minimum grade point average of 2.0 in engineering.
Modern developments in engineering. See Class Schedule for specific content. Maximum credit six units for any combination of 496, 499 and 596 applicable to a bachelor's degree.

UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

510. Methods of Analysis (3) I, II
Prerequisite: Engineering 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

Refer to the Graduate Bulletin.

Aerospace Engineering and Engineering Mechanics

Faculty
Emeritus: Shutts
Chair: Plotkin
Professors: Conly, Dharmarajan, Katz, Krishnamoorthy, McGhie, Narang, Pierucci, Plotkin, Wang
Associate Professor: Nosseir
Assistant Professor: Lyrintzis
Lecturer: Faulkner

Offered by the Department
Master of Science degree in aerospace engineering.
Major in aerospace engineering with the B.S. degree.

The Major

The Department of Aerospace Engineering and Engineering Mechanics offers a rigorous and balanced education which includes the study of aerodynamics, aerospace structures, propulsion, flight mechanics and vehicle design. The goal of this program is to create professional aerospace engineers with an understanding of the physical fundamentals underlying atmospheric and space flight, and with the capability of applying this knowledge for research, analysis, and design purposes. Moreover, the physical background and design synthesis that are characteristic of an aerospace engineering student's education also prepare the student to work productively in other fields such as energy, transportation, health and ocean engineering.

The aerospace industry, the second largest industry in our country, is one of the largest employers of engineers. Opportunities for employment in entry level positions in large aircraft companies, general aviation manufacturers, the airlines or government aerospace-related laboratories are good. Graduates of the program are also qualified to continue their formal education at the graduate level or to accept entry level positions in several nonaerospace fields.

Aerospace Engineering Major

With the B.S. Degree (Major Code: 09021)

Students majoring in Aerospace Engineering must include in their program a sequence of fundamental courses. In addition, the students have the opportunity to satisfy their particular areas of interest by selecting a pattern of study indicated in the sequence below. This pattern includes typical aerospace engineering topics, such as aerospace vehicle design, performance, structural analysis, aerodynamics, and propulsion. The students' choice of elective courses and area of specialization must be made in consultation with their adviser and documented by the filing of an approved master plan during the first semester of their junior year.

Upper Division Writing Requirement. Departmental screening in 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

Fall Semester	*Units*	*Spring Semester*	*Units*
Chem. 200, General Chemistry	5	Phys. 195, Principles of Physics	3
Math. 150, Single Variable Calculus	5	Math. 151, Calc. and Anal. Geom.	4
General Education	6	ME 190, Engineering Drawing	2
AE 123, The Aerospace Engineer	1	ME 260, Engineering Materials	3
	17	General Education	6
			18

Sophomore Year

Fall Semester	*Units*	*Spring Semester*	*Units*
Math. 252, Multivariable Calculus	4	Phys. 197, Principles of Physics	3
EM 200, Statics	3	EE 203, Principles of Elec. Engr.	3
General Education	6	EM 220, Dynamics	3
Phys. 196, Principles of Physics	3	Engr. 310, Methods of Analysis	3
	16	General Education	3
		Engr. 120, Engr. Problem Analysis	2
			17

Junior Year

Fall Semester	*Units*	*Spring Semester*	*Units*
ME 350, Thermodynamics	3	Engr. 510, Methods of Analysis	3
AE 301, Low Speed Aerodynamics	3	AE 302, High Speed Aerodynamics	3
CE 301, Intro. to Solid Mechanics	3	AE 303, Experimental Aerodynamics	2
CE 302, Solid Mechanics Lab	1	AE 310A, Aerospace Struc. Anal.	3
EM 340, Fluid Mechanics	3	AE 320, Aerospace Flight Mech.	3
EM 341, Fluid Mechanics Lab	1	General Education	3
General Education	3		17
	17		

Senior Year

Fall Semester — *All Specializations*

	Units
AE 310B, Aerospace Struc. Analysis	3
AE 403, Aerosp. Engr. Senior Project	3
AE 430, Aircraft Propulsion Systems	3
AE 440, Aircraft Stab. and Control I	3
AE 460A, Aerosp. Engr. Applications	2
American Institutions	3
	17

Spring Semester — *According to Specialization*

Aerodynamics	Units
AE 460B, Aerosp. Engr. Applications	3
AE 480, Aeroelasticity & Acoustics	2
American Institutions	3
Choose any two courses:	
AE 501, Comp. Fluid Mechanics	3
AE 530, Rocket & Space Propulsion	3
AE 550, Viscous Flow	3
EM 510, Fin. Elem. Meth. Aero. Struc.	3
	14

Aerospace Structures	Units
AE 460B, Aerosp. Engr. Applications	3
AE 480, Aeroelasticity & Acoustics	2
American Institutions	3
Choose any two courses:	
AE 540, Arcrft. Stability & Control II	3
EM 510, Fin. Ele. Meth. Aero. Struc.	3
EM 521, Adv. Mech. Deform. Media	3
EM 530, Composite Struc. Analysis	3
	14

Propulsion & Flight Mechanics	Units
AE 460B, Aerosp. Engr. Applications	3
AE 480, Aeroelasticity & Acoustics	2
American Institutions	3
Choose any two courses:	
AE 520, Int. Aerospace Flight Mech.	3
AE 530, Rocket & Space Propulsion	3
AE 540, Arcrft. Stability & Cntrl. II	3
EM 521, Adv. Mech. Deform. Media	3
	14

Other electives may be substituted with permission of the adviser and department chair.

Courses

LOWER DIVISION COURSE IN AEROSPACE ENGINEERING

123. The Aerospace Engineer (1)
Introduction to professional aerospace engineering. Emphasis on aeronautics and astronautics.

UPPER DIVISION COURSES IN AEROSPACE ENGINEERING (Intended for Undergraduates)

301. Low Speed Aerodynamics (3)
Prerequisite: Credit or concurrent registration in Engineering Mechanics 340.

Subsonic flow, airfoil and wing theory, experimental characteristics of wing sections, high lift devices.

302. High Speed Aerodynamics (3)
Prerequisites: Aerospace Engineering 301 and Mechanical Engineering 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)
One lecture and three hours of laboratory.

Prerequisites: Engineering Mechanics 341 and credit or concurrent registration in Aerospace Engineering 301. To be eligible for the departmental upper division writing test in this class, students must have completed 60 units, fulfilled the Writing Competency requirement, and completed the General Education requirement in Written Communication.

Operating characteristics of subsonic and supersonic wind tunnels. Aerodynamic characteristics of wings and bodies. Flow visualization techniques. Force, moment and pressure distribution measurement. Use of hot-wire anemometer and schlieren equipment.

310A-310B. Aerospace Structural Analysis (3-3)
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)
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)
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 I (3)
Prerequisite: Aerospace Engineering 303.

Static stability and control, general equations of unsteady motion, stability derivatives, stability of uncontrolled motion, response of aircraft to actuation of controls.

460A. Aerospace Engineering Applications (2) I
Six hours of laboratory.
Prerequisites: Aerospace Engineering 302, 303 and 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)
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
Prerequisite: Consent of instructor.

Individual study. Maximum credit six units for any combination of Aerospace Engineering 496 and 499.

UPPER DIVISION COURSES IN AEROSPACE ENGINEERING (Also Acceptable for Advanced Degrees)

501. Computational Fluid Mechanics (3)
Prerequisites: Engineering 120 and Engineering Mechanics 340.

Finite difference methods of solution to fluid dynamics equations of the potential flow, boundary layer theory and the Navier-Stokes formulation. Study of the convergence and stability of the difference equations.

520. Intermediate Aerospace Flight Mechanics (3)
Prerequisite: Aerospace Engineering 320.

A continuation of Aerospace Engineering 320 to include orbit determination techniques, general and special perturbations, artificial satellites, rocket dynamics and transfer orbits, earth-moon trajectories, and interplanetary trajectories.

530. Rocket and Space Propulsion (3)
Prerequisite: Aerospace Engineering 430.

Equilibrium combustion thermodynamics. Performance of rocket propelled vehicles. Rocket propulsion fundamentals. Topics in chemical (solid and liquid) and electrical propulsion systems.

540. Aircraft Stability and Control II (3)
Prerequisite: Aerospace Engineering 440.

Dynamic stability and control of rigid aircraft; general equations of unsteady motion, stability derivatives, perturbed state thrust forces and moment, special problems in dynamic stability and response.

550. Viscous Flow (3) I
Prerequisites: Credit or concurrent registration in Engineering Mechanics 340, and Engineering 510.

Kinematics of fluid motion. Conservation of mass, momentum, and energy. Navier-Stokes equations; exact solutions. Boundary layer approximations, turbulent flow. (Formerly numbered Engineering Mechanics 540.)

596. Advanced Aerospace Engineering Topics (3)
Prerequisite: Consent of instructor.

Modern developments in aerospace engineering. See Class Schedule for specific content. Maximum credit of six units for any combination of Aerospace Engineering or Engineering Mechanics 496, 499, and 596 applicable to a bachelor's degree. Maximum combined credit of six units of Aerospace Engineering or Engineering Mechanics 596 and 696 applicable to a 30-unit master's degree.

LOWER DIVISION COURSES IN ENGINEERING MECHANICS

200. Statics (3) I, II
Prerequisites: Physics 195 and credit or concurrent registration in Mathematics 151.

Force systems, equilibrium, structures, distributed forces, friction, virtual work, moments of inertia, vector algebra.

202. Mechanics for Electrical Engineers (3) I, II
Prerequisites: Physics 195 and credit or concurrent registration in Mathematics 151.

Essentials of mechanics of particles and rigid bodies, for engineering applications. Emphasis on particle dynamics. Intended for Electrical Engineering majors. Not open to students with credit in Engineering Mechanics 200 or 220.

220. Dynamics (3) I, II
Prerequisite: Engineering Mechanics 200 with a 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
Prerequisite: Consent of instructor.

Modern developments in engineering mechanics. See Class Schedule for specific content. Maximum credit six units for any combination of Engineering Mechanics 496, 499 and 596.

499. Special Study (1-3) I, II
Prerequisite: Consent of instructor.

Individual study. Maximum credit six units for any combination of Engineering Mechanics 496, 499 and 596.

UPPER DIVISION COURSES IN ENGINEERING MECHANICS (Also Acceptable for Advanced Degrees)

510. Finite Element Methods in Aerospace Structures (3)
Prerequisite: Aerospace Engineering 310B.

Static and dynamic analysis of aerospace structures utilizing finite element methods. (Formerly numbered Aerospace Engineering 510.)

521. Advanced Mechanics of Deformable Media (3)
Prerequisites: Aerospace Engineering 310B and Engineering 510.

Application of advanced topics in mechanics of deformable media to the design of aerospace structural components. Theory of failure, curved beams, beams on elastic foundation, thick-walled cylinders. Fracture mechanics and optimization of structures.

530. Composite Structural Analysis (3) I
Prerequisites: Engineering 310 and Civil Engineering 301.

Strength of composite materials; lamination theory; strength analysis of laminates; bending, buckling, and vibration of composite plates.

596. Advanced Engineering Mechanics Topics (1-3) I, II
Prerequisite: Consent of instructor.

Modern developments in engineering mechanics. See Class Schedule for specific content. Maximum credit of six units for any combination of Engineering Mechanics 496, 499 and 596 applicable to a bachelor's degree. Maximum combined credit of six units of Engineering Mechanics 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES IN AEROSPACE ENGINEERING AND ENGINEERING MECHANICS

Refer to the Graduate Bulletin.

Civil Engineering

Faculty

Emeritus: Capp, Johnson, Quiett
Chair: Banks
Professors: Banks, Chang, Chou, Noorany, Ponce, Stone, Stratton, Westermo
Associate Professors: Sharabi, Supernak
Assistant Professor: Stark

Offered by the Department

Master of Science degree in civil engineering.
Major in civil engineering with the B.S. degree.

The Major

Civil engineering is the application of engineering principles to the improvement of the human environment. The civil engineering major prepares students to design and supervise the construction of buildings, dams, roads, harbors, airports, tunnels, and bridges. It also provides training in the planning and construction of the complex systems that supply clean water to cities, remove sewage, control floods, and perform other functions which ensure continued health and safety.

Civil engineers are needed in both the private and public sectors. They are employed in the aerospace industry, usually as structural engineers; design and construction of roads, buildings, bridges, airports, dams and other structures; research and teaching at colleges and universities (with an advanced degree); public utilities and transportation; manufacturing; and offshore drilling, environmental pollution, and energy self-sufficiency. New job opportunities in civil engineering will result from growing demands in housing, industrial buildings, power generating plants, and transportation systems.

Civil Engineering Major

With the B.S. Degree (Major Code: 09081)

All students in Civil Engineering pursue a common program of study in basic engineering and civil engineering fundamentals. In addition, students are provided with the opportunity to select a pattern of study to satisfy their areas of interest. This pattern of study is indicated in the sequence below as "professional electives" and may be selected from available courses in foundation, structural, environmental, transportation, or water resources engineering; computer programming; advanced surveying; engineering economics; and other areas. ***The students' choice of elective courses must be made in consultation with their adviser and documented by the filing of an approved master plan during the first semester of their junior year.***

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

The requirements for the major in civil engineering are described as follows:

Freshman Year

Fall Semester	*Units*	*Spring Semester*	*Units*
Chem. 200, General Chemistry	5	Phys. 195, Principles of Physics	3
Math. 150, Single Variable Calculus	5	Math. 151, Calc. and Anal. Geom.	4
ME 190, Engineering Drawing	2	Engr. 140, Engr. Meas. Analysis	2
General Education	3	Engr. 120, Engr. Problem Analysis	2
	15	General Education	6
			17

Sophomore Year

Fall Semester	*Units*	*Spring Semester*	*Units*
Phys. 196, Principles of Physics	3	Phys. 197, Principles of Physics	3
Math. 252, Multivariable Calculus	4	EM 220, Dynamics	3
EM 200, Statics	3	EE 203, Principles of Elec. Engr.	3
ME 260, Engrineering Materials	3	CE 218, Surveying for CE	3
General Education	3	General Education	3
	16		15

Junior Year

Fall Semester	*Units*	*Spring Semester*	*Units*
CE 301, Intro. to Solid Mechanics	3	EM 340, Fluid Mechanics	3
CE 302, Solid Mechanics Lab	1	EM 341, Fluid Mechanics Lab	1
Engr. 310, Methods of Analysis	3	CE 321, Structural Analysis I	4
ME 352, Thermo. & Heat Transfer	3	CE 355, CE Environmental 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 Design	3
CE 462, Soil Mechanics	3	# Professional Electives	12
CE 463, Soil Mechanics 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.

Courses

LOWER DIVISION COURSE

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 (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) I, II
Prerequisites: Chemistry 200 and credit or concurrent registration in Engineering Mechanics 340.
The application of civil engineering methodology to the solution of environmental problems.

421. Reinforced Concrete Design (3) I, II
Prerequisite: Civil Engineering 321 with minimum grade of C.
Properties and characteristics of reinforced concrete; design of structural components. Introduction to plastic theory and limit design.

423. Timber Design (2) I
Prerequisite: Civil Engineering 321 with 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) 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) I, 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
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
(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.

555. Water and Wastewater Engineering (3) I

Prerequisite: Civil Engineering 355 with minimum grade of C.

Water and wastewater: Physical, chemical and biological methods of treatment. Advanced waste treatment processes. Water reclamation.

596. Advanced Civil Engineering Topics (1-3) I, II

Prerequisites: Minimum grade point average of 3.0 and consent of instructor.

Modern developments in civil engineering. See Class Schedule for specific content. Maximum credit of six units for any combination of Civil Engineering 496, 499 and 596 applicable to a bachelor's degree. Maximum combined credit of six units of Civil Engineering 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Electrical Engineering

Faculty

Emeritus: Brown, Chan, Learned, Lodge, Mann, Skaar, Stuart, Walling

Chair: Massey

Professors: Abut, Chang, harris, f., Harris, J., Iosupovici, Lee, Lin, Marino, Massey, Panos, Suto, Szeto, Tuszynski

Associate Professors: Betancourt, Thyagarajan, Wright

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.

The Major

The technologically oriented world of today is filled with products and services based on electrical engineering, and those with the interest and ability to enter the engineering profession will enjoy the status and rewards befitting the creators of these new technological advances. The demand for new engineering graduates has remained strong during the last decade, and projections indicate that it will stay that way far into the future.

Electrical and computer engineering is involved in all areas of science and technology and has an impact on nearly every human activity. These engineers work in such diverse areas as biomedical instrumentation; electronics for communications, vehicle guidance, consumer products, signal processing, and robotics; speech synthesis; microprocessor controlled systems; computer design; information theory; electron device design; power systems; sonics and ultrasonics; systems studies; lasers and electro-optics; and microwave/millimeter wave technology.

Graduates of this program are prepared to enter industry at the junior engineer level, take the engineer-in-training examination as a first step toward professional registration, or continue formal education at the graduate level in preparation for more advanced technical or leadership positions. The engineer's work is predominantly intellectual and constantly varying; it is not of a routine character. The program emphasizes mastery of a basic core of mathematics, physical sciences, and the engineering sciences, so that the graduate will be able to continue his/her education as required to keep up with rapid technological change. Woven through this pattern is a study of the social sciences and humanities, because success in the profession requires a high level of skill in working and communicating with other people, and because engineering graduates should be well educated citizens, conscious of the social and economic implications of their decisions.

Career opportunities in the electrical and computer engineering fields are numerous, and due to the rapid expansion of applications of this technology, the competition for a limited number of graduates has resulted in high starting salaries. Positions for electrical engineers exist in many agencies of the federal government, in a wide variety of large and small corporations, and (for engineers with graduate degrees) at many universities. The work environment can be quite diverse, including, for example, instrument development in a small corporation, project management in a large defense contracting firm, applied research in a federal government, or corporate laboratory, or systems studies in a utility company.

Electrical Engineering Major

With the B.S. Degree (Major Code: 09091)

The program below describes the requirements for the degree. Each course specifically listed in the program is required. In addition, the total number of units specified in each of the elective categories represents a minimum requirement. These are: General Education, 24 units; American Institutions, 6 units; Professional Electives, 28 units. The semester in which each course or elective is listed in the program below is typical, but not required. Any variation that satisfies course prerequisites is acceptable.

The General Education and American Institutions electives must satisfy University requirements described elsewhere in this catalog. Professional Electives include all upper division EE courses and approved upper division courses in other departments. The 28 Professional Elective units must include at least ten units of EE design (see department office for a list of design courses and credits); at least three units of basic engineering (CE 301, EM 340, and ME 352); and at least one unit of EE laboratory. *The student's choice of electives is subject to the approval of 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 with a grade of C (2.0) or better.

Freshman Year

Fall Semester	*Units*	*Spring Semester*	*Units*
Chem. 200, General Chemistry	5	Phys. 195, Principles of Physics	3
Math. 150, Single Variable Calculus	5	Math. 151, Calc. and Anal. Geom.	4
Engr. 120, Engr. Problem Analyses	2	Engr. 140, Engr. Meas. Analysis	2
General Education	6	General Education	6
	18		15

Sophomore Year

Fall Semester	*Units*	*Spring Semester*	*Units*
Math. 252, Multivariable Calculus	4	Phys. 197, 197L, Principles of Physics	4
EM 202, Mechanics for Elec. Engrs.	3	EE 210, Electrical Network Anal. I	3
Phys. 196, 196L, Principles of Physics	4	EE 270, Digital Systems	3
General Education	6	ME 260, Engrineering 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, Electrical Network Anal. II	3	EE 340, Electric & Magnetic Fields	3
EE 330, 330L, Fund. Engr. Electronics	4	EE 430, 430L, Electronic Circuits	4
EE 371, Computer Organization	3	Professional Elective	3
Engr. 310, Methods of Analysis	3	General Education	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

Courses

LOWER DIVISION COURSES

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
(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, II
Prerequisite: Electrical Engineering 371.
Systematic techniques for designing digital computers and other complex digital systems. Machine arithmetic, Register Transfer Level design, hardwired and microprogrammed control units. Not open to students with credit in Electrical Engineering 573.

380. Electrical Energy Conversion (3) I, II
Prerequisites: Electrical Engineering 210 and Engineering 120.
Magnetic circuits, transformers and polyphase AC networks. Fundamentals of electro-mechanical energy conversion; induction motors, synchronous machines and DC machines.

380L. Electrical Energy Conversion Laboratory (1) I, II
Three hours of laboratory.
Prerequisite: Electrical Engineering 380.
Experimental study of DC, single and polyphase AC circuits, transformers, and machines.

403. Biomedical Instrumentation (3)
Prerequisite: Electrical Engineering 303 or 330.
Instrumentation systems to monitor, control and record physiological functions.

410. Signals and Systems (3) I, II
Prerequisite: Electrical Engineering 310.
Linear time-invariant systems, Fourier analysis, continuous and discrete signals and systems, filtering, sampling, and z-transform techniques.

420. Control Systems Components (3) II
Prerequisites: Electrical Engineering 310, 330 and 380.
Position transducers, phase-sensitive demodulators, static magnetic and rotating amplifiers, and servomotors. Derivation of component transfer functions.

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 253.
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)
Prerequisites: Electrical Engineering 330 and 340.
Crystal properties and growth of semiconductors, quantum mechanics of solids, shot noise and thermal noise, energy band and charge carriers, excess carrier in semiconductors, p-n junctions, solar cells, tunnel diodes, photodetectors.

450. Communication Networks (3)
Prerequisites: Electrical Engineering 310, 340 and Engineering 310 or Mathematics 253.
Theory and application of transmission lines, including analysis by matrix notation; use of Smith chart and other transmission line charts; impedance-matching with transmission line stubs and lumped constants; theory and design of constant-k, m-derived, and other types of filter networks.

470. Digital Circuits (3) I
Prerequisites: Electrical Engineering 270 and 330.
Operating characteristics, specifications, and applications of standard commercially available high-speed digital integrated circuit devices.

470L. Digital Logic Laboratory (1) I
Three hours of laboratory.
Prerequisite: Credit or concurrent registration in Electrical Engineering 470.
Hands-on experience in characterization and application of standard digital integrated circuit devices.

473L. Microprocessor Laboratory (1) II
Three hours of laboratory.
Prerequisites: Electrical Engineering 373 and 470.
Design, documentation, assembly, circuit checkout, programming, and software validation of a microprocessor-based system. (Formerly numbered Electrical Engineering 475L.)

475. Microprocessors (3) I, II
Prerequisite: Electrical Engineering 371.
Program development, circuit design, interrupt structure, input/output, and memory management for a 16-bit microprocessor. Not open to students with credit in Electrical Engineering 575.

483. Power Distribution Systems (3) II
Prerequisite: Electrical Engineering 380.
Design and operation of electric power distribution systems. Design of primary and secondary systems, application of one phase and three phase transformer banks, and metering principles and practices.

496. Advanced Electrical Engineering Topics (1-3) I, II
Prerequisite: Consent of instructor.
Modern developments in electrical engineering. See Class Schedule for specific content. Maximum credit six units for any combination of Electrical Engineering 496, 499 and 596.

499. Special Study (1-3) I, II
Prerequisite: Approval of project adviser and department chair.
Individual study. Maximum credit six units for any combination of Electrical Engineering 496, 499 and 596.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

503. Computer Hardware (3) II
Prerequisites: Mathematics 137 and 371.
Digital electronics, sequential networks, digital arithmetic, integrated circuit components, microprocessor-based systems. Not open to electrical engineering majors.

520. Feedback Control Systems (3) I
Prerequisite: Electrical Engineering 410; 420 recommended.
Analysis of regulatory systems including 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)
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.

541. Electro-Optics (3) II
Prerequisite: Electrical Engineering 340.
Optical/electronic devices and systems; wave beams; light-matter quantum interactions; incoherent and laser light sources; modulators and detectors. Applications in data transmission, measurement, and materials processing.

546. Optical Fiber Communications Systems (3)
Prerequisite: Electrical Engineering 434.
Optical fiber attenuation and dispersion, light-emitting diodes and laser diodes, pin diodes and avalanche photodiodes, receiver designs, optical power budgets and rise time budgets, applications in digital and analog communication systems.

553. Stochastic Signals (3) I
Prerequisite: Engineering 310 or Mathematics 253.
Random signals, correlation functions, power spectral densities, the Gaussian process, narrow band processes. Applications to communication systems.

554. Communication Principles and Circuits (3) II
Prerequisite: Electrical Engineering 430.
Signal transmission in linear networks; modulators and detectors; wide-band and narrow-band amplifiers; oscillators; AM, FM, and phase modulation; transient response of amplifiers.

554L. Communication Circuits Laboratory (1)
Three hours of laboratory.
Prerequisite: Electrical Engineering 430L.
Regulated power supply systems; oscillator, modulator, detector, and switching circuits; superheterodyne receivers and television circuitry.

555. Modulation Theory (3) I
Prerequisite: Electrical Engineering 410.
Theory and performance characteristics of modulation and demodulation; spectral characteristics and noise performance of carrier systems: amplitude, frequency and phase, pulse coded, and compound modulation.

556. Digital Signal Processing (3)
Prerequisite: Electrical Engineering 410 or Physics 516A or Mathematics 341A.
Digital signal processing. Discrete-time signals, transform techniques, and digital filters. Design of FIR and IIR filters, 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 341A.
Two-dimensional analysis of signals and systems in areas of signal representation, enhancement and restoration, processing of images, radar signals and other two-dimensional information. Experiments in image processing.

558. Digital Communication Systems (3) 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)
Prerequisite: Electrical Engineering 470.
Digital applications of linear devices, the digital/analog interface, and ultra high speed logic devices.

571. Bit-Slice Digital Systems (3)
Prerequisites: Electrical Engineering 373 and 470.
Design of high-speed microprogrammable bit-slice digital systems. Case studies of CPU and controller designs.

576. Microprocessor Systems Development (3) I
Prerequisite: Electrical Engineering 373.
Design of microprocessor-based systems using modern development systems. Hardware and software development. Assembly Slanguage and PASCAL. Testing by emulation and real-time analysis.

578. Design of Very Large Scale Intergrated Circuits I (3) I
Prerequisites: Electrical Engineering 330 and 371.
Digital integrated circuit design based on NMOS and CMOS technologies; characterization of field effect transistors, design and circuit level simulation (using SPICE) of logic gates and subsystems, wafer processing, design rules and chip layout, bit-slice chip architecture.

579. Design of Very Large Scale Integrated Circuits II (3) II
Prerequisite: Electrical Engineering 578.
VLSI system design; chip design methodology and architecture; computer-aided design of custom and semicustom chips; circuit, gate and behavioral level simulation; testing wafers and chips; design for special applications.

580. Modern Power Systems I (3) I
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.

582. Power Relay Systems (3) I
Prerequisite: Electrical Engineering 380.
Power relays including metering and control as used in modern power systems. Characteristics of operations and applications of equipment. Demonstrations on individual component relays. Basic relay calculations.

596. Advanced Electrical Engineering Topics (1-3) I, II
Prerequisite: Consent of instructor.
Modern developments in electrical engineering. See Class Schedule for specific content. Maximum credit of six units for any combination of 496, 499 and 596 applicable to a bachelor's degree. Maximum combined credit of six units of Electrical Engineering 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Mechanical Engineering

Faculty
Emeritus: Bauer, Bilterman, Morgan, Rao, Stone
Chair: Pinto
Professors: Bedore, Craig, Fitz, Hoyt, Hussain, Mansfield, Murphy, Ohnysty, Pinto
Associate Professors: Lund, Lybarger, Radharamanan
Assistant Professors: Güven, Lowrey, Thompson
Lecturer: Robbins

Offered by the Department
Master of Science degree in mechanical engineering.
Major in mechanical engineering with the B.S. degree.

The Major

Mechanical engineers invent solutions to material problems, questioning how things work, making things work better, and creating ideas for doing things in new and different ways. A newer focus for mechanical engineers is in the area of biomedical engineering, which is the application of quantitative engineering methods to the understanding and solution of biological and physiological problems.

Jobs in mechanical engineering include developing products to improve air and water quality, inventing more efficient energy sources, designing farm equipment to improve crop yield throughout the world, and developing systems for biological research as well as life-saving medical equipment. A mechanical engineer, now more than ever, is someone who can translate scientific theories into the real products to improve the quality of life.

A number of factors indicate that employment opportunities for mechanical engineering graduates will increase. Engineers now comprise nearly 40 percent of the top management of U.S. industrial firms. As in other fields, engineering job openings for women are increasing dramatically.

The future depends on solving the worldwide problems of energy shortages, environmental pollution, world health, and inadequate food production. Mechanical engineers are heavily involved in finding those solutions.

Mechanical Engineering Major

With the B.S. Degree (Major Code: 09101)

All students in Mechanical Engineering pursue a common program of basic sciences, engineering, and mechanical engineering fundamentals. In addition, students are provided with the opportunity to select a pattern of study to satisfy their areas of interest. This pattern of study is indicated in the sequence below as "professional electives" and may be selected from available courses in controls, energy conversion, gas dynamics, heat transfer, machine design, materials, thermodynamics, vibrations, and other areas. *The students' choice of elective courses must be made in consultation with their adviser and documented by the filing of an approved master plan during the second semester of their freshman year.*

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, Gen. Chem. for Engrs.	3
Math. 150, Single Variable Calculus	5	Math. 151, Calc. and Anal. Geom.	4
Engr. 120, Engr. Problem Analysis	2	ME 195, Graphics & Processes	3
General Education	3	Phys. 195, Principles of Physics	3
		General Education	3
	15		16

Sophomore Year

Fall Semester	*Units*	*Spring Semester*	*Units*
Math. 252, Multivariable Calculus	4	Phys. 197, Principles of Physics	3
EM 200, Statics	3	EE 203, Principles of Elec. Engr.	3
ME 260, Engineering Materials	3	EM 220, Dynamics	3
Phys. 196, Principles of Physics	3	Engr. 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 Mechanics	3	EE 303, Electronics, Instrum., and Electrical Energy Conv.	3
ME 310, Engr. Design Introduction	3	EM 340, Fluid Mechanics	3
ME 340, Metallic Materials	3	ME 314, Engr. Des.: Mech. Comp.	3
ME 350, Thermodynamics	3	ME 395, Engr. Sys. Lab. Applic.	2
ME 390, Engr. Systems Lab. Intro.	2	ME 450, Engr. Thermodynamics	3
General Education	3	General Education	3
	17		17

* Chemistry 201, General, may be taken as equivalent to Chemistry 202.

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, Simulation of Engr. Sys.	3	American Institutions	3
# Professional Electives	3		
American Institutions	3		
	17		17

Approved as part of student's master plan by the department chair.

Courses

LOWER DIVISION COURSES

190. Engineering Drawing (2) I, II
Six hours of laboratory.
Development of drawing skills and techniques for engineers. Elementary orthographic and pictorial drawing, sections, dimensioning. Instrument and free-hand drawing. Drawing as an aid to visualization and design.

195. Engineering Design: Graphics and Processes (3) I, II
One lecture and six hours of laboratory.
Prerequisite: One year of high school drafting or Mechanical Engineering 190.
Graphic communication for engineers. Presentation and interpretation of engineering drawings using instruments and freehand sketches. Manufacturing processes and their influence on design decisions. (Formerly numbered Mechanical Engineering 191.)

260. Engineering Materials (3) I, II (CAN ENGR 4)
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
(Intended for Undergraduates)

310. Engineering Design: Introduction (3) I, II
Two lectures and three hours of guided design activities.
Prerequisites: Mechanical Engineering majors—English 200 or Linguistics 200 with a grade of C or better, Engineering 120, Mechanical Engineering 195, and Engineering Mechanics 220; non-Mechanical Engineering majors — English 200 with a grade of C or better. To be eligible for the departmental upper division writing test in this class, students must have completed 60 units, fulfilled the Writing Competency requirement, and completed the General Education requirement in Written Communication.
Professional approach to engineering design problems. Problem definition, information gathering, feasibility studies, analysis, final design and communication. Several design studies are completed.

314. Engineering Design: Mechanical Components (3) I, II
Prerequisites: Mechanical Engineering 310 and Civil Engineering 301.
Application of mechanics, physical properties of materials, and solid mechanics to the design of machine elements. Student design projects.

340. Metallic Materials (3) I, II
Prerequisite: Mechanical Engineering 260.
Physical metallurgy and properties of metals. Influence of processing on the properties of metals. Design criteria for selection of materials.

350. Thermodynamics (3) I, II
Prerequisites: Mathematics 252 and Engineering Mechanics 202 or 220.
Development of the basic laws of thermodynamics and their application to engineering systems.

352. Thermodynamics and Heat Transfer (3) I, II
Prerequisites: Mathematics 252 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 with a grade of C or better, Engineering Mechanics 340, and Mechanical Engineering 350.
Heat transfer by conduction, convection, radiation, and combinations thereof.

490A-490B. Engineering Design: Senior Project (2-2) I, II
Six hours of guided design activities.
Prerequisites for 490A: Mechanical Engineering 314, 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
(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 310 and credit or concurrent registration in Mechanical Engineering 512.
Analysis of the dynamic characteristics of control components and systems. Stability and response of closed loop systems. Design of control systems.

540. Nonmetallic Materials (3)
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 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.

590. Biomechanics (3)
Prerequisites: Civil Engineering 301 and Engineering Mechanics 340.
Application of engineering methodologies for quantitative understanding of biological/physiological phenomena. Continuum mechanics principles. The cardiovascular system and its components viewed from a mechanistic standpoint.

596. Advanced Mechanical Engineering Topics (1-3) I, II
Prerequisite: Consent of instructor.
Modern developments in mechanical engineering. See Class Schedule for specific content. Maximum credit of six units for any combination of Mechanical Engineering 496, 499 and 596 applicable to a bachelor's degree. Maximum combined credit of six units of Mechanical Engineering 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

English

In the College of Arts and Letters

Faculty

Emeritus: Adams, J., Baker, Brown, Burnett, Chater, Gross, Haskell, Ingham, Monteverde, O'Reilly, Perkins, Redding, M., Redding, R., Sanderlin, Sandstrom, Shouse, Sullivan, Theobald, Tozer, Tunberg

Acting Chair: McLeod

Professors: Adams, E., Benson, Borkat, Brashers, Bumpus, Davis, Dickinson, Farber, Gellens, Gervais, Henig, Hinkle, Jaffe, Kohler, McCaffery, McLeod, Moramarco, Nelson, Neumeyer, Rogers, Rother, Santangelo, Savvas, Sheres, Shojai, Stiehl, Vanderbilt, Wall, Widmer

Associate Professors: Alcosser, Boe, Butler, Gregory, Griswold, Kehler, Kuznets, Taylor

Assistant Professors: Aninger, Colquitt, Hicks, Little, Wheeler, Wyche-Smith, Zeiger

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.)

The Major

The study of English today encompasses a wide range of materials and approaches to ways in which both students and established writers – past and present – may use language to express feelings, convey ideas, and give aesthetic pleasure. As the largest English Department in California, SDSU can offer not only historical, analytical, sociopolitical and other approaches to literature and literary theory, but a variety of creative and expository writing classes as well.

English majors take fifteen units of lower division preparatory work designed to develop writing potential and analytical reading skills. More specialized upper-division study focuses on particular areas: British literature before 1800; British literature after 1800; American literature; modern literature; literary types, theory, and criticism; or creative writing.

Students going on to the single subject credential program in English can complete most of the credential requirements through courses taken in the major.

The English minor requires twelve units of upper division study that can be tailored to individual requirements. In addition the department offers certificates in Children's Literature and in Technical and Scientific Writing.

Teaching is one of the many career opportunities available to English graduates; English studies are also good preparation for radio and television broadcasting, editing, writing, politics, film and library work, journalism, criticism, advertising, public information, public relations, and technical writing.

A recent study by the Modern Language Association, "English: the Pre-Professional Major," shows that training in English and literature is valuable preparation for futures in law, medicine, business and federal service.

The SDSU Placement Office has found that liberal arts graduates in general have profited both in terms of job availability and compensation in a recent shift from manufacturing to service in the United States economy. Moreover, after a number of years of decline, the demand for teachers of English in the high schools is now on the rise.

Advising

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

English Major

With the A.B. Degree in Liberal Arts and Sciences (Major Code: 15011)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." No more than 48 units in English and comparative literature courses can apply to the degree.

A minor is not required with this major.

Preparation for the Major. English 100, 200 (also acceptable for General Education) or 280 (not acceptable for General Education), 260A, 260B (unless replaced by 560A-560B), and three units selected from English 220, 250A, 250B, 280, 281, 296, Comparative Literature 210, 270A, 270B, 296. (9-15 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), three units in writing (English 500W, 508W, 580, 581W, 582W, 589), and electives in English and Comparative Literature as needed to complete the 27 upper division units.

Students who have not taken English 260A as part of the preparation for the major must take English 560A. Students who have not taken 260B must take 560B. The same course may be used to satisfy requirements under both (b) and (c), 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, 542, 543, 544, 547, 548.

American Literature: English 521, 522, 523, 524 and 525.

Modern Literature: English 524, 525, 544, 547, 548, 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, 528, 549, American Studies 580, and selected comparative literature courses may be used to satisfy the requirements for the major if approved by the departmental adviser.

Selection of Courses

Prospective majors of sophomore standing may, with the consent of the course instructor and subject to general university regulations (see "Credit for Upper Division Courses" in the section of this catalog on General Regulations), substitute six units of upper division electives for six units of lower division work. These courses must be in the same field as those which they replace, and must be approved by the departmental adviser.

Students of junior or senior standing may substitute for any deficiencies in lower division requirements in English (except English 100) an equivalent number of units of upper division courses selected with the approval of the departmental adviser.

English Major

For the Single Subject Teaching Credential With the A.B. Degree in Liberal Arts and Sciences (Major Code: 15011)

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. Students whose A.B. degree was awarded more than seven years before evaluation of transcripts for entrance into the credential program must take at least nine units of new coursework approved by the department adviser (including at least three units in literature and three units in composition) to ensure currency in the field. To be recommended for entrance into the credential program, such students must have a GPA of at least 3.0 in the new coursework.

II. **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, 547, 548, Comparative Literature 514.
   b. Appropriate: English 544, 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, 577, 596.
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, 596.

B. Courses in Writing (total 12 units).

a. English 509.
b. At least one upper division expository writing course: English 306W, 500W, 508W, or 582W.
c. Two additional courses (six units) selected from English 280, 281, 306W, 500W, 508W, 580, 581W, 582W, 589. Equivalent writing courses taken in other departments may apply if approved by the departmental adviser.

C. Courses in Linguistics (total 9 units).

a. Particularly appropriate: Linguistics 410 (History of English), 420 (Linguistics and English) or 520 (Fundamentals of Linguistics), 450 (Introduction to Teaching English as a Second Language), 524 (American Dialectology).
b. Appropriate: Linguistics 101 (Introduction to Language), 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).

Speech Communication 103 (Oral Communication), 105 (Intro. to Speech Communication), 111A (Fund. of Interpretation), 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, 548, or approved sections of special topics courses.

Fine Arts disciplines, one course from each group:

1. A course in Shakespeare: English 302 or 533.
2. A course in genre study or criticism: English 306A, 405, 501, 507, 508W, 527, 570, 571, 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, or approved sections of 526 or 528.
4. A course in British literature: English 540A, 540B, 544, 547, 548, or approved sections of 549.

Humanities disciplines, one course from each group:

1. A course in Shakespeare: English 302 or 533.
2. A course in genre study or criticism: English 306A, 405, 501, 507, 508W, 527, 570, 571, 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, or approved sections of other special topics courses.
4. A course in literary history: English 560A, 560B, any course in the 520, 530, or 540 series, Comparative Literature 510, 511, 512, 513, 514.

* Additional prerequisites required.

For students whose needs are not accommodated by any of the above patterns:

Students whose majors are not represented by the patterns above, students who wish to design a minor more directly tailored to their specific major, or students who otherwise feel they have special needs are encouraged to consult with their advisers in both major and minor departments to design individualized minors in English. All such minors must have the written approval of both departmental advisers.

The English minor is not available to students majoring in comparative literature. Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Children's Literature Certificate

This certificate attests that the student has successfully completed 18 units (minimum GPA 3.0) of planned, advised, coherent, and articulated study in the field of literature for children. Prerequisites include admission to the University and to upper division or graduate standing. The Certificate in Children's Literature may be earned with a specialization either in Education or in English and Comparative Literature. Nine units in the certificate program may be counted toward the major in English, and six units may be counted toward the minor in English.

Specialization in Education. Nine units from courses in group A, six units from group B, and three units of an appropriate elective chosen with the approval of a faculty adviser.

Specialization in English and Comparative Literature. Nine units from courses in group B, six units from group A, and three units of an appropriate elective chosen with the approval of a faculty adviser.

Group A, Education: Education 496*; Educational 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.

Technical and Scientific Writing Certificate

The purpose of this certificate program is to prepare students for careers in technical and scientific writing. The program is designed for people who are working on degrees in nontechnical, technical, and scientific fields. It also provides a self-improvement opportunity for people seeking employment, promotion, or upward mobility on the job who are not enrolled in degree programs. Students will complete a total of 21 units that must be approved by the Director of the program in the Department of English and Comparative Literature. Applicants for entrance into the program must complete a writing assessment examination, administered by the Director of the program, and may be required to take additional coursework to improve writing proficiency. Nine units in the certificate program may be counted toward the major in English, and three units may be counted toward the minor in English.

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 coursework 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.)

* Additional prerequisites required.

Courses

LOWER DIVISION COURSES

90. Developmental Writing Workshop (1) Cr/NC
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. (Formerly numbered English 125.)

100. College Composition (3)
International students are advised to take Linguistics 100.
Prerequisites: Satisfaction of the English Placement Test and Writing Competency requirements. (See Graduation Requirements section of catalog.) Proof of completion of prerequisites required.
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.

200. Intermediate Composition (3) I, II
International students are advised to take Linguistics 200.
Prerequisites: Satisfaction of the English Placement Test and Writing Competency requirements and English 100 or Afro-American Studies 120 or Linguistics 100 or Mexican American Studies 111B. Proof of completion of prerequisites required.
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.

205. English for Journalists (3)
Prerequisite: English 100.
Intensive review of grammar, vocabulary, spelling, and other technical aspects of English, with frequent writing. Designed for students seeking mastery of standard English, particularly journalism majors preparing for the GSP Test.

220. Introduction to Literature (3) I, II
An inquiry into the basic nature of literature. What prompts 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 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: Satisfaction of the English Placement Test and Writing Competency requirements and English 100 or Afro-American Studies 120 or Linguistics 100 or Mexican American Studies 111B. Proof of completion of prerequisites required.
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. Academic Writing (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. Proof of completion of prerequisite required.
To develop proficiency in composing, under time constraints, substantial essays which analyze or explicate subjects previously investigated and discussed. Intended for students not majoring in English or Comparative Literature and who have not fulfilled the Upper Division Writing requirement by examination. The course satisfies this requirement for students who have completed 60 units, fulfilled the Writing Competency requirement, and completed the General Education requirement in Written Communication. It is strongly recommended that the course be taken at the beginning of the junior year, so that students have an opportunity to demonstrate their writing proficiency in upper division courses taken after they pass English 305W.

306A-306W. Children's Literature and **Advanced Composition (3-3) I, II**
Prerequisite: English 200. English 306A and 306W must be taken concurrently. Proof of completion of prerequisite required.
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.

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)

Prerequisite for all 500-level courses: 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. Proof of completion of prerequisites required.

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, II
Prerequisite: Consent of instructor based on writing sample and/or test.
Techniques for teaching and evaluation of written composition. Provides a theoretical base for these techniques.

521. Early American Literature (3)
Representative works by American writers from the period of America's founding to approximately 1800; likely to include works by Anne Bradstreet, Jonathan Edwards, Benjamin Franklin, Cotton Mather, others.

522. American Literature, 1800-1860 (3)
Representative works by American writers from 1800 to 1860, likely to include works by Emerson, Hawthorne, Melville, Poe, H. B. Stowe, Thoreau, Whitman, others.

523. American Literature, 1860-1920 (3)
Representative works by American writers from 1860 to 1920, likely to include works by Kate Chopin, Stephen Crane, Emily Dickinson, Henry James, Carl Sandburg, Mark Twain, Edith Wharton, others.

524. American Literature, 1920-1950 (3)
Representative works by American writers from 1920 to 1950, likely to include works by Willa Cather, T. S. Eliot, William Faulkner, F. Scott Fitzgerald, Ernest Hemingway, Eugene O'Neill, K. A. Porter, Ezra Pound, John Steinbeck, others.

525. American Literature, 1950 to Present (3)
American writers from 1950 to the present; likely to include works by Edward Albee, Saul Bellow, Allen Ginsberg, Joseph Heller, Norman Mailer, Toni Morrison, Sylvia Plath, Adrienne Rich, Kurt Vonnegut, Eudora Welty, others.

526. Topics in American Literature (3)
Topics in American literature to include The Literature of the South; Black Writers in America; The Frontier and American Literature; The History of American Literature; The Outcast in American Literature. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

527. Genre Studies in American Literature (3)
Study of a specific literary genre: overview of the genre's development in American literature (The American Novel, The American Short Story, American Poetry) or focus on a narrower period (The Modern American Novel, The Contemporary American Novel, American Autobiographies, others). May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

528. Individual American Authors (3)
Works of a major American author or, if useful comparisons and juxtapositions warrant it, the works of two or three authors: Melville, Twain, James, Faulkner, Steinbeck, Nabokov; or Pound and Eliot, Emerson and Thoreau, Vonnegut and Barth, others. See Class Schedule for specific content. May be repeated with new title and content. Maximum credit six units.

530. Chaucer (3)
Chaucer's works, with emphasis on *The Canterbury Tales* and *Troilus and Criseyde.*

531. Renaissance Literature (3)
English poetry and prose from 1485 to 1603.

533. Shakespeare (3) I, II
An introduction to the writings of Shakespeare.

534. Study of Shakespeare (3)
Prerequisite: English 533.
Advanced study of Shakespeare's achievement as a poet and playwright.

536. Seventeenth Century Literature (3)
English poetry and prose from 1603 to 1660.

537. Milton (3)
Milton's writings, with emphasis on *Paradise Lost.*

538A-538B. Restoration and Eighteenth Century Literature (3-3) I, II
English literature in the neoclassical era. Semester I: Dryden, Swift, Pope, and their contemporaries. Semester II: Writers of the middle and late eighteenth century.

540A-540B. English Fiction (3-3)
The development of English fiction from its beginnings to the end of the nineteenth century. Semester I: The eighteenth century. Semester II: The nineteenth century.

541A-541B. English Drama (3-3)
English dramatic literature from its beginnings to the nineteenth century. Semester I: The period from the beginning to 1642. Semester II: The period following reopening of the theatres in 1660.

542. Romantic Literature (3)
Representative British works from the 1790s to the 1830s by such writers as Wollstonecraft, Blake, Wordsworth, Coleridge, Byron, Shelley, Keats, Austen, and Scott.

543. Victorian Literature (3)
Representative British works from 1837 to 1890 by such writers as Carlyle, Tennyson, Ruskin, Browning, Dickens, Arnold, Eliot, and Pater. (Formerly numbered English 542B.)

544. British Literature, 1890-1918 (3)
Representative British works from 1890 to 1918 by such writers as Hardy, Gissing, Shaw, Conrad, Yeats, Wells, Forster, and the World War I poets.

547. British Literature, 1918-1950 (3)
Representative British works from 1918 to 1950 by such writers as Joyce, Woolf, Lawrence, T. S. Eliot, Mansfield, Huxley, Bowen, Greene, Auden, Orwell, and Thomas.

548. British Literature, 1950 to Present (3)
Representative British works from 1950 to the present by such writers as Golding, Amis, Murdoch, Lessing, Pinter, Hughes, Fowles, Stoppard, and Drabble.

549. Topics in English Literature (3) I, II
The Works of Spenser, The Metaphysical School of Poetry, The English Satirists, Major Movements in Contemporary English Fiction, and the like. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

560A. British Literature, Beginnings Through the Eighteenth Century (3)
Survey of major British writers, with emphasis on reading of complete works. From the beginnings to the neoclassical period. Especially appropriate for those students who have not satisfied the lower division survey requirements, for those who will teach British literature, and for those proceeding on to graduate study.

560B. British Literature, Romanticism to the Present (3)
Survey of major British writers, with emphasis on reading of complete works. Begins with the Romantic writers. Especially appropriate for those students who have not satisfied the lower division survey requirements, for those who will teach British literature, and for those proceeding on to graduate study.

570. Techniques of Poetry (3) I, II
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.

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.

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.

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, Dorris, Fulcomer, Gunning, Martin, M., Milne, Price, Somerville, Stout, Warmer
Director: Stauss
Professors: Balkwell, Cooke, Deutsch, Hewes, Josephson, Martin, J.L., Stauss
Associate Professors: Hoover-Plow, Mikitka, Null, Ross, Spindler
Assistant Professors: Dickerson, Matheny
Lecturers: Avery, 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.
Certificate in family life education.

The Majors

The School of Family Studies and Consumer Sciences offers curricula which deal with domains vital to the health and functioning of individuals and families: foods, nutrition, and dietetics; child and family development; and clothing, textiles, and merchandising. As a multidisciplinary entity, the School is a unique and important contributor to the research base of the academic community as well.

Child Development. The interdisciplinary major in child development draws from many fields of study, including home economics, anthropology, biology, psychology, and sociology, and prepares students for a variety of professional specialties. Graduates with competencies in this major find positions in preschools, day care centers, schools, hospitals, clinics, residential institutions, counseling centers, mental health centers, public welfare agencies, family service agencies, family planning clinics, community programs, business and industry, and government agencies.

Field experience programs offer students supervised work in community agencies, children's programs, the SDSU Child Study Center, and the Associated Students' Campus Children's Center.

The child development degree also provides a flexible curriculum base for continuation into graduate programs in child development or family relations; in child, family, and marriage counseling; in social work; in psychology, law, or sociology. Also available are programs leading to the multiple subject and single subject teaching credentials, the community college teaching credential, and a specialist credential in either special education or early childhood education.

The child development minor is an important adjunct for students in areas such as anthropology, education, psychology, recreation, social work, and sociology.

Foods and Nutrition. This major offers a comprehensive multidisciplinary study of the nature and quality of the food supply and the nutritional requirements for health in people. Students take core sequences of coursework in the areas of nutrition, food science, and food management founded on prerequisite courses in chemistry, biochemistry, physiology, economics, management and the behavioral and social sciences. Course emphasis in the major is placed upon the composition, properties and safety of foods and food ingredients; the relationships of metabolism and utilization of nutrients in food by the human body to health and disease states; the physiological basis for diet therapy; and organization, management and operation of food service facilities.

This major is planned for students interested in qualifying professionally for diverse careers in the fields of dietetics, food service management, and food industries. Students can fulfill academic eligibility requirements for admission to dietetic internships and graduate schools which further qualify them for membership in the American Dietetic Association and for registration as dietitians.

Professional careers in dietetics include administrative, therapeutic, teaching, research, and public service positions in hospitals, schools, clinics, and other institutions or related careers in private practice and industry. Graduates may also qualify for careers as food service managers in private and public organizations and institutions; as food science technical specialists within food companies, governmental agencies and laboratories; or as specialists in advertising or marketing of foods and nutritional products and services.

Home Economics. Beginning fall 1988, the School will no longer admit candidates to the home economics major for the Single Subject Teaching Credential or the core professional sequence in Consumer Services and Housing. Also, the core professional sequence in Clothing, Textiles and Merchandising is in the process of being revised. Contact the School for details.

Merchandising is the management and marketing of consumer products at the wholesale and retail levels. Students learn managerial strategies for the merchandising industry which is characterized by rapid change in consumer demand.

A major strength of the merchandising program lies in its interdisciplinary nature. Students take courses in the biological, physical and social sciences as well as in the humanities. In addition, they are introduced to basic courses covering all areas within the School of Family Studies and Consumer Sciences. Courses required from the College of Business Administration include accounting, management and marketing. Upon completion of course requirements, students receive a baccalaureate degree with a merchandising emphasis.

The internship is a major strength of the SDSU merchandising program. Students gain firsthand experience and knowledge about the merchandising field under the supervision of both industry and academic advisers.

The current job market is excellent, particularly in retail store management. Exciting positions in buying, personnel, promotion, and management exist as well in fashion marts, wholesale firms, and manufacturing throughout the country.

Child Development Major

With the B.S. Degree in Applied Arts and Sciences
(Major Code: 08231)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

Preparation for the Major. Anthropology 102; Biology 100, 100L; Family Studies and Consumer Sciences 107, 135, 151 or 240, 270, 271; Psychology 101, 211 or 260; Sociology 101, 201 or Psychology 270. (34 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 43 upper division units to include Family Studies and Consumer Sciences 335, 370, 371, 375, 376A (one unit), 422, 436, 478, 439 or 576, and three units from one of the following: 437, 476, 477, 536, 570, 577, 579; Psychology 340 or Sociology 410; and 12 units selected to form a core of courses that reflects in-depth study in an agreed to area of specialization. A master plan must be filed with approval of the program adviser prior to course enrollment and with the Evaluations Office prior to filing an Application for Graduation. Course selections may be within FSCS, another department, or a combination of departmental offerings. No more than six of the 12 units may be in experiential courses (FSCS 376A, 376B, 376C, 499, or similar courses from other departments).

Foods and Nutrition Major

With the B.S. Degree in Applied Arts and Sciences
(Major Code: 13061)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

Preparation for the Major. Family Studies and Consumer Sciences 204, 205A, 205B, 240, 270; Accountancy 100 or 201; 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 and Decision Systems 180, is needed if Family Studies and Consumer Sciences 507 is not selected in the major.) (52-59 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 309, 407, 482, 507, 508, 510; Biology 321; Chemistry 361A, 361B, 467 or 567; Health Science 470; and Management 350 and 352 or Psychology 321.

Home Economics Major

With the A.B. Degree in Applied Arts and Sciences
(Major Code: 13011)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

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 217, 260; Biology 100, 100L; Chemistry 100, 130 required for clothing, textiles and merchandising; Accountancy 100 required for students in clothing, textiles and merchandising who wish to focus on merchandising. Family Studies and Consumer Sciences 271; Natural Science 110A, 110B; Biology 100; Economics 201 required for consumer services and housing.) (50-53 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 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 361, 362, 440, 462, 482, 541, 546; Management 350; Marketing 370, 372; and either Marketing 373 or Journalism 460. Minor option: Related minor with consent of adviser.

Students in merchandising are *required* to take Management 350; Marketing 370, 372; and either Marketing 373 or Journalism 450 as part of the 21 units.

Consumer Services and Housing: Family Studies and Consumer Sciences 335, 343, 383, 422, 440, 451, 536, 541, 546, 553. General option: nine units selected from Family Studies and Consumer Sciences 345, 446, 482, 545; Art 453; Finance 437; Geography 354; Marketing 370; Physics 301; Public Administration 320; Sociology 433. (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
With the A.B. Degree in Applied Arts and Sciences
(Major Code: 13011)

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 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. (50 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 30 upper division units in Family Studies and Consumer Sciences to include 335, 375, 376A (one unit), 383, 422, 440, 451, 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 12 units selected from Family Studies and Consumer Sciences 370, 371, 375, 376A (one unit) or 376B (one unit) or 376C (one unit), 436, 476, 477, 478, 570*, 576, 579; Psychology 432*. No more than six of the 18 units may be in experiential courses.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

* Indicates course with prerequisites not included in list of courses acceptable for minor.

Home Economics Minor

The minor in home economics consists of a minimum of 18 to 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, 507, 508, 510 (and/or 596 if appropriate).

Consumer Services: Family Studies and Consumer Sciences 240, 451, 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, 370, 371, 375, 376A (one unit), 436, 440, 478, 536, 570 (and/or 596 if appropriate).

Clothing, Textiles and Fashion Merchandising: Family Studies and Consumer Sciences 217, 219, 260, 361, 362, 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).

Students should note that some of these courses have prerequisites not included in requirements listed above, but these prerequisites do not constitute requirements per se for completion of the minor.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Family Life Education Certificate

The purpose of this certificate program is to prepare students for careers in family life education. The program is designed for individuals working on degrees in child development, health science, and home economics. It also provides a self-improvement opportunity for people seeking employment, promotion, or upward mobility on the job who are not enrolled in degree programs.

Awarding of the certificate requires completion of an approved pattern of five courses (15 units) with a grade of "C" or better in each of the courses to include Family Studies and Consumer Sciences 135, 270* or 371* or Psychology 330*; Health Science 475, 575; and Biology 307. The course offerings under this program meet the criteria for training and standards of the American Association of Sex Educators and Counselors.

Family Studies and Consumer Sciences 135, 270 or 371 (six units) are applicable to the child development or home economics majors. Health Science 475 and 575 (six units) are applicable to the health science major. Courses in the certificate may not be counted toward the minor.

For further information regarding the Family Life Education Certificate program, consult Lois P. Kessler, Department of Health Science, or Francine Deutsch, School of Family Studies and Consumer Sciences.

* Indicates course with prerequisites not included in requirements listed above.

Courses

LOWER DIVISION COURSES

107. Nutrition Today (3) I, II
Obtaining nutritional needs from a varied food supply.
Not open to foods and nutrition majors or students with credit in Family Studies and Consumer Sciences 204.

135. Marriage and Family (3) I, II
Love, maturity, dating, compatibility, conflict as they relate to preparation for successful marriage and family living.

151. Dynamics of Family Management (3) I, II
Value systems and application of principles of decision making to individual, professional and family management in changing socio-economic environments.

202. Nutrition for Athletes (3) I
Prerequisite recommended: Family Studies and Consumer Sciences 107.
Review of basic diet which will provide nutritional adequacy. Analysis of current theories and practices related to nutrition and athletic performance.

204. Fundamentals of Nutrition (3) I, II
Prerequisites: Biology 100, 100L; Chemistry 100 and 130, or 200 and 201. Proof of completion of prerequisites required.
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.

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.
Physical, social, emotional, and intellectual development of the young child with applications for guidance. Observing, recording individual and group behavior of children.

278. Child Care Parent Participation (2) Cr/NC
One lecture and two hours of activity.
Child care practices and group management in a child care facility. Not open to students with credit in Family Studies and Consumer Sciences 279.

279. Child Care Observation/Participation (1) Cr/NC I, II
Two hours of fieldwork per week as arranged, plus orientation and evaluation.
Prerequisites: Family Studies and Consumer Sciences 270 and permission of manager of Campus Children's Center.
Observation and participation in Campus Children's Center. Experiences related to cognitive, physical, and social development of young children in group setting. Not open to students with credit in Family Studies and Consumer Sciences 278.

296. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

UPPER DIVISION COURSES
(Intended for Undergraduates)

301. Science of Foods (3) I, II
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.

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.

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.

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.

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.

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)
Prerequisites: Family Studies and Consumer Sciences 270 and 271.
Methods for measuring child, caregiver, and family behavior. Evaluation of reliability and validity. Includes research design, sampling techniques, data collection strategies, and values/ethics.

371. Human Development: Middle Childhood and Adolescence (3)
Prerequisite: Family Studies and Consumer Sciences 270.
Physical, social, emotional, and intellectual development of children during middle childhood and adolescence. Emphasis on parent, sibling, and peer relationships. Prevention and correction of developmental difficulties.

375. Child Development Programs (3) I, II
Prerequisites: Family Studies and Consumer Sciences 271; concurrent registration in Family Studies and Consumer Sciences 376A for one unit only.
Program models in early childhood education. Communication techniques, basic skills and strategies in working with young children. Development, implementation and evaluation of an appropriate curriculum and environment.

376A. Laboratory Experiences in the Child Study Center: Preschool (1-3) I, II
Three hours of laboratory for each unit of credit.
Prerequisite: First unit requires concurrent registration in Family Studies and Consumer Sciences 375. Application to take additional units requires prior consent of instructor.
Directed experiences with children, ages 3 to 5 years, in a mainstreamed setting. Designing and implementing developmentally appropriate activities in all areas of preschool program. May be repeated, at advanced level, with consent of instructor. Maximum credit three units. (Formerly numbered Family Studies and Consumer Sciences 375L.)

376B. Laboratory Experiences in the Child Study Center: Toddlers (1-3) I, II
Three hours of laboratory for each unit of credit.
Prerequisite: Family Studies and Consumer Sciences 376A. Application to take additional units requires prior consent of instructor.
Directed experiences with 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 three 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 376A and concurrent registration in Family Studies and Consumer Sciences 377.
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.)

377. Infant/Toddler Programs (2) I, II
Prerequisites: Family Studies and Consumer Sciences 376A and concurrent registration in 376C.
Program models for children from birth to three years of age. (Formerly numbered Family Studies and Consumer Sciences 570L.)

383. Consumer Information Systems (3) I, II
Two lectures and two hours of laboratory.
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 dibilitating diseases.

407. Supervised Field Experience in Nutrition Counseling and Education (3) 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.

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)
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 and Sociology 101.
Individual and family needs and the social institutions and agencies attempting to meet these needs. Social issues, service programs, program analyses, and program effectiveness are emphasized.

437. Violence in Families (3)
Prerequisite: Family Studies and Consumer Sciences 335.
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.
Prerequisite: Twelve units of the child development major.
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.
An investigation of philosophy, issues, and current trends in working with parents.

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.

491. Research Literature in Foods and Nutrition (1) I, II
Prerequisites: Family Studies and Consumer Sciences 301, 302, and consent of instructor.
Current research topics in food science and nutrition.

496. Experimental Topics (1-4) I, II
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

499. Special Study (1-3) I, II
Prerequisite: Consent of instructor.
Individual study. Maximum credit six units.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

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.

537. Child Abuse (3)
Prerequisite: Family Studies and Consumer Sciences 437 for majors; completion of General Education Explorations for non-majors; consent of instructor for graduate students.
A multidisciplinary approach to child abuse including study of child maltreatment and mistreatment, child neglect, and sexual abuse.

541. Consumer Interest (3) II
Prerequisite: Family Studies and Consumer Sciences 240 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. Infant/Toddler Development (3) I, II
Prerequisites: Family Studies and Consumer Sciences 270 or Psychology 330; Psychology 260. Biology 350 recommended.
Physiological, psychological, social and cultural development of the human organism from birth through three years of age.

576. Field Experiences with Families and Children (3) I, II
One lecture and nine hours of field work.
Prerequisite: Twelve units in child development major.
Directed experiences in various community settings.

577. Advanced Administration of Child Development Programs (3) II
Prerequisite: Family Studies and Consumer Sciences 477.
Problems of organization in conducting programs for young children; interrelationships of staff; personnel practices; communication with teaching staff, parents, and community; records and reports.

579. Advanced Child Study (3)
Prerequisite: Nine units in child development courses.
Physical, social, and psychological factors that determine the direction of child behavior. Readings and interpretations of scientific literature that contribute to an understanding of theories of human development.

584. Occupational 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. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of nine units of 596. No more than six units of 596 may be applied to either the bachelor's or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

French

In the College of Arts and Letters

Faculty

Emeritus: Ghilbert, Jackson, Max, Messier, Nelson
Chair: Cox
Professors: Branan, Cox, Glasgow
Associate Professors: Palmer, Schorr
Assistant Professors: Benkov, Cornwell

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 (Major Code: 11021)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

Students majoring in French must complete a minor in another field to be approved by the departmental adviser in French.

Preparation for the Major. French 100A, 100B, 200A, either 200B or 200E, 200C, and 200D. (22 units.) Recommended: History 105, 106; Humanities 102A, 102B.

Foreign Language Requirement. The foreign language requirement is automatically fulfilled through coursework for preparation for the major.

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 24 upper division units in French to include French 301, 302, 305A-305B, 401 or 411 or 431, and nine additional units of upper division courses in the language.

French Major

For the Single Subject Teaching Credential in Foreign Languages With the A.B. Degree in Liberal Arts and Sciences (Major Code: 11021)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under 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.

To be recommended for student teaching, students must demonstrate proficiency in French by passing the departmental written and oral tests.

Preparation for the Major. French 100A, 100B, 200A, either 200B or 200E, 200C, 200D. (22 units.)

Foreign Language Requirement. The foreign language requirement is automatically fulfilled through coursework for preparation for the major.

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 30 upper division units in French to include French 301, 302, 305A-305B, 401, 421, 422, 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 completed at San Diego State University.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable.

Foreign Language Requirement for the 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 200E or the equivalent level of achievement. The usual sequence of course work is French 100A, 100B and 200A or 200B or 200C or 200D or 200E. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

High School Equivalents

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high school courses will not count as college credit toward graduation.

Secondary school language courses can be used as follows:

1. The first ***two years*** of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.
2. The first ***three years*** of high school level language count as the equivalent of the first two college semesters, although students with fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not receive credit for the first semester college course unless at least five years separate the last high school course and the first college course.
3. ***Four years*** of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

Courses

LOWER DIVISION COURSES

Native speakers of French will not receive credit for taking lower division courses except with advance approval from the department.

All lower division courses in French are taught in French.

No credit will be given when French 100A, 100B, 200, 301, or 302 are taken concurrently or out of sequence. However, French 200A-200B-200C-200D-200E 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.

100B. Elementary (5) I, II
Prerequisite: French 100A or two years of high school French.
Continuation of French 100A. Not open to students who have completed four years of high school French unless the fourth course was completed five or more years ago.

200A. French Grammar (3) I, II
Prerequisite: French 100B or three years of high school French.
Majors and minors should enroll concurrently in either French 200B or 200E, 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 200E, 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 200E, 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.

200E. Readings in Commercial French (3)
Prerequisite: French 100B or three years of high school French. Not open to students with credit for more than 10 units of 200-level French.
Introduction to commercial institutions and socioeconomic aspects of contemporary France; development of a useful vocabulary in commercial French. Majors and minors should enroll concurrently in French 200A, 200C, or 200D.

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.

423. Commercial French (3)
Prerequisite: Twelve units of 200-level French.
French commercial practices and language, the enterprise, correspondence, advertising, telecommunications, banking, transportation, import-export, insurance, accounting, stock market, preparation for the *Certificat Pratique de Français Commercial et Economique* offered by the Paris Chamber of Commerce.

431. Applied French Linguistics (3)
Prerequisite: Twelve units of 200-level French.
Phonemics, morphemics, syntax and semantics of present day French. Taught in English.

496. Topics in French Studies (1-4)
Topics in French literature, culture and linguistics. May be repeated with new content. Maximum credit nine units. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. May be taught in English. See Class Schedule for specific content.

499. Special Study (1-3) I, II
Prerequisites: French 302, 305A, 305B.
Individual study. Maximum credit six units. This course is intended only for students who are currently enrolled in or who already have credit for all upper division courses in French available in any given semester.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

501. Translation (3)
Prerequisite: French 302.
Stylistic comparison of French and English through translation of a variety of prose styles from English to French and from French to English.

521. Seventeenth Century French Literature (3)
Prerequisites: French 302 and either 305A or 305B.
Major authors of the seventeenth century.

531. Eighteenth Century French Literature (3)
Prerequisites: French 302 and either 305A or 305B.
Major eighteenth-century writers of fiction, with emphasis on Voltaire, Diderot and Rousseau.

541. Nineteenth Century French Novel (3)
Prerequisites: French 302 and either 305A or 305B.
Major novelists of the nineteenth century.

543. Modern French Theatre (3)
Prerequisites: French 302 and either 305A or 305B.
Major dramatists of modern France.

545. Modern French Poetry (3)
Prerequisites: French 302 and either 305A or 305B.
Representative French poets of the modern era.

551. Twentieth Century French Novel (3)
Prerequisites: French 302 and either 305A or 305B.
Major 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. Taught in English.

596. Topics in French Studies (1-4)
Prerequisite: French 302.
Topics in French language, literature and linguistics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of nine units of 596. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

General Studies

The University offers a number of courses which are not part of a regular departmental curriculum. They provide students with opportunities for achieving academic credit through interdisciplinary and nontraditional coursework.

General Courses

LOWER DIVISION COURSES

200. 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.

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.

275. Honors Special Study (1)
For further information contact the Division of Undergraduate Studies.
Prerequisite: Admission to the University Honors Program.
Special study associated with a lower division course offered as an honors section, and serving as an extension of the course.

UPPER DIVISION COURSES
(Intended for Undergraduates)

300. Honors Course (1-3)
Refer to Honors Program.

310. Our Global Future: Values for Survival (3)
For further information contact Dr. Mary E. Clark in the Department of Biology or Dr. Linda Holler in the Department of Religious Studies.
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 General Studies 210.)

320. Nuclear War: Causes, Consequences and Prevention (3) I, II
Prerequisites: Upper division standing; nine units in Foundations section of General Education to include a course from each of the three areas in order to receive General Education credit.
Nuclear arms race from scientific, historical, economic, religious, and sociopsychological perspectives. Effects of nuclear weapons, current strategies for their use, and proposals for reducing the possibility of nuclear war. (Formerly numbered General Studies 350.)

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.

420. Handicapped Individuals in Society (3) I
Prerequisite: Psychology 101, Sociology 101, or Anthropology 101.
Range of human experience of handicapped individuals; attitudes toward handicapped individuals; interrelationship between societal institutions and needs of disabled people; historical response to these needs and contemporary issues with particular emphasis on normalization, integration, and community living. (Formerly numbered Special Education 475.)

Special Topics Courses

Health and Human Services Course

The College of Health and Human Services sponsors General Studies course 502. The purpose of this courses is to provide an opportunity for interdisciplinary study for students entering human service professions. See the Class Schedule for specific content.

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.

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.

101. The Liberal Arts in Today's World (1-3) Cr/NC
301. The Liberal Arts in Today's World (1-3) Cr/NC

Geography

In the College of Arts and Letters

Faculty

Emeritus: Blick, Colombo, Eidemiller, Kiewiet de Jonge, Richardson, Storm, Taylor, Yahr

Chair: Griffin

Professors: Ford, Greenwood, Griffin, Johnson, Keen, McArthur, O'Brien, Pryde, Quastler, Stutz, Wright

Associate Professors: Aguado, Fredrich, Stow

Assistant Professors: Aitken, Hope, O'Leary

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 geographic information systems.

The Major

Geography is the study of spatial aspects of the physical environment, human activities and landscapes, and the nature of their interactions. Geographers draw upon theories from both the physical and social sciences. As physical scientists, they study the processes and resulting features of the earth's surface, such as vegetation, climate, soils, landforms, and resources. As social scientists, geographers explore such topics as the arrangement of societies on the earth's surface, land use patterns, urbanization, resource and energy usage, and environmental conservation.

The Geography Department offers a broad range of fields from which to select a specialization. These include general geography – the study of both physical and cultural aspects of geography; physical geography – focusing on scientific explanations of the earth's physical features and processes; resource and environmental geography – concerned with human impacts on the earth; transportation and urban geography – dealing with the form of cities and the impacts of transportation systems; applied geography – providing a background in cartography, geographic information systems and remote sensing. The department also offers a Certificate in Geographic Information Systems. This program is for students interested in the use of satellite technology to study earth resources, mapping, computer graphics, surveying, and aerial photography.

A variety of career opportunities exist for geography majors. In recent years many graduates with bachelor degrees have entered the fields of urban and environmental planning, both in the public and private sectors. Employment is also available as geographic information systems specialists, cartographers, park naturalists, and remote sensing specialists. The following represent some of the jobs held by recent graduates: environmental impact analyst, urban planner, cartographer, park ranger, transportation planner, travel agent, teacher, zoning investigator, terrain analyst. Some graduates have chosen to pursue opportunities in business where firms are interested in hiring college graduates with broad academic backgrounds.

Advising

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

Geography Major

With the A.B. Degree in Liberal Arts and Sciences (Major Code: 22061)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

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 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, 540; (b) 350-360, 554-559; (c) 370-371, 570-576; (d) 378, 401, 504-506; (e) 507-510; (f) 380-381; (g) 382, 385, 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 coursework in related disciplines is strongly recommended.

Additional Preparation for the Major. Geography 103; Mathematics 121 or higher numbered course and Mathematics 250 or comparable course in statistics; Chemistry 200; Physics 180A, 182A.

Major (continued). Geography 385; twelve units from Geography 378, 401, 504-510, 595 (with approval of the department); six units from 382, 488, 581-589; and three units from each of the following groups: (a) 380-381, (b) 320-339, 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; Mathematics 250 or comparable course in statistics.

Major (continued). Geography 370, 371, 385; three units from each of the following groups: (a) 320-339, 540; (b) 350-360, 554-559; (c) 380-381; (d) 382, 488, 581-589. Six units from 570-576, 595 (with the approval of the department); and six units from 378, 401, 504-510. (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 and Mathematics 250 or comparable course in statistics; Economics 102.

Major (continued). Geography 381, 385; twelve units from 353-354, 358-359, 554-570, 595 (with the approval of the department); six units from 378, 401, 504-510; and three units from each of the following groups: (a) 320-339, 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 Mathematics 250 or comparable course in statistics.

Major (continued). Geography 385; fifteen units from Geography 380-382, 488, 581, 582, 588, 589, 595 (with the approval of the department); and three units from each of the following groups: (a) 320-339, 540; (b) 350-371, 554-576; (c) 378, 401, 504-506; (d) 507-510. (35 units.)

Geography Minor

The minor in geography consists of a minimum of 18-19 units of geography to include Geography 101, 102 and one of the following areas:

Physical: nine units selected from Geography 378, 401 or 504-510, and three or four units selected from techniques courses Geography 380-385, 488, 581-589.

Cultural: six units from Geography 312, 350, 357, 360, 554, 555, and six units selected from regional courses Geography 320-339.

Urban/Transportation: nine units selected from Geography 353-359, 554-559, and three or four units selected from either technique or regional courses Geography 320-339, 380-385, 488, 581-589.

Conservation: nine units selected from Geography 370, 371, 378, 570-576, and three of four units selected from technique courses Geography 380-385, 488, 581-589.

Techniques: nine units selected from Geography 380-385, 488, 581-589, and three units selected from any other upper division course.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Geographic Information Systems Certificate*

The purpose of the program is to prepare students to carry out mapping activities and cartographic analyses in public and private organizations.

Students must apply for admission to the program before the completion of 15 certificate units and must complete the required units with a 2.5 grade point average.

The certificate requires 24 units to include six units selected from Civil Engineering 218, Mathematics 106, 107, 108; and eighteen units selected from Geography 380, 381, 382, 488, 581, 582, 583, 588, 589, 595. Courses with relevant content may be substituted for the courses listed above with the approval of the certificate adviser. Courses in the certificate may be counted toward the major in geography but may not be counted toward the minor.

* Additional prerequisites required for this certificate.

Courses

LOWER DIVISION COURSES

101. 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 landscapes. (Formerly numbered Geography 312A-312B.)

320. California (3)

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. Occasional field trips may be arranged.

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)

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. Occasional field trips may be arranged.

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)
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. Occasional field trips may be arranged.

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)
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) I, II
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.
Ethnic composition, industrial and agricultural resources, demographics, and environmental management in the USSR, with an emphasis on the various cultural regions.

339. Oceania (3) I
Prerequisite recommended: Geography 101 or 102.
The physical geography, peoples, economies, and trade of Oceania, Australia, and New Zealand.

350. Political Geography (3)
Geography as it relates to the strength of nations and international relations.

353. Location of Economic Activity (3)
Prerequisite recommended: Geography 101 or 102.
Spatial arrangement and interrelationship of resources, production, exchange and consumption; principles and theory in industrial location; selecting favorable locations for capital investments; determining growth potential of service and market areas, meeting environmental impact requirements.

354. Geography of Cities (3) I, II
Prerequisite 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. Occasional field trips may be arranged.

357. Historical Geography (3)
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
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) II
Prerequisite recommended: Geography 101 or 102.
Evolution, current status, with emphasis on the U.S. and future of commerical 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.

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. Occasional field trips may be arranged.

378. Environmental Physiography (3)
Prerequisite: Geography 101.
Introduction to environmental physiographic dynamics. Assessment of man's role in these dynamics and their effect on urban and rural land use, including such topics as induced erosion, landslides, and flooding.

380. Map Investigation (3) I, II
Two lectures and three hours of laboratory.
Prerequisite: Geography 101 or 102.
Use of the map as an analytical tool in geography. History of developments in cartography.

381. Maps and Graphic Methods (3) I, II
Two lectures and three hours of laboratory.
Prerequisite: Geography 101 or 102.
The art and science of creating graphs and maps as media for describing and analyzing geographic phenomena. Laboratory instruction and practice in cartographic techniques with emphasis on presenting quantitative data.

382. Use and Interpretation of Aerial Photographs (3) 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.

385. Spatial Data Analysis (3) I, II
Prerequisites: Geography 101 or 102; Mathematics 250 or comparable course in statistics.
Analysis of spatially distributed data including computer applications. Spatial sampling, descriptive statistics for areal data, inferential statistics, use of maps in data analysis.

401. Physiography (3)
Prerequisite: Geography 101.
Morphology and genetic interpretation of the relief features of the earth's surface.

488. Remote Sensing of Environment (4)
Three lectures and three hours of laboratory.
Prerequisites: Geography 101. Recommended: Physics 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.)

496. Selected Studies in Geography (3)
Prerequisite: Six units in geography.
Critical analysis of problems within a specific field of the discipline. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units. Occasional field trips may be arranged.

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.

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)

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. Occasional field trips may be arranged.

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.

510. Physical Meteorology (3) II
Prerequisites: Geography 103; Mathematics 122 or 150; Physics 180A or 195.
Physical characteristics of the atmosphere including thermodynamics, moisture and condensation, atmospheric aerosol, and cloud processes.

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)
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) I
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. Occasional field trips may be arranged.

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, including computer-mapping applications.

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.

583. Geographic Information Systems (3) I, II
Two lectures and three hours of laboratory.
Prerequisite: Three units from Geography 380, 381, 382, 488, 585, or 589, or from computer programming.
Procedures for encoding, storage, management, and display of spatial data; theory of computer-assisted map analysis; examination of important geographic information systems.

585. Quantitative Methods in Geographic Research (3)
Prerequisite: Geography 385.
Application of statistical techniques to geographic research including simple regression and correlation, multiple regression, classification, factor analysis, and computer applications.

588. Intermediate Remote Sensing of Environment (4) II
Three lectures and three hours of laboratory.
Prerequisites: Geography 488 and 585.
Multispectral remote sensor systems and interpretation of imagery from nonphotographic systems. Computer-assisted image processing. Visible and infrared scanners, microwave radiometers and radar systems. Geographic analysis of selected terrestrial and oceanographic processes.

589. Field Geography (3) II
Two lectures and three hours of laboratory.
Prerequisites: Senior or graduate standing and the completion of at least 12 units in geography, including Geography 101 and 102, and consent of instructor.
Data acquisition techniques. Field use of topographic maps. Geocoding systems, automated land use, land cover and land capability mapping. Directed field work.

595. Geographic Internship (3) I, II
Prerequisites: Six upper division units in geography and consent of instructor.
Students will be assigned to various government agencies and industry and will work under the joint supervision of agency heads and the course instructor. Maximum credit six units; maximum credit three units applicable to a master's degree. (Formerly numbered Geography 795.)

596. Advanced Topics in Geography (1-3)
Prerequisite: Six upper division units in geography.
Advanced special topics in geography. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Geological Sciences

In the College of Sciences

Faculty
Emeritus: Brooks, Krummenacher, McEuen, Roberts, Thomas, Threet
Chair: Kern
The Eckis Endowed Chair in Seismology: Day
Professors: Abbott, Berry, Bertine, Dorman, Gastil, Huntley, Jiracek, Kern, Miller, Peterson, Walawender
Associate Professors: Frost, Girty, Marshall, Ptacek, 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.

The Major

Geology is the study of the earth, its composition, its history, and its constantly changing character.

Geologists study the origin and evolution of our planet; the chemical and physical properties of minerals, rocks, and fuels; the structure of our mobile crust – its newly forming ocean floors and its ancient, drifting continents; the history of life; and the human adaptation to earthquakes, volcanic eruptions, landslides, and floods. The subject matter of geology ranges from dinosaurs to the prediction of earthquakes.

Students who are curious about the planet on which we live, challenged by problems which involve the earth, and intrigued by the potential of a subject which combines the best of both the arts and sciences, should consider geological sciences as a major.

The employment outlook is favorable, particularly with engineering and toxic waste disposal firms and energy companies, and as public school teachers.

A geology graduate may be employed as one of the following professionals: hydrologist, geophysicist, geochemist, environmental scientist, oceanographer, teacher, research technician, geological surveyor, paleontologist, energy and resource explorer, and resource planner.

Geologists are primarily employed by private corporations, including petroleum, mining, construction, and quarry companies; and government agencies, such as the U.S. Geological Survey, the U.S. Bureau of Mines, the U.S. Bureau of Reclamation, the California Department of Conservation, and regional planning offices. Students with graduate degrees are sought for teaching positions in secondary schools, community colleges and universities.

Geological Sciences Major

With the B.S. Degree in Applied Arts and Sciences (Major Code: 19141)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements. All students must complete both the basic requirements and the additional requirements under one of the seven options listed below. All required upper division courses in both categories must be taken for letter grades only, not 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 (except in paleontology option which requires Biology 200A-200B); and Chemistry 200 and 201. (25-28 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. 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.

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; Biology 100L or 110L; Mathematics 150 and 250; Physics 180A-180B and 182A-182B, or Physics 195, 195L, 196, 196L, 197, 197L. (20-24 units.) Recommended: Chemistry 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. Engineering Mechanics 200; Engineering 140; Mathematics 150, 151, 252; Physics 195, 196, 197. (27 units.) Recommended: Civil Engineering 218; Physics 195L, 196L, 197L.

Major (continued). Geological Sciences 314, 330, 526, 550, 551; Civil Engineering 301, 462, 463; and one of the following: Geological Sciences 505, 510, 512, 530, 548, or Civil Engineering 465. (25 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, 462, and 463.

(c) Geochemistry

Additional Preparation for the Major. Chemistry 251; Mathematics 150, 151, 252; Physics 195, 196, 197, 197L. (28 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. (23 units.)

(d) Geophysics

Additional Preparation for the Major. Mathematics 107, 150, 151, 252, 253 (if Mathematics 341A is selected below); Physics 195, 196, 196L, 197. (26-29 units.) Recommended: Physics 195L, 197L.

Major (continued). Geological Sciences 330, 510, 512, and an additional nine units selected from 507, 520, 521, 526, 530, 540, 551; Mathematics 341A or Engineering 310 and 510; Physics 311, 350A and an additional three units selected from Physics 400A, 542, Electrical Engineering 340. (30-33 units.)

(e) Marine Geology

Additional Preparation for the Major. Mathematics 150, 151, 252; Physics 195, 195L, 196, 196L, 197, 197L. (25 units.) Recommended: Mathematics 107.

Major (continued). Geological Sciences 330, 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. (24-25 units.) Recommended: Chemistry 410A-410B for students anticipating postgraduate studies.

(f) Paleontology

Additional Preparation for the Major. Biology 200A-200B, 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. (24-25 units.)

Major (continued). Geological Sciences 506, 507, 516, 526; two courses from the following: Biology 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. Mathematics 107, 150, 151, 252, 253 (unless Engineering 310 and 510 are selected below); Physics 195, 196, 197. (25-28 units.) Recommended: Engineering 140; Civil Engineering 218; Physics 195L, 196L, 197L.

Major (continued). Geological Sciences 314, 330, 505, 526, 530, 551; Mathematics 341A, or 531 and 537, or Engineering 310 and 510. (21-24 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. A minimum of six upper division units must be completed at San Diego State University.

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. A minimum of six upper division units must be completed at San Diego State University.

Courses

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.
Application of classical physics to gravitational, magnetic, seismic, earthquake, and thermal characteristics in defining the structure and dynamics of the earth. Not open to students with credit in Geological Sciences 510 or 512.

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.)

302. Fossils: Life Through Time (3) I, II
Prerequisite: Completion of 100-level science courses in Foundations section of General Education.
Traditional and recently discovered aspects of history of life on earth. Topics from the origin of life to extinctions.

303. Natural Disasters (3) I, II
Prerequisite: Geological Sciences 100 or completion of the General Education Natural Sciences requirement.
Geologic processes that have dramatically affected the human race: earthquakes, volcanoes, landslides, and floods. Not acceptable for a major in geological sciences but acceptable for a minor in geological sciences.

305. Structural Geology (3) I, II
Two lectures and three hours of laboratory per week with occasional field trips.
Prerequisites: Geological Sciences 105 and trigonometry.
Structural features of the earth, both deformational and primary. Mechanical principles, causes of folding and faulting, graphic solutions and analyses.

308. Field Geology (4) I, II, W
One lecture and three hours of laboratory, and twelve Saturday field sessions in the local area. Winter: Three weeks intensive fieldwork in an area some distance from campus.
Prerequisites: Geological Sciences 224 and 305.
Techniques and methods of geologic observation, interpretation, and field mapping with preparation of individual maps, sections, and geologic report.

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. Maximum credit three units.

330. Geophysical Prospecting (3) I
Two lectures and three hours of laboratory. Occasional field trips.
Prerequisites: Geological Sciences 100 and 101, or 253; Mathematics 150; Physics 196.
Elementary theory and basic field practices, data reduction, and interpretation of gravity, magnetic, seismic, resistivity, and electromagnetic surveys in economic applications.

496. Selected Topics in Geology (1-4) I, II
Prerequisite: Consent of instructor.
Selected topics in geology and related earth sciences. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

498A. Senior Seminar (1) I, II Cr/NC
Prerequisite: Senior standing in geological sciences.
Preparation of written and oral scientific reports and attendance at departmental seminars.

498B. Senior Thesis (2) I, II
Prerequisites: Geological Sciences 498A and consent of instructor.
Individual research project, written thesis, and oral presentation. Must be completed by students desiring to graduate with distinction in the major.

498C. Senior Presentation (2) I, II
Prerequisite: Geological Sciences 498A.
Oral and written critiques of geological literature and seminar presentations.

499. Special Study (1-3) I, II
Prerequisites: Acceptable grade average in at least 12 upper division units within the major and consent of staff.
Individual study in field, library, laboratory, or museum work. Maximum credit four units.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

502. Geology of North America (3) I
Prerequisite: Geological Sciences 105.
A regional analysis of North American geology, its structural, stratigraphic, and tectonic patterns and hypotheses concerning their origin and evolution.

505. Photogeology (3) II
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 305 and 314.
Geologic interpretation of aerial photographs, elementary stereoscopy and stereometry applied to structural and stratigraphic problems, and compilation of geologic maps from annotated aerial photographs.

506. Paleontology (3) I, II
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 105 and either Biology 100-100L or 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) S
One lecture and three hours of laboratory and seven weekend field sessions.
Summer: Twenty-four days in the field (4 units); ten additional days of field and laboratory work (6 units).
Prerequisites: Geological Sciences 308. Summer: Geological Sciences 308 and 524.
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. A fee covers transportation and meals.

510. Petroleum Geophysics (3) I
Two lectures and three hours of laboratory. Occasional field trips.
Prerequisites: Geological Sciences 305, Mathematics 252, Physics 195, 196, 197. 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.

528. Seismic Stratigraphy (3) I
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 230, 305, and 507.
Principles involved in shooting, processing, and interpreting seismic reflection profiles. Laboratory exercises with stratigraphic interpretations from reflection data.

530. Geochemistry (3) I, II
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 224; Chemistry 201; Mathematics 121 and 122, or 150.
The relationship of basic chemical principles to geologic phenomena and environments, including applications to geologic exploration problems.

540. Marine Geology (3) I
Prerequisites: Geological Sciences 105, and either Geological Sciences 224, 314, 502, or 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 of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

German

In the College of Arts and Letters

Faculty
Emeritus: Boney, Dunkle, Lawson, Wolf
Chair: Wulbern
Professors: Paulin, Schaber, Tanaka, Wulbern
Assistant Professor: Skwara
Lecturer: Eigler

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.

The Major

The German language is widely spoken in many countries today. It is also a primary language of scholarship in such diverse fields as chemistry, medicine, military science, history, linguistics, art, physics, electronics, photography, and the natural sciences.

Students who major in German will gain proficiency in German language skills, and the department offers a broad variety of courses designed to prepare majors for a number of careers after graduation. A major in German is also a good preparatory curriculum for graduate programs in such areas as international trade, international law, librarianship, public administration, and journalism.

A knowledge of German is a valuable asset in finding positions as interpreters and translators employed by the federal government, the United Nations, international conferences, trade councils, and publishers, as well as with internationally oriented companies, government agencies, the press corps, and the tourism industry.

Advising

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

German Major

With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 11031)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

Students majoring in German must complete a minor in another field to be approved by the departmental adviser in German.

Preparation for the Major. German 100A, 100B, 200A; 200B or 200C; 211 and 212. (20 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Foreign Language Requirement. The foreign language requirement is automatically fulfilled through coursework for preparation for the major.

Major. A minimum of 24 upper division units to include German 301, 302, 310, 420, and 12 units in upper division German which may include Comparative Literature 571 (content: ***Faust***).

German Major

For the Single Subject Teaching Credential in Foreign Languages With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 11031)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under 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 100A, 100B, 200A; 200B or 200C; 211 and 212. (20 units.)

Foreign Language Requirement. The foreign language requirement is automatically fulfilled through coursework for preparation for the major.

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 30 upper division units in German to include 301, 302, 310, 403, 420, 505, 510, and nine upper division units in German which may include Comparative Literature 571 (content: ***Faust***).

Proficiency Examination: Before taking a student teaching assignment in German, the candidate for the credential may be required to pass an oral and written proficiency examination in the language, administered by the Department of German and Russian Languages and Literatures. The candidate should consult the chair of the department.

German Minor

The minor in German consists of a minimum of 15 units in German, six units of which must be in upper division courses.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Foreign Language Requirement for the 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 coursework is German 101, 102, and 201. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

High School Equivalents

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high school courses will not count as college credit toward graduation.

Secondary school language courses can be used as follows:

1. The first ***two years*** of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.
2. The first ***three years*** of high school level language count as the equivalent of the first two college semesters, although students with

fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not receive credit for the first semester college course unless at least five years separate the last high school course and the first college course.

3. *Four years* of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

Courses

LOWER DIVISION COURSES

Native speakers of German will not receive credit for taking lower division courses in German except with advance approval from the department.

All lower division courses in German are taught in German.

No credit will be given for German 100A, 100B, 200A, 200B, 200C, 201, 202, 301 taken out of sequence. German 302 may be taken before 301.

100A. First Course in German (5) I, II
Pronunciation, oral practice, readings on German culture and civilization, minimum essentials of grammar. Not open to students who have completed three years of high school German unless the third course was completed five or more years ago. (Formerly numbered German 101.)

100B. Second Course in German (5) I, II
Prerequisite: German 100A or two years of high school German.
Continuation of German 100A. Not open to students who have completed four years of high school German unless the fourth course was completed five or more years ago. (Formerly numbered German 102.)

200A. Grammar of Written German (3) I, II
Prerequisite: German 100B or three years of high school German.
German grammar at the intermediate level with emphasis on writing. Not open to students with credit in German 201.

200B. Expository German for Reading Comprehension (3) I, II
Prerequisite: German 100B or three years of high school German.
Reading in German with emphasis on comprehension. Works to include readings in history, science, philosophy, culture, and journalism. Not open to students with credit in German 202.

200C. Literary German for Reading Comprehension (3) I, II
Prerequisite: German 100B or three years of high school German.
Reading in German with emphasis on comprehension including one complete major work. Majors and minors urged to take 200A and/or 211 concurrently. Not open to students with credit in German 202.

202. Fourth Course in German (4) I, II
Prerequisite: German 201 or four years of high school German.
Continuation of German 201. (This course to be offered for the last time during the 1988-89 academic year.)

211. Conversation (2) I, II Cr/NC
Prerequisite: German 100B or three years of high school German.
Practice in the spoken language with emphasis on the articulation of German sounds; practical vocabulary; conversation on everyday cultural topics.

212. Conversation (2) I, II Cr/NC
Prerequisite: German 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 200A; 200B or 200C; 212.
Grammar and stylistics; intensive writing practice; reports based on outside reading.

302. Grammar and Composition (3)
Prerequisites: German 200A; 200B or 200C; 212.
Grammar and stylistics; intensive writing practice; reports based on outside reading.

310. Introduction to German Literature (3)
Prerequisites: German 200A; 200B or 200C.
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)
Prerequisites: German 310 (for literary topics) or 301 and 302 (for linguistics topics).
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

499. Special Study (1-3) I, II
Prerequisites: Fifteen upper division units in the major with an average of B (3.0) or better and consent of instructor.
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 200A; 200B or 200C; 212.
Sounds and intonation of German.

540. German Literature from Its Beginning to the Baroque Period (3)
Prerequisite: German 310.
Literature from the eighth century to about 1700.

545. German Literature of the Eighteenth Century (3)
Prerequisite: German 310.
Reading and discussion of representative works of significant authors and movements of the eighteenth century.

555. German Literature of the Nineteenth Century (3)
Prerequisite: German 310.
Reading and discussion of representative works of significant authors and movements of the nineteenth century.

561. German Literature of the Twentieth Century (3)
Prerequisite: German 310.
Reading and discussion of representative works of significant authors and movements of the twentieth century.

596. Topics in German Studies (3)
Prerequisites: German 310 (for literary topics) or 505 (for linguistic topics).
Topics in German language, literature, or linguistics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Gerontology

In the College of Health and Human Services

Faculty

Gerontology is a multidisciplinary program administered through the University Center on Aging, composed of faculty members from the Departments of Anthropology, Psychology, Recreation, and Sociology; the School of Social Work; and the Colleges of Arts and Letters, Education, Health and Human Services, and Professional Studies and Fine Arts.

Director: Stanford
Professor: Stanford
Assistant Professor: Lockery

Offered by Gerontology

Minor in gerontology.
Certificate in applied gerontology (offered only in Extension)

Advising

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

Gerontology Minor

The minor in gerontology consists of a minimum of 18 units to include Health Science 573, Psychology 335, Sociology 527; and nine units selected from Gerontology 101, 350, 360, 370, 400A, 400B; Anthropology 509; Biology 480; Communicative Disorders 580; Family Studies and Consumer Sciences 496*; Nursing 343; Physical Education 569; Recreation 580; Social Work 120, 420; Sociology 528, 496*; and Women's Studies 421.

Additional prerequisites may be required for the courses in the minor.

Courses in the minor may not be counted toward the major or the certificate, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

* When relevant.

Courses

LOWER DIVISION COURSE

101. Introduction to Human Aging (3) I
Overview of the field of gerontology, including demographic trends, basic theories, concepts and philosophic ideas, social policies, planning issues, and services available to meet the needs and problems of the aged. (Formerly numbered General Studies 101.)

UPPER DIVISION COURSES
(Intended for Undergraduates)

350. Social Policy and Aging (3) II
Prerequisite: Gerontology 101.
Philosophical and practical gerontological knowledge for the operation of health and human service organizations. Multiprofessional perspective of policies, services, and administrative techniques.

360. Minority and Ethnic Aging (3) I
Prerequisite: Gerontology 101.
Attitudes and cultural values related to aging members of ethnic minorities. Major social and psychological theories on aging as they relate to ethnic minority elderly. Impact of class, economic resources, and health in aging process. Not open to students with credit in General Studies 502, "Minority and Ethnic Aging."

370. Images of Aging in Contemporary Society (3) II
Prerequisite: Gerontology 101.
Images of older persons in our society. Influence of films, newspapers, radio, television, books and magazines, and a wide range of advertising mechanisms. Not open to students with credit in General Studies 502, "Media and Aging."

400A-400B. Practicum in Gerontology (3-3) I, II Cr/NC
Twelve hours of laboratory.
Prerequisites: Gerontology 350, 360, 370, Psychology 350 with a minimum GPA of 2.0.
Integration of theoretical background and practical experience in providing services to elderly. Fieldwork and observation in settings providing services to the elderly. Direct experience in aging projects relevant to their field of interest.

Health Science

In the College of Health and Human Services

Faculty

Emeritus: Barnes, Fellers, Harper, Kitzinger
Chair: Senn
Professors: Bender, Burgess, McTaggart, Sleet, Sorochan
Associate Professors: Boskin, Kessler, Noto, Senn

Offered by the Department

Major in health science with the B.S. degree in applied arts and sciences.
Emphasis in community health education.
Teaching major in health science for the single subject teaching credential in health science.
Minor in health science.
Certificate in family life education.

The Major

Health education is becoming increasingly accepted as the most humane and economical means to good health. Despite the vast array of preventive, therapeutic, and rehabilitative facilities developed by medical science, human health continues to depend largely on translating knowledge into individual behaviors and lifestyles. Education designed to encourage appropriate health behaviors can effectively prevent much suffering and disability. The major purpose of the health science profession is to initiate educational programs which will develop health-positive behaviors in individuals and families.

The health science major is designed to contribute to the personal health and growth of students and to prepare them for entry level positions in health agencies. An emphasis in community health education is available. Preparatory coursework for this interdisciplinary major includes courses in health science, family studies and consumer sciences, psychology, sociology, speech communication, zoology, chemistry, microbiology, and mathematics. The upper division curriculum requires 48 units from health science, biology, educational technology, and social work.

Although career opportunities in health science are variable from year to year and place to place, the long-range predictions of demand for health education professionals are favorable. Types of positions available to health science graduates include positions in governmental agencies, voluntary health agencies, hospitals, and schools.

Health professionals in any of these settings might be involved in such projects as educating the community about current health issues and the latest advances in the medical field.

International health work opportunities are available in the Peace Corps, Project Concern, and other humanitarian organizations.

Positions might also be available with various health related organizations as public information officers.

Career opportunities in the health science profession are particularly good for minority, bilingual, and bicultural persons.

Health Science Major

With the B.S. Degree in Applied Arts and Sciences (Major Code: 12011)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

Emphasis in Community Health Education

Preparation for the Major. Health Science 101, 190, 290, 292; Biology 120, 120L, 150; Chemistry 100 (or Chemistry 130 for students with previous work in chemistry); Family Studies and Consumer Sciences 107; Psychology 101, 270; Sociology 101; Speech Communication 103. (39 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or English 304W or 305W with a grade of C (2.0) or better.

Major. A minimum of 39 upper division units to include Health Science 401, 402, 406, 490, 497 (six units), 560; Biology 336; Educational Technology 532; and twelve units of electives in health science including Social Work 350.

Health Science Major

For the Single Subject Teaching Credential With the B.S. Degree in Applied Arts and Sciences (Major Code: 12011)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under 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 290, 292; Biology 150; Chemistry 100; Family Studies and Consumer Sciences 107; Psychology 101, 270; Sociology 101; Speech Communication 103. (29 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or English 304W or 305W with a grade of C (2.0) or better.

Major. A minimum of 38 upper division units to include Health Science 301, 321, 331, 345, 350, 355, 470, 475, 574, 575; Biology 336; and six units of electives in health science.

Health Science Minor

The minor in health science consists of a minimum of 15 to 18 units in health science selected from one of two areas:

Community Health Education: Health Science 101, 290, 401*, 470, 561.

School Health: Health Science 101, 320 or 321, 331, 475, 574, 575.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

* Additional prerequisites required.

Family Life Education Certificate

The purpose of this certificate program is to prepare students for careers in family life education. The program is designed for individuals working on degrees in child development, health science, and home economics. It also provides a self-improvement opportunity for people seeking employment, promotion, or upward mobility on the job who are not enrolled in degree programs.

Awarding of the certificate requires completion of an approved pattern of five courses (15 units) with a grade of "C" or better in each of the courses to include Family Studies and Consumer Sciences 135, 270* or 371*, or Psychology 330*; Health Science 475, 575; and Biology 307. The course offerings under this program meet the criteria for training and standards of the American Association of Sex Educators and Counselors.

Family Studies and Consumer Sciences 135, 270 or 371 (six units) are applicable to the child development or home economics majors. Health Science 475 and 575 (six units) are applicable to the health science major. Courses in the certificate may not be counted toward the minor.

For further information regarding the Family Life Education Certificate program, consult Lois P. Kessler, Department of Health Science, or Francine Deutsch, School of Family Studies and Consumer Sciences.

* Indicates course with prerequisites not included in requirements listed above.

Courses

LOWER DIVISION COURSES

101. Health and Life-style (3) I, II
Major variables in human health experience with attention to personal health assessment and application of health knowledge to health behavior.

190. Computer Assisted Health Education (3) I, II
Two lectures and three hours of laboratory.
Prerequisite: Health Science 101.
Health-related applications of the microcomputer. Educational strategies, behavioral changes and administrative applications for the field of health education.

290. Health Education as a Profession (3) I, II
Prerequisite: Health Science 101 or 301.
Health education and its role in the health system. For students with professional interests in health education. (Formerly numbered Health Science 400.)

292. Community Health (3) I, II
Community health problems; role of the citizen, the public, and community health agencies in promoting and protecting the health of the community. (Formerly numbered Health Science 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)

301. Concepts of Health Science (3)
Development and application of concepts in individual, family, and community health. Involvement in health project work. Not open to students with credit in Health Science 101.

320. Health Education for Elementary Teachers (3) I, II, S
The teacher's function in the different aspects of the elementary school health program, with emphasis on the planning and presentation of instructional materials and community resources and relationships.

321. Health Education for Secondary Teachers (2) I, II, S
The teacher's function in the secondary school health program.

331. Crisis Management (3) I, II
Physical and psychological crisis situations, various procedures and techniques in immediate management and follow-up referrals.

345. Safety and Accident Prevention (3) II
Prerequisites: Health Science 292; First Aid and CPR certification required for school health majors and those seeking a single subject teaching credential.
Causes and incidence of accidents with emphasis on role of education, prevention, and injury control.

350. Environmental Health Education (3) II
Environmental hazards of living and working in this modern technological world, including air, noise, land, food, and water pollution.

351. Occupational and Environmental Hazards (3) I
Recognition and prevention of morbidity and mortality in occupational and environmental settings.

355. Consumer Health (3) I
Hazards of consumer products from the viewpoint of design and use.

362. International Health (3) I, II
Population dynamics, vital statistics, global disease patterns, and analysis of variations among nations and cultures with respect to health problems and health care services.

401. Change Process in the Community (3) I, II
Prerequisites: Health Science 290, Psychology 101, Sociology 101, and declared health science majors or minors.
Attitude formation, behavior change, decision making, perception, motivation, group behavior, etc., and their relationship to the practice of health and human services.

402. Communications in Health Education (3) I, II
Prerequisites: Health Science 290, Speech Communication 103.
Development and production of health presentations for group and individual levels; including written, oral, and graphic methods.

406. Health Education Methodology (3) I, II
Prerequisite: Health Science 401.
Strategies, techniques, and materials for planning and conducting health education. Applications of learning theory in the development and use of educational methodologies in health education.

470. Communicable and Noncommunicable Diseases (3) I, II
Causes, prevention and control of communicable, degenerative and chronic health disorders.

471. Death Education (3)
Cultural, psychological, physical and personal aspects of death with emphasis on educational approaches.

475. Human Sexuality (3) I, II
Examination of the development of sexual values, attitudes, and behavior from infancy to old age.

490. Measurement and Evaluation in Health Science (3) I, II
Prerequisites: Health Science 190; Psychology 270; satisfactory completion of the Entry-Level Mathematics requirement and the SDSU Mathematics Competency requirement. 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: Senior standing in Community Health Education emphasis; Health Science 401, 402, and 406.
Supervised practical experience in local health agencies and/or schools. Maximum credit six units.

499. Special Study (1-3) I, II, S
Prerequisite: Consent of special study adviser.
Individual study. Maximum credit six units.

UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

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 290.
Philosophy, development, organization, administration, and legal aspects of public health in the United States. Disease prevention and control, health education, and the other functions and activities of official health departments, voluntary agencies, private physicians and others engaged in professional health work.

561. Health and Medical Care (3) I, II
Prerequisite: Senior or graduate standing with a major or minor in health education or a closely related area.
Health values, concepts, and attitudes; health products and facilities; hospital care and hospitalization plans; governmental health controls; economic and cultural influences on health and medical care; professional contributions, relationships, and careers; national and international health programs.

573. Health in Later Maturity (3) I
An approach to the conservation of human resources, with emphasis on understandings, attitudes, and practices related to health in later maturity. Designed for those with a personal or professional interest in the field.

574. Habit-Forming Substances (3) I, II
Tobacco, alcohol, and other drugs; their use, misuse and abuse.

575. Sex Education (3) II
Prerequisite: Health Science 475.
Philosophy, current procedures, and materials needed for development of healthy attitudes and scientific knowledge appropriate for the understanding of human sexuality.

596. Workshop in Health Science (1-3)
Selected problems in health science are used as a basis for workshop experiences. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596; maximum credit of three units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Hebrew

In the College of Arts and Letters

Faculty
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 coursework is Hebrew 101, 102, and 201. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

High School Equivalents

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high school courses will not count as college credit toward graduation.
Secondary school language courses can be used as follows:
1. The first *two years* of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.
2. The first *three years* of high school level language count as the equivalent of the first two college semesters, although students with fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not receive credit for the first semester college course unless at least five years separate the last high school course and the first college course.
3. *Four years* of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

Courses

LOWER DIVISION COURSES

All lower division courses in Hebrew are taught in Hebrew.
No credit will be given for Hebrew 101, 102, 201 taken out of sequence.

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 linguisitcs. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit eight units.

499. Special Study (1-3) I, II
Prerequisite: Consent of instructor.
Individual study. Maximum credit six units.

History

In the College of Arts and Letters

Faculty

Emeritus: Hanchett, Nasatir, Norman, Pincetl, Rader, Ridout, Rohfleisch, Webb

Chair: DuFault

Professors: Berge, Cheek, Chu, Coox, Cox, Cunniff, Davies, Dunn, Flemion, J., Hamilton, Heyman, Hoidal, Kushner, McDean, Munter, O'Brien, Peterson, Phillips, Ruetten, Schatz, Smith, C., Smith, R., Starr, Steele, Stites, Strong, Vanderwood, Vartanian

Associate Professors: Bartholomew, Colston, DuFault, Filner, Flemion, P., Oades

Assistant Professors: Ferraro, Kornfeld

Lecturer: Truant

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.

The Major

History is the study of humanity's recorded past. It encompasses almost all aspects of human activity and behavior. The arts and sciences, technology and economics, ideology and social attitudes are all as much a part of history as politics and war.

History is the most universal of the humanities. It is not merely a body of facts to be learned, but is a series of arguments and points of view to be debated. Study of the ideas, attitudes, and actions of peoples in the past helps to sharpen a person's own sense of values, offering moral lessons in the search for a global future of creative achievement and international peace. It also helps to cultivate a more tolerant and compassionate spirit toward peoples whose way of life may be different from one's own.

The excellent training in basic skills and the broad range of information students receive in history courses prepare history majors for a wide variety of careers in law, government, politics, journalism, publishing, and public history. Teaching at the high school, community college, or university level offers increasing opportunities for history majors in the future.

Advising

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

History Major

With the A.B. Degree in Liberal Arts and Sciences (Major Code: 22051)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

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 With the A.B. Degree in Liberal Arts and Sciences (Major Code: 22051)

All candidates for a teaching credential must complete all requirements outlined in this section of the catalog under 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 Minor

The minor in history consists of a minimum of 18 units in history to include six sequential units in the lower division. Twelve units must be in upper division history, distributed in no more than two of the fields listed under the history major.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

100. World History (3)
The growth of civilizations and the interrelationships of peoples of Europe, Asia, Africa, and America to 1650.

101. World History (3)
Modern history from a global perspective, 1650 to the present.

105. Western Civilization (3)
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) (110A: CAN HIST 8; 110B: CAN HIST 10)
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.

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. Early Scandinavia (3)
Formation and development of Scandinavian kingdoms from Viking Age to end of 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. Modern Scandinavia (3)
Major political, social and economic developments in Scandinavia from 1814 to present, emphasis on contemporary society.

514A. The French Revolution and Napoleonic Era (3) 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.

521. History of the British Constitution (3)
Prerequisites: Upper division standing and six units in history.
Historical development of British political institutions which are a reflection of the constitution from Anglo-Saxon period to present. (Formerly numbered History 521A-521B.)

522A-522B. Tudor and Stuart England (3-3)
Semester I: The Age of the Tudors. Semester II: England during the Stuart Dynasty, 1603-1714.

523A-523B. Modern Britain (3-3)
Semester I: The development of constitutional and social patterns from the Glorious Revolution to the French Revolution, emphasizing the immediate background to the American Revolution. Semester II: From the nineteenth century to the present, including the rise of Parliamentary democracy, imperialism and the Victorian age, and political thought from the Utilitarians to the Fabians.

524. History of Ireland (3) I, II
Social and cultural history of Ireland from earliest historical times to the present, including formation of a national character, literature from the Saga Cycles to the modern literary renaissance, and various movements to achieve independence from Cromwell through World War I.

526. Ideas and Attitudes of Modern Europe (3)
Selected problems in European intellectual history beginning with the seventeenth century, with attention to social and political thought. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

527. Diplomatic History of Modern Europe (3)
Diplomatic relations of the various European states with European and non-European powers. The diplomatic backgrounds and results of World Wars I and II. (Formerly numbered History 527B.)

528. Social History of Modern Europe (3)
Historical survey of European society emphasizing changes in the family, health, diet, the standard of living, urbanism, crime, migration, and literacy, from 1350 to the beginning of the Industrial Revolution. (Formerly numbered History 528A.)

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,
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.

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.

549. History of San Diego (3)
Prerequisites: Upper division standing and six units in history.
Development of San Diego from European contact to the present.

Field (d). Latin America

UPPER DIVISION COURSES (Intended for Undergraduates)

415A-415B. Latin America (3-3)
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.

559. Central America (3)
Prerequisites: Upper division standing and six units in history.
Historical development of the republics of Central America with emphasis on twentieth century. Contemporary revolutionary movements and role of United States in Central American affairs.

Field (e). South, Southeast and East Asia

UPPER DIVISION COURSES (Intended for Undergraduates)

420. Asia's Dynamic Traditions (3)
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.

422. Southeast Asian and Filipino Experience in America (3)
Prerequisite recommended: Upper division standing.
History of Filipinos and other Southeast Asians in America from 1898 to present. Topics include changing Southeast Asian-U.S. relations, cultural roots, immigration, comparative community institution and development, racism, discrimination, labor movements, politics, achievements, and contemporary issues.

496. Issues in History (1-4)
Refer to Field (g). Topical Subjects.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

561A-561B. Asia and the West (3-3)
History of Asian-Western relations with emphasis on China and Japan. Semester I: Through the nineteenth century. Semester II: The twentieth century.

562. Civilization of India: The Great Traditions (3)
From earliest times to the eighteenth century including Hindu, Buddhist, and Muslim contribution to Indian society, changing political ideas and institutions, and historic trends in art and literature.

563. Modern India and Its Neighbors (3)
British conquest and colonial policy, Hindu and Muslim nationalism, Gandhi's significance, and the emergence of independent India, Pakistan, and Bangladesh.

564A-564B. Southeast Asia (3-3)
Semester I: Cultural traditions of Southeast Asian peoples. Indigenous institutions and the influence of China, India, and Islam. Semester II: Southeast Asia in the modern world. Patterns of foreign stimulus and local response among the peoples of the area.

565. Revolution and Social Change in Asia (3)
Comparative study of contemporary problems in Asia emphasizing how indigenous peoples responded to the challenges of nationalism, reform, revolution, modernization, and neo-colonialism. Topics include social structure, education, peasant movements, urbanization, search for cultural identity, and national integration.

566. Chinese Civilization: The Great Traditions (3)
China's institutional and cultural development from ancient to 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, A.D. 600 to A.D. 1600. Semester II: Colonialism and nationalism in the modern Middle East, A.D. 1600 to present.

475A-475B. Africa (3-3)
Semester I: Civilization of precolonial Africa both north and south of the Sahara from the advent of Islam to 1880. Semester II: Colonial and postcolonial Africa.

496. Issues in History (1-4)
Refer to Field (g). Topical Subjects.

UPPER DIVISION COURSE
(Also Acceptable for Advanced Degrees)

574. The Arab-Israeli Question, Past and Present (3)
Arab-Israeli conflict over Palestine in perspective of Zionism, Arab nationalism, and Great Power relations from nineteenth century to present.

Field (g). Topical Subjects

UPPER DIVISION COURSES
(Intended for Undergraduates)

435. History Through Film (3)
Critical analysis of selected historical problems, eras, and events, using film as the principal historical document. Maximum credit six units.

440. The Holocaust and Western Civilization (3) I
Prerequisite: Upper division standing.
German campaign to eliminate Jews during World War II. Anti-Semitic background, both Christian and racial; rise of Adolf Hitler and implementation of "the final solution"; responses by Jews and non-Jews in the Western world.

480. History of Corporations in the Modern World (3) I, II
Prerequisite: Upper division standing.
Comparative study of the rise and success of the modern corporation in the United States, Japan, Europe, and developing nations. (Formerly offered as History 496.)

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.

487. Early Jewish History (3) I
Prerequisite: Upper division standing.
From Babylonian exile through Golden Age in Medieval Spain. Social organization and attempts to achieve independent governance; development of ideological structures to enhance survival as a separate group; tensions with outside world and eruption of Messianic movements.

488. Modern Jewish History (3) II
Prerequisite: Upper division standing.
Social, religious, and intellectual life of European Jewry from Middle Ages to present; political struggle for emancipation; anti-Semitism, the Holocaust, and establishment of state of Israel.

496. Issues in History (1-4)
Examination of selected problems and current issues in history. May be repeated with change of content. Maximum credit six units with change of content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Refer to Class Schedule for specific content.

A. Ancient, Medieval, and Early Modern Europe
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 COURSES
(Also Acceptable for Advanced Degrees)

580. Great Historians and Historical Literature (3) I, II
Prerequisite: History 100, 105, or 120.
History of historical writing and works of major historians. Recommended for history and social science majors. (Formerly numbered History 425.)

596. Selected Studies in History (1-4)
Topics in the various fields of history, such as biography, war, science, technology, urbanization, minority groups, immigration, and capitalism. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Humanities

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.

The Majors

European Studies. The European Studies major approaches the study of Europe as a unique cultural and historical entity, resulting from a common heritage, which shares common values, traditions, problems, and resources. It is an interdisciplinary curriculum which draws on faculty from a wide variety of fields, including history, foreign languages, philosophy, literature, political science, art, music, economics, and geography.

Every European studies major is required to take the four courses offered in sequence under the title, "Cultural Heritage of Europe." Each course in the sequence concerns itself with several centuries of European cultural development and emphasizes creative achievements in the visual arts, music, literature, and philosophy. It is also the intention of the cultural heritage sequence that students develop careful analytical and critical abilities and arrive at informed and thoughtful value judgments regarding the works which they study in the sequence.

European studies is a broadening, humanizing discipline for the nonspecialist undergraduate who wishes to know more about the European world. Students may augment this broad basis with any particular focus they choose by selecting certain optional courses within the major or taking additional courses in other departments. Thus, for example, if a student contemplates a career in art sales in Europe, courses in art history, European economics, and international business would be appropriate. If the student is thinking of a career in the press corps, supplementary courses in expository writing and political science should be taken. Depending upon the focus chosen, the student may find a career as an international marketing representative; art, music, or theater critic; travel agent; museum curator; fashion designer; a member of the international press corps; librarian; international legal or financial consultant for government, for the military, or for private industry; writer, teacher, or researcher specializing in the study of Europe.

Humanities. The humanities major is based on the premise that nothing pertaining to any human being in any culture or civilization can be so alien to another human being as to be incomprehensible or worthless. Humanities also believes that individuals, who live in civilization, and civilizations as a whole express themselves in acts and works; that some of these works may truly be called "achievements" and are sufficiently unique, impressive, and durable to be worthy of study; and that, depending upon whether they are objects like musical and artistic creations or intellectual creations expressed in various forms of literature, these achievements may be interpreted and evaluated in accordance with the criteria and methods of various humanist disciplines such as literature, philosophy, and art history.

The humanities major serves to familiarize students with the fundamental principles, criteria, and methodologies of the humanistic disciplines which study these achievements, as well as with the scope and limitations of such disciplines with regard to their historical and cultural origins, their philosophical presuppositions, and their practical consequences. Such study gives students an interdisciplinary understanding of different interpretations of the human condition and different possibilities for it.

The special advantage of this major is its wide compass, the breadth of learning and genuine understanding it provides. Persons majoring in humanities are generalists and therefore the opposite of specialists – but just as necessary as the latter in the modern world. They do best when left on their own initiative to accomplish innovative solutions to problems requiring interdisciplinary understanding or when employed as managers of complex enterprises where the daily routine requires multiple comprehension and where the emergency requires sureness of judgment and finesse in handling.

Possible career opportunities include positions such as international press corps or diplomatic corps member; international trade, finance, or marketing representative, or legal, financial, or cultural consultant for private industry or government; newspaper editor, freelance writer, or researcher; art, music, or theatrical critic; fashion designer; museum curator; travel agent.

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
(Major Code: 03101)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

Preparation for the Major. History 105, 106; Classics 140, six units from Art 258 or 259, Comparative Literature 210, Economics 101 or 102, English 220, Geography 102, Political Science 101 or 103. (15 units.)

Foreign Language Requirement. Twelve units in any one of the following languages: French, German, Italian, Latin, Russian, Spanish.

Upper Division Writing Requirement. Passing the University Writing Examination or History 430W, English 500W, or English 508W with a grade of C (2.0) or better.

Major. A minimum of 36 upper division units to include Humanities 401A-401B and 402A-402B; six units in one of the foreign languages listed above; six units selected from Art 371*, 557*, 558*, 573A*, 573B*, 574*, 575*, Music 351A, 351B, 351C; six units selected from Geography 336, Political Science 301A, 301B, 302; and six units from Anthropology 440, History 503A, 503B, 506, 509, 510A, 510B, 511A, 511B, 512A, 512B, Comparative Literature 510, 511, 512, 513, 514, Philosophy 402, 403, 404, 405, 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.

Humanities Major

With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 15991)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

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 any one of the following languages: Arabic, Chinese, French, German, Greek, Hebrew, Italian, Japanese, Latin, Portuguese, Russian, Spanish.

Upper Division Writing Requirement. Passing the University Writing Examination or English 500W or 508W with a grade of C (2.0) or better.

Major. A minimum of 36 upper division units selected with the approval of the adviser to include Humanities 401A-401B, 402A-402B, Asian Studies 458, 459, 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, Humanities 400, Music 351A, 351B, 351C, 351D, 351E, 351F, 580, Drama 460A-460B; and three units in Humanities 599.

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*, 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. A minimum of six upper division units must be completed at San Diego State University.

* Indicates course with prerequisites not included in requirements listed above.

Humanities Minor

The minor in humanities consists of a minimum of 21 units, 12 of which must be upper division. No more than six units may be taken in any one department or program area with the exception of humanities. 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 400, 401A, 401B, 402A, 402B; Art 258, 259, 263, 365, 366, 371, 557, 558, 559, 560, 561, 562, 567, 568, 569, 570, 572, 573A, 573B, 574, 575, 576, 577; Asian Studies 458, 459; 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, 405, 495, 510, 511, 512, 513, 514, 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 401, 402, 403, 404, 405, 506, 507; Religious Studies 201, 301, 305, 340, 506; and three additional units from the courses listed above.

Plan B – *Interdisciplinary Structure.* Humanities 402B; six units selected from Humanities 130, 140, 157, 158, Women's Studies 205; nine units selected from Humanities 400, 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. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

All classes are conducted in English.

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,
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.

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. Requires lecture attendance, examinations, and written reports. 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.

UPPER DIVISION COURSES
(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.

596. Topics in Humanities (1-3)
Prerequisite: Upper division standing and six units in courses listed in Humanities section of General Education.
Special topics focusing upon selected aspects of civilization and studied from an interdisciplinary perspective in the humanities. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. No more than six units of 596 may be applied to either the bachelor's or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

599. Special Study (1-3)
Prerequisites: Twelve upper division units in humanities or in humanities disciplines and consent of instructor and program chair
Directed individual study. 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, Thiel
Chair: Bailey, G.D.
Professors: Bailey, G.D., Dirksen, Guentzler, Hammer
Associate Professors: Bailey, G.W., Marsters, McEowen
Adjunct: Elliott

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.

The Major

The primary objective of the industrial arts major is to offer a program designed to provide: 1) academic preparation in technical and theoretical foundations of technology, 2) an understanding of industrial systems, and 3) the technical skills required for potential careers in education or industrial supervision or management. A secondary objective of the program is to prepare students for the single subject teaching credential.

Students choosing professional careers in this major are typically involved with 1) the application of significant theories, concepts and principles found in the humanities, social and behavioral sciences (including communications), physical sciences, and mathematics; and 2) the application of concepts and skills derived from a variety of technical disciplines such as materials and production processes, industrial management and human relations, communications, electronics, graphics, computer assisted drafting, polymers, energy, and transportation.

The major offers professional preparation for challenging and self-fulfilling careers in a variety of settings and capacities. Opportunities for rewarding positions are available for women as well as men. Students can broaden their career possibilities by complementing their major with carefully selected electives and a minor in a discipline relevant to their specific interests. In addition, invaluable experience can be gained from internships, cooperative education programs and work experience.

Individuals seeking careers in industry may choose from a wide variety of technical and managerial positions in such areas as computer, electronic or polymer technology or manufacturing production and management. Upon completion of the program, students are prepared for entry level positions as an operations analyst, associate engineer, product assurance engineer, quality control engineer, purchasing manager, director of facilities, planner/estimator, plant engineer, OSHA coordinator, project manager, manufacturing engineer, production design engineer, industrial sales, production supervisor, process engineer, applications engineer, inspection coordinator, operations planning coordinator, systems engineer, tool and production planner, and engineering supervisor.

Industrial Arts Major

With the A.B. Degree in Applied Arts and Sciences
(Major Code: 08393)

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 121 and 200 to be taken at the beginning of the major; four courses selected from Industrial Arts 115, 131, 140, 151, 161, 171 and 181. (18 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

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, electronics, power technology, graphic arts, and photography; and six additional units in industrial arts excluding Industrial Arts 498 and 499.

Industrial Arts Major

For the Single Subject Teaching Credential
With the A.B. Degree in Applied Arts and Sciences
(Major Code: 08393)

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 121 and 200 to be taken at the beginning of the major; four courses selected from Industrial Arts 115, 131, 140, 151, 161, 171, and 181. (18 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

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, 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 24 units in industrial arts to include Industrial Arts 121, 200; 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, electronics, power technology, graphic arts, and photography.
Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Certificate

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 240 hours of clinical training in a veterans hospital. Consult an adviser in the Department of Industrial Studies for more detailed information.

Courses

LOWER DIVISION COURSES

115. Industrial Plastics (3) I, II
Six hours of laboratory.
Production methods, mechanical and physical properties, composition of plastics. The basic processes: molding, casting, thermoforming, reinforcing and foaming.

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.
Photographic optics and chemistry; nature of light and image formation; photographic emulsions, exposure and development; composition and lighting. Provides fundamentals for advanced courses in technical, commercial, creative and other areas of photography. Not open to students with credit in 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.
Prerequisite: Mathematics 140 or two years of high school algebra.
Planning, designing, constructing, and experimenting to develop skills and acquire knowledge in the electronics field. Basic principles, their application to modern electronic equipment, and correct use of test equipment.

171. Power Mechanics (3) I, II
Six hours of laboratory.
Introduction to various forms of power transmission. Emphasis on small internal combustion engines, alternative fuel, consumer product research, and automotive preventive maintenance.

181. Introduction to Graphic Arts (3) I, II
Six hours of laboratory.
Theory and practice in planning, designing, and processing various graphics production processes and materials.

200. Introduction to Contemporary Industry and Technology (3) I, II
Development of modern industry and technology with emphasis on historical and recent industrial changes, and the problems resulting from our technological society. (Formerly numbered Industrial Arts 100.)

UPPER DIVISION COURSES (Intended for Undergraduates)

315. Plastics Product Design and Development (3) I
Six hours of laboratory.
Prerequisite: Industrial Arts 115.
Production systems for plastics manufacturing based on Sproperties of thermoplastics, thermosetting plastics, and composite materials; use of models, master models and prototypes in product design and development.

320. Computer Assisted Drafting (3) I, II
Six hours of laboratory.
Prerequisite: Industrial Arts 121 or Mechanical Engineering 190.
Capabilities of CAD software for the personal computer. Micro- and macroframe units compared. Emphasis on software systems such as VERSA CAD, AUTO CAD, CAD-PACK.

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) 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. Photographic Sensitometry (3) II
Six hours of laboratory.
Prerequisite: Industrial Arts 140.
Technical aspects of photography; sensitometry, the densitometer, advanced exposure and development theory, the zone system, specialized development and printing techniques, application of quality control in the photographic process.

351. Machine Woodworking (3) I
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 or Physics 196.
Solid state circuits through design and experimentation. Application of solid state principles for use in control, communication, and computing circuits.

371. Power Systems (3) I
Six hours of laboratory.
Prerequisite: Industrial Arts 171.
Sources of power, power transmission and utilization. Emphasis on internal combustion engine design to include theory of operation, system design, and mathematical principles.

381. Intermediate Graphic Arts (3) I
Six hours of laboratory.
Prerequisite: Industrial Arts 181.
Activities in the various graphic arts with emphasis on new technology in the industry.

416. Thermoplastics (3) II
Six hours of laboratory.
Prerequisites: Industrial Arts 115 and Chemistry 100 or higher.
Composition and selection of materials; evaluation of physical and mechanical properties of various thermoplastics; special techniques for processing and production of thermoplastics.

422. Architectural Drafting (3) I
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) 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) II
Six hours of laboratory.
Prerequisite: Industrial Arts 341.
Research in technical and practical areas of photographic materials and processing as they relate to commercial, creative, and other areas of photography.

444. Color Photography (3) I
Six hours of laboratory.
Prerequisite: Industrial Arts 341.
Theory and practical applications of color photographic materials and processes. Techniques of exposure, composition, and lighting of illustrative industrial and commercial subjects.

452. Wood Manufacturing Applications (3) 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) II
Six hours of laboratory.
Prerequisite: Industrial Arts 361.
Production skills with application to industrial electronics. Techniques in use of test equipment for analysis of electronic products.

464. Basic Digital Computers (3) I
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) II
Six hours of laboratory.
Prerequisite: Industrial Arts 371.
Theory and application of various types of diagnostic testing equipment, emphasis on computer controlled engines, and power system analysis.

482. Advanced Graphic Arts (3) II
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) 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)

517. Thermoset Plastics (3) II
Six hours of laboratory.
Prerequisites: Industrial Arts 115 and Chemistry 100 or higher.
Composition and selection of materials; evaluation of physical and mechanical properties of various thermoset plastics, special techniques for processing and production of thermoset plastics.

523. Industrial Arts Drawing (3) II
Six hours of laboratory.
Prerequisite: Industrial Arts 320.
Practice in and analysis of modern industrial drafting techniques and theories.

533. Applied Metal Forming Operations (3) I
Six hours of laboratory.
Prerequisite: Industrial Arts 131.
Theory of conventional and high energy industrial forming processes augmented with laboratory forming experiences.

542. Commercial/Industrial Photography (3) I
Six hours of laboratory.
Prerequisites: Industrial Arts 140 and upper division standing.
Theory and laboratory techniques, composition and lighting with emphasis on large format photography. Industrial applications, architecture, illustrative, advertising, portraiture, and commercial photography.

553. Residential Building Construction (3) II
Six hours of laboratory.
Prerequisite: Industrial Arts 351.
Residential building construction principles encompassing the study of state and national building codes, foundation systems, framing techniques, and waterproofing applications. Estimating labor and material costs.

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 Technology (3) II
Six hours of laboratory.
Prerequisite: Credit or concurrent registration in Industrial Arts 371.
Power systems and technological innovations in education and power related industries. Emphasis on product development, testing, and reporting.

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 of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

Refer to the Graduate Bulletin.

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), Gerontology, Humanities (European Studies), Judaic 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.

Russian and East European Studies Major

With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 03071)

About the Major. The goals of the Russian and East European Studies major are to promote the study of the Soviet Union and Eastern Europe within an integrated framework, and to build better understanding of the societies and cultures of this part of the world through the exchange of students, faculty and publications.

Recent revolutionary advances in transportation and communications produced by science and technology are effectively "shrinking" the world. At the present time the United States and the Soviet Union are in the process of expanding their commercial and cultural ties, opening unprecedented opportunities in government service, journalism, library work, and international business.

For those who continue graduate work after completing the bachelor's degree, Russian and East European studies is a good preparatory curriculum for graduate professional programs in international trade, international law, librarianship, education, public administration, and journalism.

Dr. Leland A. Fetzer, 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 coursework for preparation for the major.

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 30 upper division units to include nine units from at least two departments in the humanities selected from Comparative Literature 513, 514, History 518A-518B, Humanities 330, 331; nine units from at least two departments in the social sciences selected from Economics 330, Geography 337, 499, Political Science 358, 359; six units in Russian selected from 301, 302, 305A-305B, 555, 561, 563, 580, 581; and six units of electives selected with the approval of the adviser.

African Studies Minor

Dr. Charles H. Cutter, Political Science 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. A minimum of six upper division units must be completed at San Diego State University.

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 361, 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. A minimum of six upper division units must be completed at San Diego State University.

Courses in the major department or required for the major may not be used to satisfy requirements for the minor.

Environment and Society Minor

Dr. Philip R. Pryde, Geography Department, 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. A minimum of six upper division units must be completed at San Diego State University.

Middle East Studies Minor

Dr. Charles H. Cutter, Political Science 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*, Political Science 363.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

* Additional prerequisites are required for these courses.

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 completed at San Diego State University.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable.

Foreign Language Requirement for the 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.

High School Equivalents

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high school courses will not count as college credit toward graduation.

Secondary school language courses can be used as follows:

1. The first *two years* of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.
2. The first *three years* of high school level language count as the equivalent of the first two college semesters, although students with fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not receive credit for the first semester college course unless at least five years separate the last high school course and the first college course.
3. *Four years* of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

Courses

LOWER DIVISION COURSES

Native speakers of 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.

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.

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

Offered by the Department of Classical and Oriental Languages and Literatures

Minor in Japanese.

Japanese Minor

The minor in Japanese consists of a minimum of 18 units, 15 of which must be in Japanese language, six in upper division. The three additional units must be selected from Japanese 496; Anthropology 452; Art 263 or 308; History 569, 570; Linguistics 420; Religious Studies 403 or 508.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Foreign Language Requirement for the 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 201 or the equivalent level of achievement. The usual sequence of coursework is Japanese 101, 102, and 201. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

High School Equivalents

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high school courses will not count as college credit toward graduation.

Secondary school language courses can be used as follows:

1. The first *two years* of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.
2. The first *three years* of high school level language count as the equivalent of the first two college semesters, although students with fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not receive credit for the first semester college course unless at least five years separate the last high school course and the first college course.
3. *Four years* of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

Courses

LOWER DIVISION COURSES

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, 102, 201, 202 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 kyoiku 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; all kyoiku 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: Holowach, Sorensen, Whitney, Wimer
Chair: Buckalew
Professors: Broom, Brown, Buckalew, Hartung, Odendahl
Associate Professors: Dozier, Sneed, Wulfemeyer
Assistant Professors: Mandel, Mueller, Severn, Spevak
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.

The Major

Journalism education emphasizes the training of writers, reporters, and editors for mass media. It also seeks to prepare and guide students interested in pursuing careers in a wide range of informational, interpretative, and promotional mass communication fields.

The courses offered by the Department of Journalism are designed to give students a working knowledge of the skills, concepts, and values needed to succeed as competent professional communicators. They focus on the basic elements of factual and persuasive writing, editing, communications law and theory, history, and responsibility of mass communication.

Career opportunities for journalism graduates are diverse and in competitive fields, including advertising, book editing and publishing, freelance writing, industrial journalism, magazines, mass communication research, news agencies, newspapers, public relations, radio, television, and teaching.

Journalism Major

With the A.B. Degree in Liberal Arts and Sciences (Major Code: 06021)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

Journalism majors must complete 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 minimum of 94 units of coursework applicable to the bachelor's degree must be completed outside the areas of journalism, film, broadcasting, television, photography, and mass communication.

A minor is required; however, to preserve an appropriate balance between journalism/mass communication courses and courses in liberal arts and sciences, journalism majors may not minor in telecommunications and film. Journalism students planning to minor in any College of Business Administration discipline should contact the department office for pre-minor requirements.

Students are required to achieve a passing score on the Department of Journalism grammar, spelling, and punctuation test before enrolling in most journalism courses.

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 With the A.B. Degree in Liberal Arts and Sciences (Major Code: 06021)

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. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

200. Introduction to Mass Communication (3)
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 test.
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 with minimum grade of C; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.
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. Satisfies the University Upper Division Writing requirement for students who have completed 60 units, fulfilled the Writing Competency requirement, and completed the General Education requirement in Written Communication.

320. Public Affairs News Reporting (3)
One lecture and four hours of activity.
Prerequisites: Journalism 310 with minimum grade of C; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.
Field and laboratory practice in news gathering and writing, covering news beats including courts; local governments and other news sources. Emphasis on accuracy, clarity, comprehensiveness and interpretation.

326. News Editing (3)
One lecture and four hours of activity.
Prerequisites: Journalism 310 with minimum grade of C; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.
Copy editing, headline writing, photo cropping and sizing, page layout and editorial judgment. Practice with wire and other copy. Attention to electronic editing.

350. News and Feature Photography (3)
One lecture and four hours of activity.
Prerequisites: Journalism 220 with minimum grade of C; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.
Principles and practice of photojournalism, including fundamentals of camera operation, composition, developing and printing of black and white photographs for publication. News values in photography. Not open for credit to students with credit in Industrial Arts 140.

408. Mass Communication and Society (3)
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.

425. Editorial and Critical Writing (3)
Prerequisites: Journalism 320; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.
Principles and practices in editorial and critical writing. Editorials, columns and commentary. Analysis and interpretation.

441. Magazine Article Writing (3)
Prerequisites: Journalism 220 with minimum grade of C; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.
Planning, gathering material, writing and marketing articles for specialized and general publications. Production of expository articles and marketing of at least one.

443. Magazine Editing and Production (3)
Two lectures and three hours of activity.
Prerequisites: Journalism 310 with minimum grade of C; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.
Editing and mechanics in the production of magazines. Selection and preparation of editorial materials. Graphics and photo selection, cropping, captioning. Graphic production processes. Layout, preparation of dummies for magazines, booklets, brochures.

450. Advanced News and Feature Photography (3)
One lecture and four hours of activity.
Prerequisites: Journalism 310 and 350; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.
Role of photography in mass communication. Emphasis on photographic essay and innovation in photojournalism. Field and laboratory practice in telling stories with photographs. Information gathering for captions; accuracy, completeness.

451. Photojournalism (3)
One lecture and four hours of activity.
Prerequisites: Journalism 310 and 350; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.
Advanced techniques of photography and darkroom. Documentary journalism. Experimentation with photo derivation and color photography. Field and laboratory practice in covering news events with still cameras.

460. Principles of Advertising (3)
Prerequisite: Upper division standing.
Principles of advertising, including copywriting, layout, typography, production, social responsibility, consumer and market surveys, and advertising readership studies.

463. Advertising Copy, Layout and Design (3)
One lecture and four hours of activity.
Prerequisites: Journalism 310 with minimum grade of C and 460; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.
Preparation of copy, layout, planning and production. Graphics, typography, and visual literacy. Copy writing.

465. Advertising Research and Analysis (3)
Prerequisites: Journalism 310 with minimum grade of C and 460; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.
Evaluation and use of data collecting and measurement for advertising media. Cases, practices and problems. Quantitative and qualitative characteristics of advertising.

466. Advertising Campaigns (3)
Prerequisites: Journalism 463, and Journalism 465 or Telecommunications and Film 540; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.
Cases, practices and problems with advertising campaigns, including political campaigns. Decision making in copy themes, art work, media imagery. Advertising campaign targets. Evaluating results.

470. Radio-Television News Writing (3)
One lecture and four hours of activity.
Prerequisites: Journalism 220 with minimum grade of C or Telecommunications and Film 110; credit or concurrent registration in Journalism 310; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.
Application of radio and television newswriting principles and techniques. Emphasis on news scriptwriting using audio and video. (Not open to students with credit in Telecommunications and Film 310.)

474. Broadcast News Reporting and Editing (3)
One lecture and six hours of activity.
Prerequisites: Journalism 310 with minimum grade of C and 470 or Telecommunications and Film 310; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.
Advanced practices in radio and television newswriting and script editing. Field experience investigating, writing and reporting broadcast news and feature stories. Field and laboratory practice.

475. Radio and Television News Production (3)
One lecture and six hours of activity.
Prerequisites: Journalism 310 with minimum grade of C and 470 or Telecommunications and Film 310; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.
Radio and television news production principles and techniques. Audio recording and editing for radio news. Videography and editing for television news. Field and laboratory practice.

480. Principles of Public Relations (3)
Prerequisite: Upper division standing.
Principles, theories, methods and objectives in public relations. Survey of public relations problems and practices.

481. Public Relations Techniques and Media Usage (3)
One lecture and four hours of activity.
Prerequisites: Journalism 310 with minimum grade of C and 480; upper division standing; ability to type; and satisfactory score on departmental grammar, spelling, and punctuation test.
Practical applications of public relations techniques with emphasis on writing and media usage. News releases, publications and printed materials, audio-visual techniques, speeches and special events. Field and laboratory practice.

490. Internship in Journalism (1-3) Cr/NC
Prerequisites: Upper division standing; consent of instructor; satisfactory score on departmental grammar, spelling, and punctuation test; Advertising: Journalism 463; News-Editorial: 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)
Prerequisites: Upper division standing; consent of instructor; and satisfactory score on departmental grammar, spelling, and punctuation test.
Individual study or project, normally in a research area selected by the student. Maximum credit three units.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

500. Current Problems in Mass Communication (3)
Prerequisites: Journalism 220 or Telecommunications and Film 100 or Economics 100 or Political Science 101 or Sociology 101; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

Forces affecting American mass communication today: government restrictions, economics, pressure groups, censorship, mechanical developments, interrelationships of the media and society; professional ethics.

502. Law of Mass Communication (3)
Prerequisites: Journalism 220 or Political Science 102 or Telecommunications and Film 100; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

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; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

American journalism from colonial times to the present, with special attention to twentieth century trends and developments, including the emergent concept of social responsibility.

509. Research Methods in Mass Communication (3)
Prerequisites: Journalism 320 or 450 or 460 or 470 or 480; upper division standing.

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.

Prerequisites: Journalism 326; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

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.

Prerequisites: Journalism 320; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

Development of articles of substance and depth in specialized areas. Research, analysis and interpretation of complex issues in the news. Special problems of the sustained, reportorial effort. Field and laboratory practice.

530. Media Management (3)
Prerequisites: Senior standing and twelve upper division units in journalism.

Role of manager in journalism and journalism-related organizations. Interaction of news, entertainment, advertising, circulation, production, and promotion functions as related to economic demands.

585. Problems and Practices in Public Relations (3)
Prerequisites: Journalism 481; upper division standing; and satisfactory score on departmental grammar, spelling, and punctuation test.

Current public relations practices and problems in a wide variety of commercial, industrial, financial, governmental, cultural and social organizations.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Judaic Studies

In the College of Arts and Letters

Faculty
Faculty assigned to teach courses in Judaic studies are drawn from departments in the College of Arts and Letters.

Offered by Judaic Studies
Minor in Judaic Studies.

The Minor

The minor in Judaic studies provides a balanced interdisciplinary study of Jewish contributions to world culture and history. It serves the needs of students who plan to (1) specialize in disciplines in which an understanding of Jewish contributions is essential, or (2) follow careers in teaching, community service, foreign service, or the ministry. Students seeking a minor in Judaic studies may want to consider combining it with a major in Social Science with an emphasis on Africa and the Middle East. Many courses relevant to this major are available in anthropology, economics, geography, history, political science, and sociology.

Judaic Studies Minor

Dr. Ita G. Sheres, Department of English and Comparative Literature, is adviser for this minor.

The minor in Judaic studies consists of 18 to 22 units to include Humanities 130, 131, or Hebrew 101, 102, 296; and 12 units selected from Comparative Literature 405 (English 405), 526, 571 (Legend and Mysticism), 577 (Kafka); History 487 (Early Jewish History), 488 (Modern Jewish History); Judaic Studies 496; 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 Judaic 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. A minimum of six upper division units must be completed at San Diego State University.

* Additional prerequisites required for these courses.

Courses

LOWER DIVISION COURSE

296. Topics in Judaic Studies (1-3)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

UPPER DIVISION COURSE
(Intended for Undergraduates)

496. Topics in Judaic Studies (1-3)
Prerequisite: Upper division status.

Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

Latin American Studies

In the College of Arts and Letters

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.

Faculty

Chair and Undergraduate Adviser: Davies (History)

Committee: Ball (Anthropology), Barrera (Spanish), Case (Spanish), Castillo (Spanish), Christensen (Spanish), Clement (Economics), Colston (History), Cunniff (History), Esser (Art), Flemion, P. (History), Fredrich (Geography), Ganster (Institute for Regional Studies of the Californias), Gonzalez (Mexican American Studies), Griffin (Geography), Griswold del Castillo (Mexican American Studies), Hartung (Journalism), Head (Spanish), Hicks (English and Comparative Literature), Higgs (Spanish), Kelley (Social Work), Kennedy (Sociology), Lemus (Spanish), Loveman (Political Science), Padgett (Political Science), Phillips (History), Rodriguez (Mexican American Studies), Segade (Spanish), Silverman (Portuguese), Sonntag (Latin American Studies Bibliographer), Unterman (Management), Vanderwood (History), Villarino (Mexican American Studies), Watson, L. (Anthropology), Watson, M. (Women's Studies), Weeks (Sociology), Weeter (Spanish), Young (Spanish).

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.

The Major

The major in Latin American Studies is a multidisciplinary program designed to provide an effective understanding of the cultures and governments of Latin America, offering basic education and training for business or professional careers that require specialized knowledge of this exciting and diverse area of the world.

A major in Latin American studies provides a multitude of career opportunities. Employment possibilities exist not only in Latin America, but throughout the world. Graduates can apply their specialization to service in international organizations and government positions at the federal or state level. Numerous employment situations can be found in the private sector. Private agencies and corporations have significant interests in Latin America and are looking for area specialists. Those students who wish to continue in their studies will find opportunities in teaching at all levels. A major in Latin American studies opens many avenues in the choice of a career.

High school students preparing to enter this program should include in the high school course of study not less than three years of study in one foreign language, preferably Spanish or Portuguese. Proficiency in either of these languages is indispensable to a successful career in this area of study.

Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; 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
(Major Code: 03081)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

Preparation for the Major. Portuguese 101, 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. Portuguese 101 and 301 or Spanish 101, 102 and 201.

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 36 upper division units selected from courses in anthropology, art, economics, geography, history, Latin American studies, Mexican American studies, political science, Portuguese, sociology, Spanish and Women's Studies, with not less than 12 units in one field and nine in each of two other fields. At least 33 units must be in courses having Latin American content. The student will file with the Evaluations Office a master plan approved by the adviser for the Latin American studies curriculum.

Courses acceptable for the Latin American studies major include Latin American Studies 498, 560, 580; Anthropology 442*, 470, 476, 529*; Art 561, 562; Comparative Literature 445; Economics 336, 365, 464, 483, 562, 565, 592*; Geography 323, 324, 498A*, 498B* (when relevant); History 415A-415B, 538A, 551A-551B, 552, 553, 554, 555, 556, 557, 558, 559; Mexican American Studies 306, 310, 335, 350A, 355, 375, 376, 450, 498; Political Science 382, 566, 567, 568, 577; Portuguese 535; Sociology 450*, 556*; Spanish 306A-306B, 441, 442, 515A-515B, 520, 522, 524, 570, 571, 572; Telecommunications and Film 363 (when relevant), 562*; Women's Studies 310 (when relevant), 480* (when relevant).

Courses numbered 496, 499, and 596 of relevant content in the above departments may be used for the Latin American Studies major.

* Indicates course with prerequisites not included in requirements listed above.

Latin American Studies Major

(Imperial Valley Campus)
With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 03081)

At the Imperial Valley campus the major in Latin American studies is essentially the same as the Latin American studies major offered at the San Diego campus.

It is designed to provide (1) a foundation of understanding of the history, culture and governments of the countries of Latin America and the multiple interrelationships among those countries; and (2) a basic education and training for a business or professional career involving understanding of Latin America.

Preparation for the Major. The lower division preparation for the major can be fulfilled by taking the following courses at Imperial Valley College, or their equivalent: Elementary Spanish; Intermediate Spanish or Bilingual Spanish; Intermediate Conversational Spanish or Bilingual Oral Spanish; Advanced Conversational Spanish; and 12 units selected from Physical Anthropology, Physical Geography, History of the Americas, Introduction to Political Science, Comparative Politics, and Civilization of Spanish America and Brazil.

A minimum grade point average of 2.0 is required for all work attempted.

Foreign Language Requirement. The foreign language requirement for graduation is automatically fulfilled through coursework for preparation for the major.

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 36 upper division units selected from the courses listed below with not less than 12 units in one field and nine in two other fields. At least 33 units must be in courses having Latin American content: Latin American Studies 344; Anthropology 442; Art 496 (when relevant), 561, 562; Economics 365, 464, 496 (when relevant); Geography 323, 324, 496 (when relevant); History 415A-415B, 496 (when relevant), 538A-538B, 551A-551B, 552, 557, 558; Mexican American Studies 335, 350A, 376; Political Science 566, 567, 568; Sociology 350, 450, 566 (when relevant); Spanish 306A-306B, 515A-515B, 570, 571, 572; Women's Studies 310 (when relevant).

Latin American Studies Minor*

The minor in Latin American studies consists of a minimum of 15 units of Latin American content courses. At least 12 of these units must consist of upper division courses. In addition, students must complete Spanish 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:

Latin American Studies 101, 498, 560, 580; Anthropology 442 (when relevant), 470, 476, 529; Art 561, 562; Comparative Literature 445; Economics 464, 562, 565, 592; Finance 329 (when relevant); Geography 323, 324; History 115A-115B, 415A-415B, 538A, 551A-551B, 552, 553, 554, 555, 556, 557, 558; Marketing 376 (when relevant); Mexican American Studies 306, 310, 350A, 355, 375, 376, 450, 498; Music 596; Political Science 382, 566, 567, 568, 577; Portuguese 535; Public Administration 580 (when relevant); Sociology 556 (when relevant); Spanish 306A-306B, 441, 442, 515A-515B, 520, 522, 524, 570, 571, 572; Telecommunications and Film 363 (when relevant), 562; Women's Studies 310 (when relevant). 480 (when relevant).

Courses numbered 496, 499, and 596 of relevant content in the above departments may be used for the Latin American Studies minor.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University. In designing their Latin American studies programs for a minor, students may not include courses drawn from their major department.

* Additional prerequisites may be required for courses in the minor.

Courses

LOWER DIVISION COURSE

101. Latin American Heritage (3)
Introduction to Latin American cultures and peoples from an interdisciplinary perspective.

UPPER DIVISION COURSES (Intended for Undergraduates)

344. Cooperative Studies at the Universidad Autónoma de Baja California (3-9) (Offered at IVC only)
Prerequisites: Spanish 301; declared major in Latin American Studies.

Latin American Studies majors will attend classes with a Latin American focus at the Universidad Autónoma de Baja California; SDSU/IVC faculty will cooperate in supervision and evaluation of students. May be repeated with new content. Maximum credit nine units.

496. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

498. Seminar on Latin America (3)
Exploration of the interdisciplinary approach to Latin America including evaluation of relevant resources and methods. Taught by a team of instructors representing two or more disciplines.

499. Special Study (1-3)
Prerequisite: Consent of instructor.
Individual study. Maximum credit six units.

UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

560. Latin America After World War II (3) II
Prerequisites: Latin American Studies 101; History 115A, 115B; and either Political Science 566 or consent of instructor.

Major socioeconomic and political changes in Latin America since World War II and inter-American relations during the same period. Includes guest lecturers.

580. Special Topics (1-4)
Prerequisite: Six upper division units in Latin American content courses.

Interdisciplinary study of selected Latin American topics. Credit will vary depending on the scope and nature of the topic. Whenever appropriate, the course will be taught by a team of instructors representing two or more disciplines. May be repeated with different content. See Class Schedule for specific content. Maximum credit eight units.

Liberal Studies

For further information regarding Liberal Studies, consult the Office of the Division of Undergraduate Studies.

The Major

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.

Liberal Studies Option 1 is a student-designed major incorporating coursework from three different departments. It is appropriate for students whose postgraduate goals are not well addressed by a traditional major or major/minor combination.

Students design and justify their own master plans to suit their individual career goals. Approval of the plans must be secured from each of the involved departmental advisers and from the Dean of Undergraduate Studies ***prior to completion of 90 semester units.*** Information regarding participating departments and procedures for application is available from the Division of Undergraduate Studies.

Some common master plans include International Commerce, with coursework in business, foreign language, and area studies; and Performing Arts, with coursework in music, dance, and drama.

Liberal Studies Option 2 provides a broad and vigorous liberal education with coursework equally distributed between English language, literature and communication; mathematics and sciences; social science; and humanities and fine arts.

Some students choose this major because their educational goal is a liberal education or they seek breadth before a specialized postgraduate degree. Most students who select this major, however, are seeking a Multiple Subject Credential. Liberal Studies Option 2 meets all the requirements for the multiple subject/diversified major as specified in the Ryan Act and is an approved major for the Multiple Subject Credential leading to a career in teaching at the elementary level. Individuals seeking this credential who complete this major are exempt from the National Teachers Examination. Additional requirements for admission to the credential program are listed in this catalog under Teacher Education.

Advising for the major is available at the University Advising Center (CL-107). A booklet giving a more detailed description of the major is available at the campus bookstore.

Liberal Studies Option 3 is a variation of Option 2 which offers students the opportunity to study in a broad spectrum of academic fields while also learning a foreign language. Graduates of this program may choose to use their bilingual skills and liberal arts education in seeking employment with international corporations or government agencies which require such skills or to enter the field of elementary school teaching.

Liberal Studies Option 3 meets all the requirements for the multiple subject/ diversified major as specified in the Ryan Act. Students selecting the Liberal Studies Option 3 major may enter either the Multiple Subject or the Multiple Subject with Bilingual Emphasis credential program. The bilingual emphasis authorizes teaching in either a regular or bilingual classroom.

Students should select those courses which will improve oral and written Spanish usage ability, English language proficiency, and cultural awareness and sensitivity; and are advised to take courses taught in Spanish – for example, history, mathematics, or science.

Advising for this major is available at the University Advising Center (CL-107). A descriptive booklet describing the major more fully is available at the campus bookstore.

Liberal Studies Major

OPTION 1. Liberal Studies in Three Departments with the A.B. Degree in Liberal Arts and Sciences. (Major Code: 49011U)

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. A minimum of two courses (normally defined as six units) in each of the three departments selected in the major must be completed in the lower division as foundation for upper division courses. In departments where lower division offerings are insufficient to meet this requirement, the total minimum upper division requirement may be extended.

Foreign Language Requirement. Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 36 upper division units selected from three departments: (a) with no fewer than nine units from each of the three departments; and (b) with no fewer than six units from each of the three departments completed at San Diego State University; and (c) with minimum overall and San Diego State University grade point averages of 2.0 in each of the three departments.

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. (Major Code: 49012U)

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.

Preparation for the Major. Fifty-two units distributed as follows. (Courses listed under numbers 1, 2, 3, and 5 or 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 Comparative Literature 270A, 270B; English 220.

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; 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, 118, 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.
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 (for entrance into Teacher Education).

1. Health Science 101 or 320.
2. Physical Education 241.
3. Teacher Education 290.

Pattern Requirement. One three-unit course in the major or preparation for the major must be selected from History 422 or Sociology 455, or 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 upper division units distributed as follows (no more than six units each in Afro-American, American Indian, Mexican American, or Women's Studies):

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; Comparative Literature 470; English 301, 302, 405, 494, 501; 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), 524, 550, 552, 553; Mexican American Studies 464; Speech Communication 475.

Group B: Mathematics and Science (7-10 units)

Required – Mathematics 309 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/politics 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 politics from the following courses:

History: Afro-American Studies 471A, 471B, American Indian Studies 440, History 407A, 407B, 422, 442A, 442B, 540, 545A, 545B, 546A, 546B, 548A, 548B, Mexican American Studies 350A, 350B;

Politics: American Indian Studies 400, Mexican American Studies 301, Political Science 334, 335, 346, 348, 356, 375, Women's Studies 375.

Students may also select three units of history and three units of politics (not complete sequences) from among the American Institutions courses listed above. Students with credit in History 110A may not take 310A or 410A; with credit in 110B, may not take 310B or 410B; with credit in Political Science 102, may not take 320.

Required – Psychology 330 or 380.

Required – Three units in culture, society, or geography selected from the following: Afro-American Studies 331, 445; American Indian Studies 320; Anthropology 350, 432, 444; Geography 312, 321, 350, 357, 370, 371; Mexican American Studies 320, 370, 480, 481; Sociology 320, 355, 410, 421, 430, 444, 450, 455, 459, 522, 539; Women's Studies 310, 320.

Electives: – Zero to three units selected from required courses listed above or from the following: Afro-American Studies 330, 332, 363, 380, 448, 452, 470; American Indian Studies 303, 420, 533; Economics 330, 336, 338, 489; Education 350; General Studies 310; History 415A, 415B, 420, 421; Linguistics 551; Mexican American Studies 355; Psychology 340; Women's Studies 325, 340, 370, 390.

Group D: Humanities and Fine Arts (6-9 units)

Required – Three units in art, drama, or music selected from the following: Afro-American Studies 480; Art 387 (recommended), 558, 560, 562, 569, 576; Drama 310, 315, 329A, 329B (all four recommended), 460A, 460B; Mexican American Studies 310; Music 343 (recommended), 344, 351A, 351B, 351C, 351D, 351E, 351F.

Required – Three units selected from art, drama, or music courses listed above or from the following: American Indian Studies 430, 470; Classics 310, 340; History 305A-305B; Humanities 401A, 401B, 402A, 402B; Mexican American Studies 376, 380; Philosophy 310, 329, 334, 336, 351, 401; 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.
(Major Code: 49014)

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.

Spanish Language Requirement. Students need to have or be gaining proficiency in Spanish equivalent to four years of high school or Spanish 101, 102, 201 to follow this curriculum.

Maximum Units in One Department. Twenty-four 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 5 or 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 Comparative Literature 270A, 270B; English 220.

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; 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; 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.
3. Policy Studies in Language and Cross-Cultural Education 451.

Upper Division Writing Requirement. English 306W (very strongly recommended) or English 500W with a grade of C (2.0) or better.

Major. Thirty-seven upper division 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 309 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 330 or 380.
Required – Three units selected from the following: Afro-American Studies 330, 331, 363, 471B; American Indian Studies 320, 420, 533; Anthropology 410, 432; History 310A, 310B, 410A, 410B, 415A, 415B, 551A, 551B, 557; Linguistics 551; Mexican American Studies 480, 481; Political Science 305, 320, 321, 335; Psychology 330, 351, 380; Social.Work 350; Sociology 355, 522; 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, 315, 329A, 329B; Foreign Language (any upper division class); Mexican American Studies 310, 324, 376, 380; Music 343, 344, 351A, 351B, 351C, 351D, 351E, 351F; Women's Studies 356.

Linguistics

In the College of Arts and Letters

Faculty

Emeritus: Elgin, Tidwell
Chair: Donahue
Professors: Bar-Lev, Donahue, Frey, Johns, Underhill
Associate Professors: Kaplan, Seright, Webb
Assistant Professor: Choi

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).

The Major

Linguistics is the scientific study of language. The structure of a wide variety of languages is looked at, not to learn these languages, but to learn about them in order to understand the universal properties of human language.

The linguistics program offers coursework in all areas of linguistic analysis. It specializes in applied linguistics, which is the application of linguistic theory to areas such as teaching English as a second language, foreign language teaching, or bilingual education.

Linguistics majors must complete a minor in another field approved by the adviser in linguistics. Recommended fields include anthropology, communicative disorders, ethnic studies, a foreign language, history, journalism, literature, philosophy, psychology, public administration and urban studies, sociology, and speech communication.

In addition to the major and minor programs, the Department of Linguistics offers a Certificate in Applied Linguistics and English as a Second Language (ESL). This certificate prepares students to teach English as a second language in adult and private schools and to teach English in foreign countries.

Employment opportunities for linguistics majors exist in the teaching of English as a second language to immigrant and refugee population groups in various locales throughout the southwestern United States. In addition, many students are interested in teaching English in Latin America, the Far East, or other areas outside the United States and continental Europe. Linguistics training can also be used as a valuable skill in conjunction with a California teaching credential in another field. Government work is another alternative, where such divisions as the state department and the foreign service hire trained linguists. Researchers are needed at institutes working in the field of animal communication, computer science development, disorders of communication, or advanced research in linguistics theory. By combining a linguistics major with courses in accounting, business administration, or related fields, there are jobs available with multinational corporations, particularly those which emphasize trade among the Pacific rim nations. Linguists are also hired in such fields as computer science, advertising, communication media, public relations, and curriculum development.

With a master's or doctoral degree, linguistics majors may find teaching positions at community colleges or universities.

Advising

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

Linguistics Major

With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 15051)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

Students majoring in linguistics must complete a minor in another field approved by the departmental adviser in linguistics. Recommended fields include anthropology, communicative disorders, ethnic studies, a foreign language, history, journalism, literature, philosophy, psychology, public administration and urban studies, sociology, and speech communication.

Preparation for the Major. Linguistics 101. (3 units.)

Students should note that a number of the upper division required and recommended courses listed below have lower division prerequisites, but these prerequisites do not constitute requirements per se for the completion of the major.

Foreign Language Requirement. Competency equivalent to that which is normally attained through three college semesters of a foreign language with a B (3.0) average, or the equivalent. Refer to section of catalog on "Graduation Requirements."

Upper Division Writing Requirement. Passing the University Writing Examination or Linguistics 396W, English 305W or 500W with a grade of C (2.0) or better.

Major. A minimum of 24 upper division units is required; at least 18 of these must be in Linguistics (and those 18 must include Linguistics 420 or 520 and 521 and 522); with the approval of the adviser, up to six units may be selected from related fields.

Linguistics Major

For the Single Subject Teaching Credential in English With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 15051)

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; 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, 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. A minimum of six upper division units must be completed at San Diego State University.

Applied Linguistics and English as a Second Language (ESL) Certificate

The Department of Linguistics offers a basic and an advanced Certificate in Applied Linguistics and English as a Second Language (ESL). The basic certificate requires 12 units to include Linguistics 420 or 520, 452 or 552, 524 or 551, and 550. Under certain circumstances comparable courses taken at other institutions may count toward the certificate. Such courses must be evaluated and approved by the Certificate adviser. In addition, there is a 15-hour tutoring practicum requirement. In order to enroll, you must contact the certificate adviser in the Department of Linguistics. Courses in the certificate may be counted toward the major in linguistics but may not be counted toward the minor.

Refer to the Graduate Bulletin for information on the advanced certificate.

Courses

LOWER DIVISION COURSES

General

101. Introduction to Language (3) I, II
The nature of language. Sound, meaning, and grammar. Language history and change. Dialects and variation. Language acquisition. Animal communication. Language and the brain. Not open to students with credit in upper division linguistics courses.

250. Directed Language Study (3) I, II
Prerequisite: Consent of instructor.
Directed independent study of a foreign language not offered within the course structure at San Diego State University with the aim of acquiring a basic competency in reading, writing, and grammar. No instruction in speaking or understanding the spoken language is included in this course.

296. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

English Composition for International Students

100. English Composition for International Students (3)
Prerequisites: Satisfaction of the English Placement Test and Writing Competency requirements. (See Graduation Requirements section of catalog.) Proof of completion of prerequisites required.
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: Satisfaction of the English Placement Test and Writing Competency requirements; and Linguistics 100. Proof of completion of 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.

354. Language and Computers (3)
Computers, computer programming languages, and "Artificial Intelligence" viewed from perspective of human language. Not open to students with credit in Linguistics 554.

396W. Writing Proficiency (1)
Prerequisite: Consent of instructor. Limited to linguistics majors.
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. Linguistics and English (3) I, II
Introduction to sound and grammatical structure of language, with special attention to English. Language acquisition and variation. Of special interest to prospective teachers. Not open to students with credit in Linguistics 520.

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
Prerequisite: Credit or concurrent registration in Linguistics 101, 420, or 520.
Principles of child language development. Sounds and grammar in speech of young children. Acquisition of reading and vocabulary. Relationship between cognitive development and language. Development of language in bilinguals. Second language acquisition.

496. Experimental Topics in Linguistics (1-4) I, II
Specialized study of a selected topic in linguistics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

499. Special Study (1-3) I, II
Prerequisite: Consent of instructor.
Individual study. Maximum credit six units.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

520. Fundamentals of Linguistics (3) I, II, S
Prerequisite: Upper division standing.
Principles of modern linguistics, with attention to English grammar (syntax, morphology, phonology). Language change, dialects, sociolinguistics, psycholinguistics, language acquisition.

521. Phonology (3) I, II
Prerequisite: Linguistics 420 or 520.
Introduction to the theoretical principles of transformational-generative phonology.

522. Syntax (3) I, II
Prerequisite: Linguistics 420 or 520.
Introduction to the theoretical principles of transformational-generative syntax.

523. Phonemics and Morphemics (3)
The study of procedures for arriving at the phonetic inventory of languages and the structuring of sound units (both linear and intonational) into phonemic systems; the study of morphemic hierarchies and their arrangements in forming words.

524. American Dialectology (3) I, II
Prerequisite: Upper division standing.
Development of American English. Regional, social, and ethnic differences in pronunciation, grammar, and vocabulary. Differences in men's and women's language. Black English.

525. Semantics and Pragmatics (3)
Prerequisite: Linguistics 420 or 520.
Advanced semantic theory; systematic analysis of the interaction of sequences of language with real world context in which they are used.

530. English Grammar (3) I
Prerequisite: Six upper division units in linguistics.
English morphology, syntax, and discourse structure, including simple and complex sentence structure; lexical categories and subcategories; discourse functions of selected constructions. Problems and solutions in teaching English grammar.

550. Theory and Practice of English as a Second Language (3) I, II
Prerequisite: Linguistics 420 or 450 or 520.
The nature of language learning; evaluation of techniques and materials for the teaching of English as a second language.

551. Sociolinguistics (3) I, II
Prerequisite: A course in introductory linguistics.
Investigation of the correlation of social structure and linguistic behavior.

552. Psycholinguistics (3) I, II
Prerequisite: A course in introductory linguistics.
Psychological aspects of linguistic behavior.

553. Bilingualism (3)
Prerequisite: Linguistics 420 or 520 or Communicative Disorders 531.
Bilingual societies; language choice by bilinguals; bilingual language acquisition; effects of bilingualism on language structure and use.

554. Linguistics and Computers (3) I, II
Prerequisites: Linguistics 420 or 520, and experience in any programming language.
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 (1-3)
Prerequisite: Upper division standing.
Advanced study of selected topics. See Class Schedule for specific content. May be repeated with new content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

Refer to the Graduate Bulletin.

Mathematics

In the College of Sciences

Faculty

Emeritus: Becker, Branstetter, Bryant, Eagle, Harris, Harvey, Marosz, Riggs, Shaw, Smith, Warren, Willerding

Chair: Carlson

Professors: Ananthanarayanan, Baase, Beck, Bell, Branca, Bray, Carlson, Davis, Deaton, Donald, Drobnies, Eisemann, Elwin, Fountain, Garrison, Geveci, Gindler, Grone, Hager, Ho, Holmes, Howard, Lesley, Lutz, Marovac, Moser, Park, Pierce, Reynolds, Romano, Ross, Salamon, Saltz, Short, Silver, Sowder, J., Sowder, L., Van de Wetering, Villone, Vuskovic

Associate Professors: Burdick, Carroll, Eckberg, Golbeck, Hintzman, Koehler, Lopez, Macky, Mahaffy, Marcus, Nower, Sung, Vinge, Whitman, Whitney

Assistant Professors: Castillo, Erdogan, Gursel, Kirschvink, Stewart

Lecturers: Meckstroth, Metzger, Root, Teegarden

Visiting Lecturer: Markovits

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.

Certificate in introductory mathematics.

Certificate in single subject mathematics.

The Majors

Mathematics is considered a discipline in its own right as well as the language of the sciences. Because of the broad scope, the Department of Mathematical Sciences offers a variety of degrees and emphases designed to provide several blends of mathematics and specialties to the student.

The study of mathematics prepares students to solve problems. In recent years, the line between pure and applied mathematics has become blurred, and the applications of mathematics have grown enormously.

Mathematics graduates are employed as teachers; systems analysts, who develop and implement business and other systems for management; customer service and field engineers, who install and maintain equipment in satisfactory operating condition; marketing and sales persons, specializing in business systems; and statisticians.

The principal areas of employment for mathematics graduates include accounting, advertising, education, agriculture and conservation, banking, communications, economics, finance, government, insurance, manufacturing, marketing merchandising, medical services, transportation, utilities, intelligence systems, mathematical programming, and operations research.

Computer Science Major

With the B.S. Degree in Applied Arts and Sciences
(Major Code: 07011)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required for this major.

Preparation for the Major. 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
(Major Code: 17011)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

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 371, 521A, 524, and 534A and one two-semester sequence chosen from the following: Mathematics 370 and 372; 521A-521B; 521A and 573; 531 and 537; 534A-534B; 534A and 535; 541A-541B; 551A and 551B, 550 and 553; and six to nine units of electives. The student must complete an outline for the major and file a copy signed by the adviser with the Evaluations Office.

Mathematics Major

With the B.S. Degree in Applied Arts and Sciences
(Major Code: 17031)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

The purpose of this major is to allow students with a strong interest in the mathematical aspects of a particular science to apply courses in that science to their major. This should provide a good background for employment or graduate work in applied mathematics or in that science.

Students must see the adviser and be accepted in the major prior to enrolling in Mathematics 370, 372, 573, 576, 578, 580, 581, 582, 583, 584, and certain sections of 596.

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 371, 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 six 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.

Emphasis in Applied Mathematics

(Major Code: 17031)

This emphasis is designed to train the student in those areas of mathematics which may be applied to formulate and solve problems in other disciplines. The program is designed to qualify the student for employment as an applied mathematician, but the graduate would be well prepared for graduate study in pure or applied mathematics.

Preparation for the Major. Mathematics 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 371, 524, 534A, 534B, 537, 541A, 350A or 551A; and 12 units selected from Mathematics 336, 362, 370, 372, 521A, 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.

Auxiliary Area. A minimum of 12 units from an area to which mathematics may be applied. A typical program might be Physics 195, 195L, 196, 196L, 197, 197L; or Chemistry 200, 201, and a course for which these are prerequisite; or Biology 200A and 200B and courses for which these are prerequisite; or Economics 101, 102, 307, 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

(Major Code: 17031)

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, 371, 372, 524, 534A; at least six units from Mathematics 336, 341A, 341B, 362, 521A, 531, 532, 533, 534B, 537, 561; at least six units from Mathematics 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.

Emphasis in Statistics

(Major Code: 17021)

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 350A, 371, 524, 534A, 551A, 551B, 554; at least six units from Mathematics 336, 341A, 341B, 521A, 531, 532, 533, 534B, 537; at least six units from Mathematics 350B, 550, 553; 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.

Mathematics Major

For the Single Subject Teaching Credential
With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 17011)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under 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, 371, 521A, 534A; an upper division course in geometry; and six units of electives in mathematics approved by the credential adviser. Student must complete outline for major and file a copy signed by adviser with Evaluations Office.

Single Subject Waiver Program in Mathematics

Students who do not wish to complete a major in mathematics but want to satisfy the requirements for the single subject waiver program in mathematics must complete the following requirements.

To be admitted to the program, students must demonstrate competency in high school mathematics (algebra through trigonometry) by passing a mathematics placement test.

Waiver Program. A minimum of 45-46 units to include Mathematics 107, 150, 151, 252, 253, 302, 314, 357, 510, 521A, 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. 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. A minimum of six upper division units must be completed at San Diego State University.

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 Mathematics 252 and nine upper division units in mathematics, at least six of which have as prerequisite Mathematics 151. The courses selected will be subject to the approval of the minor adviser.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Introductory Mathematics Certificate

The purpose of the Introductory Mathematics Certificate program is to provide individuals with appropriate mathematics coursework to qualify them to receive a supplementary authorization in introductory mathematics from the Commission on Teacher Credentialing. Admission is open to individuals who are majoring or have majored in an area other than mathematics and who have the equivalent of two years of high school mathematics and satisfy the Entry-Level Mathematics Examination. In order to enroll in the program, individuals should contact the supplementary mathematics credential adviser in the Department of Mathematical Sciences.

The program consists of 20 units to include Mathematics 140, 150, 302, 310A, 310B, 357.

Individuals must complete at least six units at San Diego State University and have a cumulative grade point average of 2.5 in the required courses to qualify for the certificate. Courses in the certificate may not be counted toward the minor.

Single Subject Mathematics Certificate

The purpose of the Single Subject Mathematics Certificate program is to provide individuals with appropriate mathematics coursework to qualify them to receive a credential in single subject mathematics. Admission is open to individuals who are majoring or have majored in an area other than mathematics and who have the equivalent of two years of high school mathematics and satisfy the Entry-Level Mathematics Examination. In order to enroll in the program, individuals should contact the single subject mathematics credential adviser in the Department of Mathematical Sciences.

The program consists of 46 units to include Mathematics 107, 150, 151, 252, 253, 302, 314, 357, 510, 521A, and 12 units of electives selected from mathematical or physical sciences.

Individuals must complete at least nine upper division units at San Diego State University and have a cumulative grade point average of 2.5 in the required courses to qualify for the certificate. Courses in the certificate may not be counted toward the minor.

Mathematics Departmental Placement Examination

All students who expect to enroll in Mathematics 104, 106, 107, 108, 118, 119, 120, 121, 140, 141, 150, 210A, 210B, and 250 must satisfy the Entry-Level Mathematics Examination requirement and pass the required part of the Mathematics Departmental Placement Examination. For Mathematics 141 and 150, certain prerequisite courses taken at San Diego State University may be used to satisfy the Mathematics Departmental Placement Examination requirement.

Courses

LOWER DIVISION COURSES

104. Trigonometry (2) I, II

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental 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 Departmental 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 Departmental 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 Departmental 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 qualification on the Mathematics Departmental Placement Examination, Part I. 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 Departmental Placement Examination, Part I. Proof of completion of prerequisites required.

Measures of central tendency/variability, frequency distributions. Probability; Bayes theorem; probability distributions including binomial, hypergeometric, normal sampling and distributions. Significance testing. Regression and correlation. Not open to students with credit in Mathematics 250. Students with credit or concurrent registration in another statistics course other than Mathematics 250 will be awarded a total of four units for the two (or more) courses.

120. Calculus for Business Analysis (3) I, II

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental Placement Examination, Part I. Proof of completion of prerequisites required.

Matrix algebra. Calculus including differentiation and integration. Graphing and optimization. Exponential and logarithmic functions. Multivariable calculus.

121. Calculus for the Life Sciences I (3) I, II

Prerequisite: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental 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 Departmental 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 Departmental 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 Departmental 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 Departmental 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 Departmental 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.

150. Single Variable Calculus (5) I, II

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and either qualification on the Mathematics Departmental 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 multiple subjects credential in elementary education.

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental Placement Examination, Part I. 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 multiple subjects credential in elementary education.

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental Placement Examination, Part I; and Mathematics 210A. Proof of completion of prerequisites required.

Measurement, Euclidean and transformation geometry, probability and statistics. Topics from logic, computer science, and problem solving. Involves use of computers.

250. Basic Statistical Methods (3) I, II

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental 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 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.

309. Algorithms in Elementary Mathematics (3)

Prerequisite: Mathematics 210B.

Programming in LOGO: graphics, recursion, list processing. Constructing algorithms to solve problems from number theory, geometry, set theory, and arithmetic. May not be used as part of the major or minor in the department of mathematical sciences.

310A-310B. Modern Elementary Mathematics (3-3)

Prerequisite: Mathematics 210B and qualification on Mathematics Departmental Placement Examination, Part I. 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 253.
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.

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 150.
Probability, measures of central tendency and dispersion, characteristics of frequency functions of discrete and continuous variates; applications. Highly recommended for all prospective secondary school teachers of mathematics (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 (3)
Prerequisite: Mathematics 122 or 151.
Logic, set theory, equivalence and order relations, Boolean algebra and lattices, minimization of Boolean expressions, graph theory.

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)

509. Computers in Teaching Mathematics (3)
Prerequisites: Mathematics 107, 252, and either 521A or 524.
Programming in an appropriate language. Designing software for teaching mathematical concepts. Creating object-oriented environments for learning mathematical concepts. Developing problem-based curricula.

510. Introduction to the Foundations of Geometry (3) II
Prerequisite: Mathematics 122 or 151.
The foundations of Euclidean and hyperbolic geometries. Highly recommended for all prospective teachers of high school geometry.

511. Projective Geometry (3) I
Prerequisites: Mathematics 122 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 151.
History of attempts to prove the fifth postulate; emphasis on plane synthetic hyperbolic geometry; brief treatment of other types of non-Euclidean geometry.

521A-521B. Abstract Algebra (3-3) I, II
Prerequisites: Mathematics 252 and 371. Mathematics 521A is prerequisite to 521B.
Abstract algebra to include an introduction to the theory of groups, theory of equations, and finite mathematics.

522. Number Theory (3)
Prerequisites: Mathematics 252 and 371.
Theory of numbers to include congruences, Diophantine equations, and a study of prime numbers.

523. Mathematical Logic (3)
Prerequisites: Mathematics 151 or Philosophy 120, and Mathematics 371.
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
Prerequisites: Mathematics 253 and 371.
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.

531. Partial Differential Equations (3)
Prerequisite: Mathematics 253.
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 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
Prerequisites: Mathematics 253 and 371.
Properties of 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 253 and either Mathematics 107 or Engineering 120.
Solution of equations of one variable, direct methods in numerical linear algebra, least squares approximation, interpolation and uniform approximation, quadrature.

541B. Numerical Analysis and Computation (3) II
Prerequisite: Mathematics 541A. Recommended: Mathematics 524.
Iterative methods for linear systems, eigenvalues and eigenvectors, nonlinear systems, initial value and boundary value problems for ordinary differential equations.

550. Probability (3)
Prerequisite: Credit or concurrent registration in Mathematics 252.
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 252.
Probability models in the theory of statistics, sampling distributions with applications in statistical inference.

551B. Mathematical Statistics (3) II
Prerequisite: Mathematics 551A.
Point and interval estimation and hypothesis testing in statistical models with applications to problems in various fields.

553. Stochastic Processes (3)
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.

556. Computer Mathematics and Symbolic Programming (3)
Prerequisites: Mathematics 107 and 253.
Use of mathematical and symbolic computer packages such as MACSYMA, SMP, MAPLE, REDUCE, and MUMATH to analyze problems in various branches of mathematics and computer science.

561. Applied Graph Theory (3)
Prerequisite: Mathematics 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 341A, 524, 537, 541A, Engineering 310.
Continuous and discrete Fourier transforms, sampling, digital filters, fast Fourier transform and convolution algorithms. Sample applications.

571. Queueing Theory (3) I, II
Prerequisite: Mathematics 550 or 551A.
Performance prediction of computer networks and other systems (e.g., inventory control, customer service lines) via queueing theory techniques. Operational analysis.

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. Run-time storage organization. Code generation and optimization.

576. Artificial Intelligence (3) II
Prerequisites: Mathematics 108 and either 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.

577. Artificial Intelligence Programming (3) I, II
Prerequisites: Mathematics 370 and 372.
Primary programming languages for AI (artificial intelligence), which are LISP and PROLOG. Applications to AI; programs assigned; implementation issues.

578. Algorithms and Their Analysis (3)
Prerequisites: Mathematics 370 and 371.
Algorithms for solving frequently occurring problems. Includes sorting, fast matrix multiplication, string matching, and graph problems. Analysis techniques. Introduction to NP-complete problems.

579. Combinatorics (3)
Prerequisite: Mathematics 122 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.
Design and implementation of systems software. Relationship between software design and machine architecture. Topics include assemblers, loaders and linkers, macro processors, compilers, and operating systems.

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.

585. Structure of Computing Systems (3)
Prerequisite: Mathematics 372.
Functional organization of computers, operating systems and their interaction.

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.

588. Distributed Systems (3)
Prerequisite: Mathematics 372.
Principles of distributed systems; mechanisms for interprocess communication; rules for distribution of computer software and data. (Formerly numbered Mathematics 682.)

596. Advanced Topics in Mathematics (1-4) I, II
Prerequisite: Consent of instructor.
Selected topics in classical and modern mathematical sciences. May be repeated with the approval of the instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Mexican American Studies

In the College of Arts and Letters

Faculty
Chair: Griswold del Castillo
Professor: Griswold del Castillo
Associate Professors: Gonzalez, Rodriguez, Villarino
Assistant Professor: Ortiz

Offered by the Department
Major in Mexican American studies with the A.B. degree in liberal arts and sciences.
Minor in Mexican American studies.
Certificate in United States-Mexico Border studies.

The Major

The Mexican American studies major emphasizes the unique cultural experience of the Mexican American. The program is open to all students who wish to study in an academic environment that recognizes the richness of the Mexican American past and present.

Mexican American studies majors may choose from one of two areas: ***Humanities,*** which includes courses designed to increase the student's awareness of the Chicano culture, as well as intellectual, aesthetic, literary, historical, ethical, and human values; and ***Social Science,*** including courses which analyze social institutions and how they affect the individual and also emphasize contemporary Mexican American issues as they relate to the larger society. Areas of study include political science, anthropology, economics, sociology, and history.

Bilingual/bicultural graduates are sought after more than ever before. A student with a major or minor in Mexican American studies has a good possibility of securing a position and advancing. Although employment opportunities in regular classroom teaching and other careers have remained fairly constant, the number of positions for bilingual/bicultural graduates has continued to increase.

Mexican American studies is also an excellent major as preparation for postgraduate study in various professional schools. For example, students can continue their studies for advanced degrees in law, with positions specializing in minority or barrio problems; social work, as a medical or psychiatric social worker in a minority community; public administration; librarianship; and business administration, with careers in accounting, marketing, bank management, and insurance.

Advising

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

Mexican American Studies Major

With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 22131)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A double major is strongly recommended for students majoring in Mexican American studies.

Students majoring in Mexican American studies must complete a minor in another field approved by the adviser in Mexican American studies.

Preparation for the Major. Mexican American Studies 110A-110B. (6 units.)

Foreign Language Requirement. Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Students are encouraged to satisfy this language requirement in Spanish. Refer to section of catalog on "Graduation Requirements."

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 24 upper division units to include Mexican American Studies 301 and 21 units selected from: (social sciences) Mexican American Studies 303, 304, 306, 320, 324, 350A-350B, 355, 370, 450, 481, 498; or 21 units selected from (humanities) Mexican American Studies 310, 324, 335, 375, 376, 380, 396W, 464. Up to nine units, with appropriate content, can be applied to each area of specialization from Mexican American Studies 496, 499, and 596.

Mexican American Studies Minor

The minor in Mexican American studies consists of a minimum of 18 units in Mexican American studies to include Mexican American Studies 110A-110B and 12 units of upper division courses selected from one of the following two areas in Mexican American studies: (social sciences) Mexican American Studies 301, 303, 304, 306, 320, 324, 350A-350B, 355, 370, 450, 481, 498; (humanities) Mexican American Studies 310, 335, 375, 376, 380, 396W, 464. Up to six units, with appropriate content, can be applied to each area of specialization from Mexican American Studies 496, 499, and 596.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

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 one of the following areas: (humanities) Mexican American Studies 335, 376, 380; (social sciences) Mexican American Studies 320, 350A-350B, 481.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

United States-Mexico Border Studies Certificate

The United States-Mexico Border Studies Certificate program is an interdisciplinary program integrating border studies courses from academic units throughout the campus. The objective of the program is to train students from diverse academic backgrounds within a multidisciplinary border studies curriculum that provides direct experience in border institutions and policy issues in both the public and private sectors. The program requires 21 units and a level of Spanish proficiency, 3 on a scale of 5, as indicated on the Foreign Service Language Examination. Students must apply for admission to the program before the completion of nine certificate units and are required to plan their program with an adviser. Contact the Department of Mexican American Studies.

Required courses: Mexican American Studies 355 and three units of an internship, either Mexican American Studies 498 or an internship from the student's major if it is carried out as a border-oriented internship.

Fifteen units selected from the following areas, at least three units from each area. In addition to the courses listed and with the approval of the adviser, students may take border-related courses from other areas, but no more than six units can be from a single department. Courses in the certificate may not be counted toward the minor.

Evolution of Social and Environmental Regions: Mexican American Studies 375; Geography 496; History 551B.

Political and Economic Systems: Mexican American Studies 306; Economics 458, 496, 565; Political Science 568.

Cultural and Social Institutions: Mexican American Studies 450; Geography 325; Policy Studies in Language and Cross-Cultural Education 551.

Special Problems/Human Services: Mexican American Studies 496, Border Research Topics; Journalism 496, Latin America and the Media; Political Science 390, Dynamics of Modern International Crises.

Courses

LOWER DIVISION COURSES

110A-110B. Introduction to Mexican American Studies (3-3)
Introduction to the culture and the civilization of the Mexican American. Semester I: History; Mexican and US roots; the new identity. Semester II: Contemporary social conditions, public policy, and politics affecting Mexican Americans.

111A. Oral Communication (3)
Training in the process of oral (speech) expression: addressing the barrio; formal delivery.
Mexican American Studies 111A is equivalent to Speech Communication 103. Not open to students with credit in Afro-American Studies 140 or Speech Communication 103 or 204.

111B. Written Communication (3)
Prerequisites: Satisfaction of the English Placement Test and Writing Competency requirements. (See Graduation Requirements section of catalog.) Proof of completion of prerequisites required.
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.

140. History and Sociology of Racism (3)
Survey and analysis of majority group racism and its effects upon minority ethnic groups and society.

141A-141B. History of the United States (3-3)
Spanish, Mexican, and Chicano influences on US history. Semester I: Comparative development of US and Mexico to 1865. Semester II: Mexican Americans in US history; US and Mexican national histories compared from 1865 to the present. This year course meets the graduation requirement in American Institutions.

296. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

UPPER DIVISION COURSES
(Intended for Undergraduates)

301. Political Economy of the Chicano People (3)
Prerequisite recommended: Mexican American Studies 110A-110B.
Political and economic roots of the oppression and exploitation of the Chicano from historical, institutional and theoretical points of view. Parallels between the experience of the Chicano and other Hispanic groups.

303. Mexican American Community Studies (3) II
Prerequisite: Completion of the General Education requirement in Foundations: Social and Behavioral Sciences. Recommended: Mexican American Studies 110A or 110B.
Mexican American communities from a comparative perspective. Systematic inquiry into methods and issues in community studies. Contemporary social, institutional, and political affairs.

304. Drug Abuse in the Mexican American Community (3) I
Substance abuse among segments of the Mexican American population. Theoretical and practical issues and solutions.

306. Mexican Immigration (3) II
Immigration from Mexico in the context of US immigration history and policies. Comparative study of political, economic, and cultural factors. Undocumented immigration and current US law.

310. Mexican and Chicano Music (3) I, II
Music of Mexico and the Southwest including folk dances appropriate for children and adults. Emphasis on the corrido, its history and development in Mexico and the US. Course will be taught bilingually.

314. Rondalla (3)
Six hours of activity.
Prerequisites: Upper division standing; Mexican American Studies 301 and consent of instructor.
Music of pre-Columbian and various Mexican romantic historical genres, i.e. corridos (ballads), musica Jarocha (music of Veracruz), boleros (romantic music), musica Nortena (music of Northern Mexico). Emphasis on cultural context, style, and techniques.

320. Mexican American Life Styles (3)
Prerequisite: Completion of the General Education requirement in Foundations: Social and Behavioral Sciences.
Social relations and cultural evolution in the Mexican American community, female-male relationships, and family. Influence of Spanish-Mexican feudal cultural heritage and US industrial-capitalist society. Comparative cross-cultural social science methodology. Includes interview techniques.

324. Gramatica Cantada (Pedagodia, Musica y Cultura) (3)
Methods and materials of Spanish instruction through music of Mexico and the Southwest.

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 US encroachment and the Mexican American War; Chicano influences and contributions; the multilingual and multicultural Southwest.

355. The United States-Mexico International Border (3) I
Prerequisite: Upper division standing.
History, culture, economics, and politics of US/Mexico border region. Theories and policy issues surrounding development of region; local regional problems and major agencies, institutions, organizations addressing these problems.

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. US/Mexico Border History (3) II
Prerequisite: Completion of the General Education requirement in Foundations: Social and Behavioral Sciences. Recommended: Mexican American Studies 110A.
Historical problems and movements in the US/Mexico border region, in particular those impacting Spanish-speaking populations on both sides of the border. Contemporary border issues from a historical perspective.

376. Mexican American Culture and Thought (3)
Intellectual history of the Mexican American as a synthesis of different cultural traditions and perspectives. Philosophical concepts from pre-Cortesian times to the present.

380. US-Mexico Borderlands Folklore (3) I
Prerequisite recommended: Mexican American Studies 110A or 110B.
Border folklore: myths, rituals, legends, sayings, and songs of Chicanos and Mexicanos in the U.S.

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.

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.

496. Selected Topics in Mexican American Studies (1-3)
Intensive exploration of selected topics in the area of Mexican American studies. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

498. Internship in US-Mexico Border (3)
Nine to twelve hours per week plus four class meetings.
Prerequisites: Upper division standing, Mexican American Studies 355, and consent of instructor.
Internship in public or private sector institution, agency, or organization engaged in US-Mexico binational relations or border-related issues. Meets requirements for United States-Mexico Border Studies Certificate program.

499. Special Study (1-3)
Prerequisite: Consent of instructor.
Individual study. Maximum credit six units.

UPPER DIVISION COURSE
(Also Acceptable for Advanced Degrees)

596. Topics in Mexican American Studies (1-3)
Prerequisite: Consent of instructor.
Advanced topics in Mexican American studies. See Class Schedule for specific content. May be repeated with new content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

Military Science

In the College of Professional Studies and Fine Arts

Faculty

Chair: Roth
Professor: Roth
Assistant Professors: Ash, Chestnut, Guerry, Posehn, Vance
Lecturers: Brown

Offered by the Department

Army ROTC curriculum leading to a commission as a Second Lieutenant in the US Army.
Minor in Military Science.

Curriculum

The Department of Military Science offers both a four-year and a two-year Army Reserve Officers Training Corps (ROTC) program designed to develop future officers in the areas of leadership, management, foreign policy, national security, military history, and military skills. 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 two-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 US Army. The available options after commissioning are active duty for a minimum of three years or three months active duty for training followed by participation in the US Army Reserve or US Army National Guard.

Several special programs are available for students who have previous ROTC training or active military service. These programs allow for part- or full-placement credit for the Basic Course. In addition, a program is available for simultaneous participation in both Army ROTC and the Army 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 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, 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. In addition, two-year scholarships are available at the Basic Camp at Fort Knox, Kentucky, where you will be in competition only with the students attending the Basic Camp. Contact the department chair for details. Paid positions (part-time) are available through simultaneous membership in local reserve and National Guard units.

Military Science Minor

The minor in military science consists of a minimum of 15 units to include Military Science 301, 302, 410, 411; and Military Science 351 or 352 or 499 (3 units) or Sociology 499 (3 units).

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

100A-100B. Introduction to the US Army (2-2) I, II
Semester I: Structure, organization, and missions of the US Army. Preparation and development for officer status. Semester II: Officer leadership, development, and functions. Emphasizing command responsibilities for a basic foundation of military fundamentals.

201. Civil-Military Relations (2) I
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.

221-S. Cadet Basic Field Training (3) Extension
Offered only in Extension.
Prerequisite: Sophomore standing.
Six-week field training through Extension with training in structure, organization, and missions of the US Army; officer leadership, development, and responsibilities; basic military skills; personal conditioning; oral and written military communications. Not open to students with military experience.

296. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

UPPER DIVISION COURSES
(Intended for Undergraduates)

301. Skills of Military Leadership (3) I
Techniques and skills required of military leaders. Military methods of instruction, review of essential map reading skills and case studies of military leadership techniques.

302. Theory and Dynamics of the Military Organization (3) II
Current tactical doctrine and military techniques of planning and coordination required to apply doctrine to small unit operations.

351. Military Land Tactics: Before 1910 (3) I
Prerequisite: Consent of department chair.
Military tactics prior to 1910. Emphasis on leadership, weapons, and strategy.

352. Military Land Tactics: After 1910 (3) II
Prerequisite: Consent of department chair.
Military tactics after 1910. Emphasis on leadership, weapons, and strategy.

410. Senior Leadership Seminar (3) I
Prerequisites: Military Science 301 and 302.
Leadership and management problems encountered in a company-sized military unit. Role of the junior officer. Designed to prepare senior cadets for positions as leaders and managers of resources at the platoon/company level.

411. Contemporary Military Policy (3) II
Prerequisites: Military Science 301 and 302.
The Military Justice System as it has evolved from international law principles and established national security policies. History of military law, the philosophy and structure of the system to include court-martial and alternatives to court-martial.

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, Biggs, M., Blyth, Estes, Flye, Forman, Hurd, Lambert, Loomis, Moe, Rohfleisch, Rost, Smith, Snider, Springston

Chair: Steinke

Professors: Almond, Barra, Brown, Bruderer, Brunson, Chambers, Dutton, Genzlinger, Hogg, Logan, Meadows, Mitchell, Mracek, Sheldon, Steinke, Ward-Steinman, D., Yates

Associate Professors: Hill, Kolar, O'Donnell, Peterman, Yeager

Assistant Professors: Follingstad, Liebowitz, Stauffer

Lecturers: Friedrichs, Ward-Steinman, S., Warman

Applied Music Instruction

Piano: Bruderer, Follingstad, Kolar
Harpsichord: Paul
Organ: Fall, Spelman
Voice: Chambers, Genzlinger, Henderson, MacKenzie
Flute: Lukas
Oboe: Michel
Clarinet: Liebowitz
Saxophone: Rotter
Early Instruments: Peterman
Bassoon: Michel
French Horn: Cable
Trumpet: Siebert
Trombone: Friedrichs, Hogg, Yeager
Baritone Horn: Dutton
Tuba: Dutton
Percussion: Mitchell
Violin/Viola: Brunson, Hill
Cello: Stauffer
Contrabass: G. Biggs
Harp: Hays
Classical Guitar: Kilmer, Romero
Composition: Dutton, Hogg, Stauffer, Steinke, Ward-Steinman, D.
Non-Western Instruments: Specialists from specific cultures as available each semester
Jazz Studies: Helzer, Yeager
Opera: Chambers

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.

The Major

Music serves to enhance the lives of all peoples and provides a challenging avenue of creative expression for those who wish to pursue its serious study. The Department of Music offers an innovative and comprehensive musicianship program as part of the curriculum of all music majors. This program is designed to ensure that every student learns to function as a conductor, performer, coach, editor or arranger. The student receives instruction in sight-reading, sight-singing, improvisation and music composition.

The Bachelor of Music program is for those students who have professional ambitions in music performance or seek a foundation for graduate study leading to college or university teaching. This program strongly emphasizes the performance aspects of music. The Bachelor of Arts degree is similar to a liberal arts degree. The course-work has a slightly lesser emphasis on the rigorous demands of performance and enables students to obtain a broad understanding of music.

For those students who are interested in teaching music, the department offers a major leading to the Single Subject Teaching Credential. A minor is available for students interested in music, yet whose primary interest is with another department.

The performance of music is the most obvious and frequent use of the musician's skill. However, graduates may also teach, compose, review, sell, and record music. In addition, inventing, constructing, tuning, and repairing instruments requires skills which are based on understanding the fundamentals of music. Some of the positions that a music graduate might hold include studio instructor; teacher in public or private schools; researcher for libraries, publishers, and museums; music therapist; recording artist, composer, arranger, or calligrapher; professional musician with an orchestra, band, or opera company.

Music Curricula

The music curricula are designed to fulfill the needs of all students: (1) those who have professional ambitions in music performance, or seek a foundation for graduate study leading to college or university teaching; (2) those who are preparing for one of the several state teaching credentials; (3) those whose major professional interest is in another department, and are seeking musical study as a minor; and (4) those who are interested in music as an elective study area for the enrichment of their cultural background.

General Basic Requirements

General basic requirements for the B.M. degree in applied arts and sciences, the 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 CM courses in order to advance to the next higher course.

5. Students must participate in at least one ensemble each semester of enrollment and must register for credit up to a total of nine units for the A.B. degree, eight units for the A.B. degree with credential, and twelve units for the B.M. degree. At least one-half of the requirement must be met by participation in a "large" ensemble in which the major instrument is used. Voice majors are required to participate in concert choir or chamber singers for four semesters and opera workshop for two semesters. A maximum of nine units for the A.B. degree, eight units for the A.B. degree with credential, and twelve units for the B.M. degree may be accumulated in ensemble study for the music major. See the Music Department Student Handbook for more details.

6. Attendance at and performance in recitals is a requirement of all music majors as set forth in the department recital regulations.

Refer to the Music Department Student Handbook for detailed information.

Electives in Music – Non-Majors

The Music Department offers certain courses for students who are interested in music as an elective study area for the enrichment of their cultural background. Courses particularly suited for these needs are Music 151 and 351 and the music courses numbered 170 to 189 and from 369 to 389. Some students will be musically prepared to elect courses which may or may not be included in this group. Enrollment by qualified students who wish to elect these courses is encouraged.

Opportunities to participate in instrumental and vocal ensembles are also available to non-music majors. Music ensemble courses may be repeated. A maximum credit of eight units of ensemble courses (Music 170-189, 370-389, and 569-589) may be counted toward a bachelor's degree for non-majors.

Music Major

With the A.B. Degree in Applied Arts and Sciences (Major Code: 10052)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

Preparation for the Major. Music 110A-110B, 110C-110D (may be waived in full or in part by examination); 115A; four units selected from courses numbered 220A through 235; 158A-158B; four units selected from courses numbered 170 through 189; four units of Music 250; 258A-258B. (25-29 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, 351E, or 351F.

Music Major

With the B.M. Degree in Applied Arts and Sciences (Major Code: 10041)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

Preparation for the Major. Music 110A-110B, 110C-110D (may be waived in full or in part by examination), 158A-158B, 258A-258B; six units selected from courses numbered Music 170 through 189; four to eight units in Music 250. In addition, students specializing in composition must take two units of Music 207. (22-32 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. Thirty-six 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 areas of specialization:

(a) Performance. Ten units to include Music 367 and 497 and the remaining seven units selected with the aid of the departmental adviser. (Pianists and string performers must include Music 541 and 542. Vocalists must include Music 541 and 554.)

Students specializing in performance must appear in a joint recital during the junior year and must present a solo recital during the senior year. The student must pass an audition of the program to be performed before the music faculty no less than one month in advance of the recitals.

(b) Music History and Literature. Ten units to include Music 367 and 497 and the remaining seven units selected with the aid of the departmental adviser.

During the senior year, the student specializing in music history and literature is required to organize, prepare program notes, and present two recitals consisting of recorded or "live" performances. Each will deal with representative works of a certain period, composers, or styles to be compared. Such students must pass an audition of the lecture and the music to be performed no less than one month in advance of the recitals.

(c) Composition. Eight units to include two units of Music 497, two units of Music 507, and the remaining four units selected with the aid of the departmental adviser.

The specialization may not be formalized until completion of Music 158B, or waiver by examination.

The student specializing in composition is required to present a concert of his compositions during the senior year and present the scores of works to be performed to the music faculty no less than one month in advance of the performance.

Foreign Language Requirement. Equivalent knowledge demonstrated in a test of reading knowledge administered by the foreign language department concerned in consultation with the Department of Music, as follows:

1. Vocalists—one semester each of French, German, and Italian.
2. Music History and Literature students—three semesters of one foreign language chosen from French, German, or Italian.
3. 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 With the A.B. Degree in Applied Arts and Sciences (Major Code: 10052)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under 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 220A through 235; 158A-158B; four units selected from courses numbered 170 through 189; 246; four units of Music 250; 258A-258B. (28-32 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 33 upper division units to include Music 351E or 351F, 358A-358B; four units selected from courses numbered 369 through 389; 446A-446B; two units of beginning and advanced conducting selected from 448A, 448B, 449A, 449B; four units of 450; 552A-552B.

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 Admissions and Records 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 audition to demonstrate vocal or instrumental performing ability.

The minor in music consists of 23-24 units in music selected from one of the following areas:

Art Music (Classical). To be admitted to this area students must take a placement examination in comprehensive musicianship. Requirements include Music 110A-110B, 158A-158B, 258A-258B, two units selected from Music 170-189 and 369-389; and eight units of upper division electives selected with the approval of the adviser.

Jazz (Instrumental). Requirements include four units of Music 170/370; four units of 189/389; Music 166, 266, 366, 466, 566A*, 566B*; and 351D or 364A-364B.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

* Additional prerequisites required.

Courses

LOWER DIVISION COURSES

101. Recitals (1) I, II Cr/NC
Preparation for individual solo performances and attendance at a minimum of 12 concerts or recitals in accordance with departmental requirements. Maximum credit four units.

102. Basic Musicianship for Non-Music Majors (3) I, II
Two lectures and two hours of activity.
Rudimentary music theory involving the elements of music: melody, rhythm, and harmony. Developing the understanding of these elements through instrumental and vocal experiences which include the use of unison and part-singing, the keyboard, and simple melodic and harmonic instruments.

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)
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
Fundamental harmonic analysis of basic jazz progressions, common modes and blues scale variations, solo transcription analysis, and ear-training.

Performance Organization Courses
(Music 170 through 189)

The performance organization courses are devoted to the study in detail and the public performance of a wide range of representative literature for each type of ensemble and designed to provide students with practical experience in rehearsal techniques.

170. Chamber Music (1) I, II
Three hours. Four hours for opera.
Prerequisite: Consent of instructor.
Sections for string, woodwind, brass, piano, vocal, and mixed ensemble groups. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

175. Marching Band (2) I
More than six hours.
Prerequisite: Consent of instructor.
Study and public performance of literature for the ensemble. Practical experience in rehearsal techniques. Maximum combined credit for Music 175 and 375 eight units.

176. Symphonic Band (1) I, II
Five hours.
Prerequisite: Consent of instructor.
Study and performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

177. Wind Ensemble (1)
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.

189. Jazz Ensemble (1) I, II
More than three hours.
Prerequisite: Consent of instructor.
Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

207. Composition Laboratory (1) II
Three hours of laboratory.
Prerequisite: Consent of instructor.
Original writing in different homophonic and polyphonic forms for various media. Maximum credit two units.

220A. Strings—Elementary Class Instruction (1) I, II
Two hours.
Fundamentals of violin, viola, cello and string bass by lecture and acquisition of elementary skills. (Formerly numbered Music 320A.)

220B. Strings—Elementary Class Instruction (1) I, II
Two hours.
Prerequisite: Music 220A.
Fundamentals of violin, viola, cello and string bass by lecture and acquisition of elementary skills emphasizing those instruments not previously studied in Music 220A. (Formerly numbered Music 320B.)

225A. Clarinet and Flute—Elementary Class Instruction (1) I, II
Two hours.
Fundamentals of the clarinet and flute by lecture and acquisition of elementary skills. (Formerly numbered Music 325A.)

225B. Oboe and Bassoon—Elementary Class Instruction (1) I, II
Two hours.
Fundamentals of oboe and bassoon by lecture and acquisition of elementary skills. (Formerly numbered Music 325B.)

230. Brass—Elementary Class Instruction (1) I, II
Two hours.
Fundamentals of brass instruments by lecture and acquisition of elementary skills. (Formerly numbered Music 330.)

235. 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. (Formerly numbered Music 335.)

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.

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 Renaissance 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 Accordian
Y. Composition
Z. Non-Western Instruments

258A-258B. Comprehensive Musicianship (3-3) I, II
Two lectures and two hours of activity.
Prerequisite: Music 158B. Music 258A is prerequisite to 258B.
Continuation of Music 158A and 158B. Harmony in the eighteenth to twentieth centuries as exemplified in works from the classic, romantic, impressionist, and modern periods.

266. Elements of Jazz II (2)
Prerequisite: Music 166.
Harmonic analysis of standard and bebop repertoire, less common modes and dominant scales, solo transcription, analysis, and ear-training.

296. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

UPPER DIVISION COURSES
(Intended for Undergraduates)

301. Recitals (1) I, II Cr/NC
Preparation for individual solo performances and attendance at a minimum of 12 concerts or recitals in accordance with department requirements. Maximum credit four units.

310. Electronic Music (2)
One lecture and three hours of laboratory.
Prerequisite: Consent of instructor.
Principles and techniques of electronic sound synthesis, musique concrete, and multimedia application in live performance.

340. Guitar—Intermediate Class Instruction (1) I, II
Two hours.
Prerequisite: Music 140.
Playing styles of folk, popular, and jazz with emphasis on classical music and technique. Theory, reading music, transcription and performance. Group instruction.

343. Music Literature for Children (3) I, II
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)
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 Eighteenth and Nineteenth Centuries.
B. Musical Masterpieces of the Twentieth Century.
C. Masterpieces of Grand Opera.
D. Jazz History and Appreciation.
E. Music of Africa and the Americas
F. Music of Asia and the Pacific

353. Opera Theatre (2) I, II
Six or more hours per week.
Interpretation and characterization of light and grand opera. Specific work in coordination of opera ensemble. Maximum credit eight units.

358A-358B. Comprehensive Musicianship (5-5) I, II
Four lectures and two hours of activity.
Prerequisite: Music 258B. Music 358A is prerequisite to 358B.
Continuation of Music 258A-258B. Counterpoint from eighteenth to twentieth centuries, serial techniques, jazz, electronic music. Individual projects in instrumentation, composition, analysis, non-Western musics.

364A-364B. History of Jazz (2-2)
Jazz style and forms as they have evolved historically. Classroom playing experience in jazz styles as a part of study. Designed for music majors.

366. Elements of Jazz III (2) I
Prerequisite: Music 266.
Post bop repertoire, altered modes and scales, solo transcription, analysis, and ear-training.

367. Junior Recital (1) I, II
Prerequisite: Junior standing in music.
Selection of literature for recital program not to exceed 30 minutes in length; theoretical analysis and historical study of scores chosen; preparation and public performance; and examination before committee of music department faculty.

Performance Organization Courses
(Music 369 through 389)

The performance group courses are devoted to the study in detail and the public performance of a wide range of representative literature for each type of ensemble, and designed to provide students with practical experience in rehearsal techniques.

369. Collegium Musicum (1) I, II
Prerequisite: Consent of instructor.
Performance of medieval and renaissance music on reproductions of historical instruments. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

370. Chamber Music (1) I, II
Three hours. Four hours for opera.
Prerequisite: Consent of instructor.
Section for string, woodwind, brass, piano, vocal, and mixed ensemble groups. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

375. Marching Band (2) I
More than six hours.
Prerequisite: Consent of instructor.
Study and public performance of representative literature for the ensemble. Practical experience in rehearsal technique. Maximum combined credit for Music 175 and 375 eight units.

376. Symphonic Band (1) I, II
Five hours per week.
Prerequisite: Consent of instructor.
Study and public performance of representative literature for ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

377. Wind Ensemble (1)
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.

389. Jazz Ensemble (1) I, II
More than three hours.
Prerequisite: Consent of instructor.
Study and public performance of representative literature for ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

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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 or 449A 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. (Formerly numbered Music 448.)

449A-449B. Instrumental Conducting (1-1) I, II
Three hours.
Prerequisite: Music 258B. Music 448A or 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 Renaissance 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 Accordian
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)
Two hours of activity.
Systematic refinement of rhythmic skills based mainly on exercises and techniques developed in teaching classical music of India. Multiple patterns, cross rhythms, and a variety of meters through spoken syllables and hand clapping.

466. Elements of Jazz IV (2)
Prerequisite: Music 366.
Atonal and harmelodic theories and philosophy, research paper, solo transcription, analysis, and ear-training.

468. Stylistic Interpretation (2)
One lecture and two hours of activity.
Prerequisite: Music 369.
Individual and group projects in period musical styles. Application of original treatises and manuscripts to performance on historical and modern instruments. May be repeated with new content. Maximum credit six units.

475. Band Pageantry (2)
One lecture and two hours of activity.
Prerequisite: At least one semester of college marching band.
Marching band drill styles and techniques. Practical experience in marching band techniques.

496. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

497. Senior Recital (2) I, II
Prerequisite: Senior standing in music.
Selection of literature for recital program not to exceed one hour in length; theoretical analysis and historical study of scores chosen; preparation and public performance; and examination before committee of music department faculty.

499. Special Study (1-3) I, II
Prerequisite: Consent of the department chair.
Individual study. Maximum credit six units.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

507. Composition Laboratory (1) 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)
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)
Two lectures and three hours of laboratory.
Prerequisite: Consent of instructor.
Teaching beginning and intermediate applied music. Survey and evaluation of teaching materials. Observation of individual or group lessons.
A. Piano
B. Strings
C. Voice

542. Performance Studies Laboratory (2)
One lecture and three hours of laboratory.
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

543. Diction (3)
Principles of pronunciation and enunciation. Application to song and opera: in English, Italian, German, and French

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)
Prerequisite: Music 258B.
Ethnomusicological theory and methodology, including history of the field and its relation to such disciplines as anthropology and linguistics.

554. Music Literature (2) I, II
Prerequisite: Music 258B.
A concentrated study of the literature in the several areas listed. Analysis of scores and recordings. Maximum credit six units applicable to a master's degree.
A. Chamber Music Literature – (See Class Schedule for specific content.)
B. Symphonic Literature – (See Class Schedule for specific content.)
C. Keyboard Literature – (See Class Schedule for specific content.)
D. Song Literature – (See Class Schedule for specific content.)
E. Choral Literature (Cantata, Mass, Oratorio – See Class Schedule for specific content.)
F. Opera Literature – (See Class Schedule for special content.)

561. Area Studies: Ethnomusicology (3)
Prerequisites: Music 351E and 351F.
Music of a specific culture. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

562. World Music in Context (2)
One lecture and two hours of activity.
Prerequisites: Music 351E or 351F and consent of instructor.
Practical experience in the performance of specialized traditional genres of world music, social and environmental context in which they exist. Relationship of music, dance, and theater. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

566A-566B. Jazz Arranging and Composition (2-2) I, II
Prerequisite: Music 258B.
Analysis of jazz compositions and arrangements; arranging and composing for large and small jazz ensembles.

569. Advanced Collegium Musicum (1) I, II
Prerequisite: Music 369.
Preparation and performance of representative works by a specific medieval or renaissance composer on historical instruments. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

570. Advanced Chamber Music (1) I, II
Three hours.
Prerequisite: Consent of instructor.
Study and public performance of established repertory as well as new compositions. Sections for string, woodwind, brass, piano and mixed ensemble groups. May be repeated with new course content. See Class Schedule for specific content. Maximum credit four units.

576. Symphonic Band (1) I, II
Five hours.
Prerequisite: Consent of instructor.
Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

577. Wind Ensemble (1)
Five hours.
Prerequisite: Consent of instructor.
Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

580. Analogs in Music, Art, and Literature (3)
Prerequisite: At least one survey course in music history or appreciation, art history, or comparative literature.
Cross-influences and correspondences in the arts from the standpoints of style, texture, rhythm, and form.

581. Symphony Orchestra (1) I, II
Five hours.
Prerequisite: Consent of instructor.
Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

585. Concert Choir (1) I, II
Five hours.
Prerequisite: Consent of instructor.
Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

589. Jazz Ensemble (1) I, II
Three hours.
Prerequisite: Consent of instructor.
Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

596. Special Topics in Music (1-3)
A specialized study of selected topics from the several areas of music. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Natural Science

In the College of Sciences

Faculty
Emeritus: Merzbacher, Shull
Chair: Metzger
Professors: Dessel, Dowler, Feher, Goldberg, Ingmanson, Metzger, Phleger
Associate Professors: May, Springer, Wallace
Assistant Professor: Thompson
Lecturers: Hood, Snider

Offered by the Department
Teaching major in the physical sciences for the single subject teaching credential.
Minor in history of science and technology.

The Major

The Department of Natural Science specializes in teaching science to nonscience majors at all levels. The lower division classes have no mathematics or science prerequisites. The upper division classes, for the most part, are designed for nonscience majors. They emphasize conceptual understanding, historical developments, and philosophical implications of complex scientific topics such as quantum mechanics, relativity, the origin of life, and the ways in which the world is interpreted by scientists.

The physical science major is offered as an interdisciplinary approach to the study of science. It stresses the interrelationship of chemistry and physics, as well as geology, astronomy, and mathematics. The major is designed primarily for students who intend to become high school teachers of both physics and chemistry. The State of California does not offer separate credentials in either chemistry or physics.

Upon completing the physical science major and other requirements for a Single Subject Credential, graduates will be able to teach the following subjects in California high schools: chemistry, general science, physics, and physical science. Accreditation by the California State Commission of Teacher Preparation and Licensing allows students to waive the State examination for the teaching credential in physical science.

Jobs for physical science teachers are becoming more plentiful. An increasing need for physical science teachers in high schools during the next ten years is predicted. Minority students or those proficient in Spanish are particularly in demand.

Physical Science Major

For the Single Subject Teaching Credential
With the A.B. Degree in Applied Arts and Sciences
(Major Code: 19011)

All candidates for a teaching credential must complete all requirements outlined in this section of the catalog under 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, and 230 or 251; Geological Sciences 100; Mathematics 107, 150, 151, 252, 253; Physics 195, 195L, 196, 196L, 197, 197L. (51-52 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 341A; Natural Science 500 and 315 or 316 or 317; Physics 354A, 354B; Teacher Education 453; 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. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

100. Physical Science (3) I, II
Introduction to concepts and processes in science intended to show why science is essential to a liberal education by recognizing relationship with other areas of knowledge such as philosophy, literature, fine arts, economics. Emphasis varies with instructor. Natural Science 100 not open to students with credit in Natural Science 102 or 210A.

102. Physical Science with Laboratory (4) I, II
Three hours of lecture and three hours of laboratory.
Introduction to the physical sciences. Emphasis varies with instructor. Laboratory activity is fully integrated with lecture material. Experiments and observations are done when relevant to the subject discussed. Not open to students with credit in Natural Science 100.

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.

296. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

UPPER DIVISION COURSES
(Intended for Undergraduates)

301. Field Experiences in Secondary School Science (1) I, II Cr/NC
Three hours per week of classroom experience under supervision of certified science teacher.
Prerequisites: Upper division standing; life or physical science major.
Supervised field experiences in secondary school science classrooms. May be biology, chemistry, physics, physical science, or earth science classes depending on major.

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 Sciences and three units in classics history category of Foundations. Recommended: Astronomy 101.

The growth and development of science from antiquity to the fifteenth century. Emphasis on man's cognitive reactions to his environment through the coalescence of the occult arts, empirical practices and rational thought associated with early scientific theory.

316. History of Science II (3) I, II
Prerequisites: Completion of the General Education Foundations requirement in Natural Sciences and three units in classics history category of Foundations. Recommended: Astronomy 101 and a course in chemistry.

The major developments during the sixteenth through nineteenth 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 General Education Foundations requirement in Natural Sciences. Recommended: Natural Science 100 or 102.

Technologies such as solar and fusion power, lasers, computer services, transport, synthetic food and their impact on values and lifestyles of developed countries. Characteristics of post-industrial society, future shock and biological revolution. Curve extrapolation and simulation by games and computer.

351. Solar Energy (3) I, II
Prerequisites: Completion of a lower division course in the physical sciences and the mathematics competency requirement or Academic Skills 90A or 90B.

Principles and practical aspects of solar energy including radiation transfer, optics, solar spectrum, heat transfer and storage, active solar and passive solar devices and systems, and design of passive solar buildings and shelters.

400. Seminar (1-3) I, II
A directed study of a topic to be chosen by instructor and announced in Class Schedule. Maximum credit six units.

412A-412B-412C. Processes and Inquiry in the Natural Sciences (4-4-4) I, II
Three lectures and two hours of activity.

Prerequisite: Completion of General Education Foundations requirement in Natural Sciences.

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) II
Prerequisite: Completion of General Education Foundations requirement in Natural Sciences. 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 of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Naval Science

In the College of Professional Studies and Fine Arts

Faculty
Chair: O'Keefe
Professor: O'Keefe
Assistant Professors: Crow, Cutts, Hobbs, Krohne, Larioza, Perry

Offered by the Department
Minor in naval science.

NROTC Curriculum

The Department of Naval Science offers two programs, a scholarship and a nonscholarship program leading to a commission in the United States Navy or United States Marine Corps. Scholarship Program students receive tuition, fees, books and a stipend of $100 per month while nonscholarship or College Program students receive a $100 per month stipend during their final two years of college. All students receive instruction in essential naval science subjects which, in conjunction with a baccalaureate degree in the field of their major, qualifies them for commissions as Ensign, United States Navy or Second Lieutenant, United States Marine Corps.

Naval science courses are open to all students having an interest in history, national security, foreign policy, organizational leadership, management and the military services. Enrollment in the Naval Reserve Officer Training Corps (NROTC) is not a requirement for taking naval science courses.

Naval Science Minor

The minor in naval science consists of a minimum of fifteen units in naval science, nine of which must be upper division.

Courses in the minor may not be counted toward the major, but may be used to satisfy requirements for preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

101. Introduction to Naval Science (2) I
Structure, principles, and practices; lines of command and control; logistical organizations; functions and services of major components of the Navy and Marine Corps; shipboard organization.

102. Naval Ships Systems I (3) II
Types, structure, and purpose of naval ships; compartmentation, propulsion systems, auxiliary power systems, interior communications, ship control, ship design and stability.

201. Naval Ships Systems II (3) I
Theory and principles of operation of naval weapons systems including types of weapons and control systems, capabilities and limitations, theory of target acquisition, identification and tracking, trajectory principles, and the basics of naval ordnance.

202. Sea Power and Maritime Affairs (3) II
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 US 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 Health and Human Services

Agency Member of the National League for Nursing and the American Association of Colleges of Nursing. Accredited by the California Board of Registered Nursing and by the National League for Nursing.

Faculty

Emeritus: Black, Coveny, Laiho, Leslie, Moses, Thomas
Director: Lantz
Associate Director: Flagg
Professors: Heineken, Lantz, Salerno, Wozniak
Associate Professors: Blenner, Fitzsimmons, Flagg, Freitas, Gulino, Hines, Loveridge, Mechanic, Reed, Shively, Verderber
Assistant Professors: Hadley, La Monica, Moffett, Saarmann, Walker
Lecturers: Bormann, Broom, Burt, Carson, Colwell, Gilbert, Goldberger, Handysides, Lischke, McMillan, Rapps, Schreiber, Smith, Szafran, 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.

The Major

The nursing profession is concerned with the total health care of the individual and the family. It is a profession which believes in the prevention of illness, caring for those who are acutely ill, and helping people with long-term rehabilitative problems to live in the healthiest way possible. Nursing is both a science and an art. It has its foundation in biophysical and behavioral humanistic sciences, as well as in specific practice skills and techniques.

Students in the nursing program are provided opportunities to acquire knowledge from the natural and social sciences; to develop critical thinking and professional decision-making abilities; to utilize current research in the application of the nursing process; to develop leadership potential and accountability in professional practice; to become aware of the emerging roles of the professional nurse and of the social forces and trends affecting health and health care systems; and to learn to balance professional and personal growth and values.

Nurses are in demand throughout the country and are needed in such settings as acute care hospitals, community health agencies, outreach programs, public schools, health maintenance organizations, and clinics which serve underprivileged, minority, and rural populations. Career opportunities are particularly good for minority, bilingual/bicultural persons.

Standards for Admission

Admission to the University

Applicants must be eligible for admission to the University. See "Regulations: Admission and Registration" section of this catalog. Students accepted as nursing majors are subject to further screening to determine their eligibility to be admitted into the professional coursework.

Admission to the Professional Program in Nursing

1. **Declaration of Major.** Students who are declared nursing majors at SDSU will have first consideration of their application. Students desiring to change their major to Nursing will be considered on a space available basis.
2. **Prerequisite Courses.** The following courses, or their equivalents, and course grades are required for admission to the nursing program:
   a. Course grade requirement (C or better) in each of these required university courses: Biology 210, Chemistry 130, Psychology 101, Sociology 101
   b. Course grade requirement (B or better) in each of these required university courses: Biology 150, Biology 261
3. **Minimum Grade Point Average.** Applicants must complete the six prerequisite courses with a minimum overall grade point average of 2.5.
4. **Writing Competency Requirement.** All students must demonstrate their writing competence on one of the following tests.
   a. By a score of 470 on the verbal portion of the Scholastic Aptitude Test
   b. By a score of 22 on the American College Tests
   c. By a score of 150 on the English Placement Test with score of 7 on essay portion
   d. By a score of 8 on the SDSU Writing Competency Examination

   Students who have not achieved the minimum score on the writing competency test must register in Academic Skills 92A and/or 92B prior to admission to the nursing program.
5. **Additional Point System.** Applicants requesting admission to the professional coursework will be ranked and evaluated on the basis of a point system. A maximum of 94 points can be earned in meeting the prerequisite courses, writing competency, recognition of outstanding achievement, health care experience and bilingual ability requirements, and applicants will be ranked in accordance with points earned. Letters of reference will be required to verify specific achievements, leadership, participation and work experience. For specific additional point system allocation, consult the School of Nursing office.
6. **Health Requirement.** To meet the specific health requirements, a medical examination and immunizations must be completed. The medical examination is in addition to the 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. **Associate Degree in Nursing-Bachelor of Science Degree in Nursing Option.** An Associate Degree in Nursing-Bachelor of Science Degree in Nursing option is available for registered nurses with Associate Degree in Nursing preparation. This program gives credit for previous coursework and is designed with flexible class scheduling and innovative teaching strategies for the working nurse.
9. **Formal Application.** Applicants must make an application to the University according to deadlines for impacted programs. In addition, application to the nursing program must be made during the semester that the student is completing prerequisite non-nursing courses (22 units). Application forms may be obtained at the School of Nursing office. Consult the School of Nursing for the deadline date.

Special Instructions

1. **Change of Major.** Requests for change of major will be granted only on a space available basis.
2. **Full-Time Study.** Students in the nursing program are required to enroll in all of the nursing courses scheduled in each semester. 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
(Major Code: 12031)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

Nursing majors are eligible to take the State Board Registered Nurse license examination after completing 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 courses except Nursing 453 and 456 which, as electives, are exempt from this requirement. No nursing course may be repeated more than once. A grade of C (2.0) or better or Cr is required in corequisite courses.

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 completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 46 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	6	General Education	6
General Education	3	+ American Institutions	3
Specified Elective	2		
	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: 26 units
- A. Natural Science (11 units)
  1. Life Sciences (8 units) to be satisfied by:
     Biology 150 (4 units)
     Biology 210 (4 units)
  2. Physical Sciences (3 units) to be satisfied by:
     Chemistry 130 (3 units) *or*
     Chemistry 160 (3 units)
- B. Social and Behavioral Sciences (6 units) to be satisfied by:
     Psychology 101 (3 units)
     Sociology 101 (3 units)
- C. Humanities (9 units)
  At least three units must be taken from three of the four areas (1. Literature; 2. Art, Classics, Drama, Humanities, and Music; 3. History; 4. Philosophy and Religious Studies) in the Humanities section of the Foundations component of the regular General Education program. Refer to General Education requirements in the Graduation Requirements section of the catalog.

III. Explorations: Twelve units to include Psychology 351 and at least one course from the Humanities area of Explorations *not* selected in the Foundations component. At least nine of the twelve units must be upper division and three must be cross-cultural. Refer to General Education requirements in the Graduation Requirements section of the catalog.

Health Services Credential

(Credential Code: 00600)

San Diego State University offers curricula leading to the Health Services Credential. This authorizes the holder to serve as a School Nurse. For information concerning the credential, the student is referred to the School of Nursing Office, HT-58.

The Health Services Credential has been approved by the Commission on Teacher Credentialing.

All applicants seeking admission to the Health Services Credential program ***must*** be admitted to the University and accepted as a classified postbaccalaureate student.

Standards for Admission

1. Baccalaureate degree in nursing or related field (including community health nursing).
2. Current California Registered Nurse License.
3. Required admission and advisement ***required*** with Health Services Credential Adviser.

Program

The following program elements are required of all health services credential candidates: (31 units.) In addition, Nursing 414 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	3
Electives:	Three units selected from Nursing 630, 637, 638, 639; Health Science 520; Public Health 621,661, 753; Social Work 550.	

* Prerequisites waived for students in this program.

Courses

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 GPA 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.

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.

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 (6) I, II
Three lectures and nine 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 Cr/NC
Prerequisite recommended: Concurrent registration in Nursing 452.
Basic electrophysiological and interpretive concepts necessary for identification and management of supraventricular and ventricular rhythms.

454. 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.

456. Clinical Pharmacology in Nursing Practice (3) I, II
Prerequisites: Biology 150 and 261.
Major classifications of drugs; pharmacological and toxicological activity; clinical applications. Role of nurse in assessment, intervention, and patient education.

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.

504. Primary Health Care of the School-Aged Child (3) I
Prerequisites: Baccalaureate degree in nursing or related field; current California Registered Nurse License.
Primary health care of the school-aged child and adolescent. Major health problems, chronic illnesses, communicable diseases, traumatic injuries, learning and behavior disorders.

504L. Primary Health Care of School-Aged Child Practicum (3) II
Twelve hours of practicum.
Prerequisites: Nursing 500 and 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.

596. Special Topics in Nursing (1-3)
Prerequisites: Completion of 30 upper division units in nursing or graduate status; 3.0 grade point average.
Selected topics in the practice of nursing. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum credit of three units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Oceanography

Administered by the Dean of the College of Sciences

San Diego State University provides preparation for ocean-oriented careers by offering marine-related coursework and oceanographic experience within regular degree programs in the Departments of Biology, Chemistry, Economics, Civil and Mechanical Engineering, Geography, Geological Sciences, Natural Science, and Physics. Master's degrees with specialization in marine problems may also be earned in these departments. The Ph.D. degree is offered in biology, chemistry, and ecology, jointly with the University of California. Degrees in general oceanography or marine studies are not offered by the University. A minor in oceanography is offered for undergraduate science students by the Department of Geological Sciences. The Center for Marine Studies coordinates work in the area of marine studies and provides special supporting services to the faculty, staff and students, including student advising, assistance in research and publication, operation of the University's marine laboratory at Mission Bay, and a boat operations program.

Courses in general oceanography are offered by faculty from the Departments of Biology, Chemistry, Geological Sciences, and Natural Science. Advanced coursework and research in geological and physical oceanography are conducted in the Geological Sciences Department. An option in marine geology is offered as part of the undergraduate major in geological sciences, and the Chemistry Department offers work in chemical oceanography. Advanced courses and research in biological oceanography, marine biology, marine botany, and marine zoology are conducted in the Department of Biology. Similar marine-related coursework and research are offered in the Departments of Economics and Geography and in the College of Engineering. Students who require advising in these areas should inquire at the Center for Marine Studies. (See section of this catalog on Academic Organization, College of Sciences Research Centers.)

Courses

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 notifed 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 Marine Studies see:

Biology 513. Marine Microbiology
Biology 514. Phycology
Biology 515. Marine Invertebrate Zoology
Biology 517. Biological Oceanography
Biology 518. Fisheries Biology
Biology 519. Aquaculture
Biology 520. Ichthyology
Chemistry 501. Chemical Oceanography
Economics 454. Economics of the Ocean
Geography 504. Coastal and Submarine Physiography
Geography 510. Physical Meteorology
Geography 576. Geography of Marine Resources
Geography 588. Intermediate Remote Sensing of Environment
Geological Sciences 540. Marine Geology
Geological Sciences 545. Descriptive Physical Oceanography
Geological Sciences 548. Coastal and Estuarine Physical Oceanography

Philosophy

In the College of Arts and Letters

Faculty

Emeritus: Howard, Lauer, Nelson, O'Reilly, Ruja, Shields
Chair: Snyder
Professors: Carella, Feenberg, Friedman, Gregor, McClurg, Rosenstein, Snyder, Warren, Weissman
Associate Professors: Troxell, Weston
Assistant Professor: Chaffin

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.

The Major

The philosophy major explores and seeks to understand values and the nature of reality. Through the study of philosophy, questions are asked about existence and experience: What is truth? What is morally right? What kind of life is best? What kind of society? Is there an ultimate reality? Philosophy studies the types of questions that most other subject areas are unable to address fully.

There are three different ways these questions are characteristically investigated in the philosophy major at San Diego State University. They are approached historically, by studying the history of philosophy from the ancient Greeks to the present; analytically, by carefully examining the meanings and interrelationships of ideas; and critically, by training students in the art of evaluating various claims and the arguments for and against them.

While the analytical and critical approach are part of every course in philosophy, the philosophy curriculum at San Diego State University emphasizes the historical approach. The aim is to provide the philosophy major with a thorough grounding in the development of philosophy so that the student is well prepared to participate in the discussion of contemporary issues.

The education of a philosophy major, along with providing the satisfaction of dealing with fundamental issues which have concerned serious thinkers for many centuries, also provides the student with skills that may be used in a variety of careers. Some students begin graduate work after their B.A., either in philosophy, with the expectation of teaching or writing in the field, or in law, education, or other professional programs. Some enter new fields of research, working on computer problems or artificial intelligence. Other students find that the special skills they have developed as philosophy majors – the ability to read complex material with comprehension, to analyze problems, to find relevent sources, to evaluate evidence, to propose solutions and to examine them self-critically, and to report the results of their inquiries with clarity and coherence – are valued by employers in many different fields. Such students may find career opportunities in government, industry, finance, and social services.

Advising

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

Philosophy Major

With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 15091)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

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 30 upper division units in philosophy to include Philosophy 401, 402, 403, 404, 405, 521, and either 506 or 507. Of the remaining nine units, at least six units must be in 500-numbered courses.

Students majoring in philosophy will find it necessary to follow a pattern of enrollment in courses similar to the following if they are to complete their upper division work in two years.

JUNIOR YEAR

Fall	Spring
PHIL 401	PHIL 402
PHIL 403	PHIL 404
	PHIL 521

SENIOR YEAR

Fall	Spring
PHIL 405	PHIL 506 (or elective)
PHIL 507 (or elective)	Elective
Elective	

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 401, 402, 403, 404, 405, 506, 507, 508, 532, and 575.

Values: Philosophy 510, 512, 527, 528, 535, 541, and 542.

Knowledge and Reality: Philosophy 521, 522, 523, 525, 531, and 537.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

101. Introduction to 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 (CAN PHIL 6)
Introduction to deductive and inductive logic. Logic and language. Analysis of fallacies. Uses of logic in science and in daily life.

296. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

UPPER DIVISION COURSES
(Intended for Undergraduates)

300. Honors Course (1-3)
Refer to Honors Program.

305. Classics of Western Philosophy (3) I, II
Prerequisite: Upper division standing.
Analysis of major texts selected from diverse historical periods in western philosophy. Texts will illustrate different world views (e.g., Platonism, Stoicism, Skepticism) and their relationship to other disciplines and to present world views.

310. Philosophy and Human Nature (3)
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.

333. Philosophy of Technology (3) I, II
Prerequisite: Completion of Foundations section of General Education in Humanities.
Nature of technology. Ethical aspects of social, political, and environmental problems associated with rapid development of technology over the last century. Responses to these problems by contemporary philosophers.

334. Philosophy of Literature (3)
Study of literature of philosophical significance, and of philosophical problems of literature.

336. Jewish Philosophy (3)
Prerequisite: Three units in 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.

401. History of Philosophy I (3) I, II
Prerequisite: Three units in philosophy.
Philosophy in Graeco-Roman times. (Formerly numbered Philosophy 301.)

402. History of Philosophy II (3) II
Prerequisite: Philosophy 401.
Medieval philosophy. (Formerly numbered Philosophy 502.)

403. History of Philosophy III (3) I
Prerequisite: Six units in philosophy including Philosophy 120.
Renaissance philosophy and the continental rationalists, including Descartes, Spinoza, and Leibniz. Not open to students with credit in Philosophy 303.

404. History of Philosophy IV (3) II
Prerequisite: Philosophy 403.
The British empiricists (including Locke, Berkeley, Hume) and Kant. Not open to students with credit in Philosophy 303.

405. History of Philosophy V (3) I
Prerequisite: Six upper division units in philosophy.
Nineteenth century philosophy. (Formerly numbered Philosophy 504.)

496. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

499. Special Study (1-3) I, II
Prerequisites: Six upper division units in philosophy and prior arrangements with a supervising instructor.
Individual study. Maximum credit six units.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

506. Twentieth Century Continental Philosophy (3)
Prerequisite: Six upper division units in philosophy.
Major figures and movements in European philosophy from Husserl to the present.

507. Twentieth Century Anglo-American Philosophy (3)
Prerequisite: Six upper division units in philosophy.
Major figures and movements in Anglo-American philosophy since World War I.

508. Existentialism (3)
Prerequisite: Six units in philosophy.
The philosophical aspects of Existentialism. Major emphasis is on the diversity of thought within a common approach as this is shown in individual thinkers.

510. Philosophy of Law (3)
Prerequisites: Three units in philosophy and three units in political science.
The nature of law and the logic of legal reasoning. An exploration of certain key legal concepts such as causation, responsibility, personality and property.

512. Political Philosophy (3)
Prerequisite: Philosophy 101, 102 or 103.
Selected aspects of the political structures within which we live, such as law, power, sovereignty, justice, liberty, welfare.

521. Deductive Logic (3)
Prerequisite: Philosophy 120.
Principles of inference for symbolic deductive systems, connectives, quantifiers, relations and sets. Interpretations of deductive systems in mathematics, science and ordinary language. Not open to students with credit in Mathematics 523.

522. Inductive Logic (3)
Prerequisite: Philosophy 120.
Definition, classification and division. The logic of experimentation and statistics. Formation and validation of hypotheses. Probability theories.

523. Theory of Knowledge (3)
Prerequisite: Six units in philosophy.
The major theories of human knowledge: mysticism, rationalism, empiricism, pragmatism.

525. Metaphysics (3)
Prerequisite: Six units in philosophy.
Prominent theories of reality, e.g., realism and nominalism, materialism and idealism, teleology and determinism.

527. Values and Social Science (3)
Prerequisite: Six units in philosophy.
Analysis and discussion of the nature of values and value-judgment with particular reference to the social sciences. Among relevant issues: the naturalistic fallacy, facts and values; authoritarianism, emotivism, objective relativism; the individual and the community.

528. Theory of Ethics (3)
Prerequisite: Six units in philosophy.
Significant and typical value theories and systems and the concrete problems such theories seek to explain. Emphasis will be on moral values.

531. Philosophy of Language (3)
Prerequisite: Six units in philosophy.
An introduction to theories of meaning for natural languages and formal systems; concepts of truth, synonymy and analyticity; related epistemological and ontological problems.

532. Philosophy of History (3)
Prerequisite: Six units in philosophy.
The nature of history and historical inquiry. As metaphysics: A study of theories of historical development. As methodology: History as science, truth and fact in history, historical objectivity, the purpose of history.

535. Philosophy of Religion (3)
Prerequisite: Six units in philosophy.
Philosophical examination of issues raised by the religious impulse in man.

536. Philosophy of Mind (3)
Prerequisite: Three upper division units in philosophy.
Analysis of the concept of mind, intention, behavior, etc. Developments generated by works of such philosophers as Wittgenstein, Wisdom, and Ryle.

537. Philosophy of Science (3)
Prerequisite: Six units in philosophy.
The basic concepts and methods underlying contemporary scientific thought. Contributions of the special sciences to a view of the universe as a whole.

541. History of Aesthetics (3)
Prerequisite: Philosophy 101, 102 or 103.
Major documents in the history of aesthetics.

542. Philosophy of Art (3)
Prerequisite: Six units in philosophy.
The nature of aesthetic experience. Principal contemporary theories of art in relation to actual artistic production and to the function of art in society.

575. A Major Philosopher (3)
Prerequisite: Six upper division units in philosophy.
The writings of one major philosopher. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to the major. Maximum credit six units applicable to a master's degree.

596. Selected Topics (3)
Prerequisite: Six upper division units in philosophy.
A critical analysis of a major problem or movement in philosophy. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to the major in philosophy. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Physical Education

In the College of Professional Studies and Fine Arts

Faculty

Emeritus: Andrus, Benton, Broadbent, Cave, Cullen, Fox, Friedman, Kasch, Landis, Lockman, Murphy, Olsen, A., Schutte, Schwob, Sportsman, Terry, Tollefsen, Wilhelm, Williamson, Ziegenfuss

Chair: Carlson

Professors: Aufsesser, Carlson, Carter, Grawunder, McKenzie, T., Moore, Olsen, L., Phillips, Rushall, Selder, Simmons, Sucec

Associate Professors: Barone, Buono, Francis, P., Franz, Hempel, King, Mechikoff, Nunn, Powell, Sandback, Wells, Willis

Assistant Professors: Faucette, Gutowski, Patterson, Quinn, Smith, Verity, Whitby

Lecturers: Casey, Edwards, Francis, Ll., Griffin, Hammond, Heilbuth, McKenzie, R., Nichols, Osinski, Storrs

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.

The Major

Physical education is a study of the processes through which individuals obtain optimal health, physical skill, and fitness. The physical educator, whether in a laboratory, school, medical or business setting, is ultimately concerned with improving the health and well-being of people.

The major in physical education prepares students in such areas as exercise physiology, motor learning and control, human movement, injury prevention and rehabilitation, sport psychology, sport sociology, philosophy and history of sport and physical education, nutrition, sport pedagogy, and measurement and evaluation. Courses designed to develop skills in the analysis, organization, and performance of various sports and physical activities are also a part of the program.

While many high school students think of physical education only as preparation for coaching and teaching, today's physical educator is prepared for a wide range of exciting career opportunities beyond the traditional occupational paths. Some of the typical career fields open to physical education majors include:

Athletic Training. Students find employment in a broad range of medical, commercial, and educational environments. Sports medicine specialists work in such diverse areas as health and nutritional consulting, fitness testing, cardiac rehabilitation, the design of industrial health and safety programs, biomedical engineering, physiological research, and as athletic trainers for sports teams. Students majoring in physical education also find their preparation beneficial for graduate study leading to careers in physical therapy and medicine. There are also career opportunities for employment in the business sector. Physical education graduates work as fitness experts and managers in adult and corporate fitness programs of businesses, industry, public agencies, and schools.

Teaching. The college graduate in physical education may find employment in public and private schools, specializing at either the elementary or secondary level. Physical education majors teach activity and sports skills, health and fitness classes, and act as physical education resource specialists. Students also may prepare for careers in athletic coaching. The athletic coach works to improve individual and team sports skills, enhance opportunities for social and personal development of team members, develop the health and fitness of participants, and promote public awareness concerning the benefits of sports participation. Opportunities for both men and women exist at the interscholastic level, as well as with community and commercial sports clubs.

Dance. Students specializing in dance find employment as teachers of dance, professional performers with dance companies, choreographers, dance therapists, recreation specialists, and movement educators.

Physical Education Major

With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 08351)

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
(Major Code: 08351)

The 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; Physics 107; Psychology 101. (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 38 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
(Major Code: 10081)

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 342A, 345D, 345E, 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
With the A.B. Degree in Applied Arts and Sciences
(Major Code: 08351)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under 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 (345A, 345H); two units from individual sports (345B, 345F, 345G); and six units from Physical Education 322, 332, 342 or 345.

Adapted Physical Education Credential

(Credential Code: 00980)

Admission Categories

Level I: Physical Education major with an interest in adapted physical education, completion of a minimum of 45 units with a GPA of 2.5 or better, and official application to the Coordinator of Adapted Physical Education.

Level II: Physical Education major with a minimum of 2.75 after 90 units including the completion of Physical Education 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.

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. A minimum of six upper division units must be completed at San Diego State University.

* 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, 345G, 570; four units selected from the Physical Education 332 series; two units of Physical Education 398; and two units selected from Physical Education 345A, 345B, 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. A minimum of six upper division units must be completed at San Diego State University.

* 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. These include Physical Education 362, 560, 561, 661, 662, Biology 150, 200A, 200B, 336, and Physics 180A, 180B, 182B. 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 coursework 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.

Courses

LOWER DIVISION COURSES

Courses offered for one unit credit meet two hours per week or equivalent. "A" signifies a beginning class, "B" intermediate.

100. Exercise and Health (3) I, II
Two lectures and two hours of activity.
Scientific bases of relationships between exercise and health and application of these principles to individual fitness appraisal and regimen.

102A-102B. Conditioning (1-1) I, II

103A-103B. Jogging (1-1) I, II

104A-104B. Weight Training (1-1) I, II, S

105. Individual Adaptives (1) I, II
Prerequisite: Consent of instructor.
A health history record is required of each student.
Individual exercise programs for those who are handicapped in some respect, or who have functional defects or deficiencies amenable to improvement through exercise. May be repeated for credit.

108A-108B. Basketball (1-1) I, II

109A-109B. Soccer (1-1) I, II

110A-110B. Volleyball (1-1) I, II

111A-111B. Softball (1-1) I, II

115A. Track and Field (1) I, II

116A-116B. Golf (1-1) I, II

117A-117B. Archery (1-1) I, II

118A-118B. Tennis (1-1) I, II, S

119A-119B. Bowling (1-1) I, II

120A-120B. Badminton (1-1) I, II

122A-122B. Fencing (1-1) I, II

123A-123B. Racquetball (1-1) I, II, S

124. Sailing (1)
(Formerly numbered Physical Education 124A.)

125. Men's Gymnastics Apparatus (1)
(Formerly numbered Physical Education 125A.)

127A-127B. Women's Gymnastics Apparatus (1-1) I, II

129A-129B. Swimming (1-1) I, II, S

130. Synchronized Swimming (1) I, II

132A-132B. Ballroom Dance (1-1) I, II

133A-133B. Folk and Square Dance (1-1) I, II

134A-134B. Modern Dance (1-1) I, II

135A-135B. Ballet (1-1) I, II

136A-136B. Jazz (1-1) I, II

137A. Aerobic Dance (1) I, II, S

138. Selected Activities (1) I, II, S
May be repeated with new activity for additional credit. See Class Schedule for specific content.

139. Competition Fitness (1) II Cr/NC
Two hours of activity.
Fitness program for student wishing to prepare for high-level competitive athletics. Theoretical aspects included. Maximum credit one unit applicable to a bachelor's degree and athletic eligibility.

141A-141B. Martial Arts (1-1) I, II
Physical Education 141A is prerequisite to 141B.

145. Waterskiing (1) I, II, S

146. Surfing (1) I, II, S

147. Windsurfing (1) I, II, S

150A-150B. Horseback Riding (1-1) I, II
Physical Education 150A is prerequisite to 150B.

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)
One lecture and two hours of activity.
Music as related to movement; notation and simple music forms applied to all movement activities; percussion accompaniment; writing of percussion scores, music repertoire for dance.

171. Intercollegiate Practicum in Athletics (1) Cr/NC
Maximum combined credit for any combination of 171 series is four units. (Formerly numbered Physical Education 339.)

Offered in Fall
- **A.** Basketball
- **B.** Cross Country
- **C.** Football
- **F.** Soccer
- **G.** Volleyball

Offered in Spring
- **G.** Volleyball
- **H.** Baseball
- **I.** Golf
- **J.** Softball
- **K.** Tennis
- **L.** Track

190. Skill Competency in Physical Education (2) I, II 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, S
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) I, II
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

UPPER DIVISION COURSES
(Intended for Undergraduates)

310. Skin and Scuba Diving (2) I, II, S
Prerequisites: Medical examination, waiver for hazardous procedures, pass swimming competency test. Concurrent registration in Physical Education 310L.
Function and knowledge of underwater diving to include diving physiology, hyperbaric conditions, medical hazards, safety procedures associated with scuba diving, proper care and operation of equipment. (Formerly numbered Physical Education 320.)

310L. Skin and Scuba Diving Laboratory (1) I, II, S
Three hours of laboratory.
Prerequisite: Concurrent registration in Physical Education 310.
(Formerly numbered Physical Education 320L.)

311. Intermediate Scuba Diving (2) II
One lecture and three hours of laboratory.
Prerequisites: Physical Education 310 or Openwater Scuba Diving Certification, medical examination, and acceptable openwater diving equipment.
Development of practical openwater diving skills and techniques, for divers who have successfully completed an openwater diving course.

312. Advanced Scuba Diving (3) I
Two lectures and three hours of laboratory.
Prerequisites: Physical Education 311 or Openwater Scuba Certification, medical examination, and acceptable openwater diving equipment.
Theory, skills, and technique including underwater navigation, diving physics, diving physiology, diving medicine, diving safety. Qualifies for Advanced Diving Certificate from the National Association of Underwater Instructors.

313. Assistant Scuba Instructor (3) I, II
Two lectures and three hours of laboratory.
Prerequisites: Physical Education 312 or Advanced Openwater Certification, medical examination, and acceptable openwater diving equipment.
Qualifies for Assistant Scuba Instructor Certificate from the National Association of Underwater Instructors.

322. Practicum: Life Saving and WSI (2) I, II
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.

332. 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)
- **E.** Additional sports (offered on student demand). May be repeated with new content.

(Physical Education 332A formerly numbered Physical Education 331A; Physical Education 332B formerly numbered Physical Education 331B; Physical Education 332C formerly numbered Physical Education 331C; Physical Education 332D formerly numbered Physical Education 331D; Physical Education 332E formerly numbered Physical Education 331F.)

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 241.

342. Practicum: Educational Games for Children (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. (Formerly numbered Physical Education 341C and 342B.)

345. 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
- **B.** Track and Field
- **C.** Racquetball, Softball
- **D.** Folk, Square, and Ballroom Dance
- **E.** Modern Dance
- **F.** Gymnastics
- **G.** Tennis, Badminton
- **H.** Flag Football, Soccer

(Physical Education 345A formerly numbered Physical Education 346A; Physical Education 345B formerly numbered Physical Education 346B; Physical Education 345C formerly numbered Physical Education 346C; Physical Education 345D formerly numbered Physical Education 346D; Physical Education 345E formerly numbered Physical Education 346F; Physical Education 345F formerly numbered Physical Education 346H; Physical Education 345G formerly numbered Physical Education 346I; Physical Education 345H formerly numbered Physical Education 346K.)

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)
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.

351. Jazz Dance for the Professional (2)
Four hours of activity.
Prerequisites: Physical Education 136A, 136B, and physical education major with dance emphasis.
Advanced work in jazz dance to enhance performance skills of dancers interested in a 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.

362. Exercise Physiology Laboratory (1) I, II, S
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 Laboratory (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) I, II, S
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) I, II
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) I, II, S
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) I, II, S
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)
Prerequisite: Physical Education 153.
Integrated approach to understanding of historical, philosophical, and sociological forces shaping development of dance.

380. Organization and Administration of Physical Education (3) I, II
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) I, II, S
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.

397. Contemporary Topics in Physical Education (Credit to be arranged) Offered only in Extension
Prerequisites: Consent of instructor; bachelor's degree.
Study of specially selected problems in physical education and sport. Does not apply to undergraduate degrees or credentials. (Formerly numbered Physical Education 497.)

398. Supervised Field Experience (1-3) I, II, S Cr/NC
Prerequisite: Consent of department chair.
Supervised practical experience in the area of physical education. Maximum credit six units.

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) I, II
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

499. Special Study (1-3) I, II, S
Prerequisite: Consent of department chair.
Individual study. Maximum credit six units.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

550. Choreography: Basic Elements (2)
Fours 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) I, II, S
Prerequisites: Biology 150, 336.
Arthrology, syndesmology and myology, with emphasis on movement analysis. Muscle groups and their functional relationships. Application of simple mechanical principles to movement analysis.

561. Physiology of Exercise (3) I, II, S
Prerequisites: Biology 150, 336.
Effects of physical activities on the physiological functions of the body.

562. Cardiopulmonary Laboratory (2) I, II
One lecture and three hours of laboratory.
Prerequisites: Physical Education 362 and 561.
Cardiopulmonary evaluation of human subjects for rehabilitative and preventive cardiology including electrocardiography, blood chemistry, ergometry, central and peripheral vascular assessment, body composition, and lifestyle change.

563. Biomechanics of Human Movement (3) I, II
Prerequisites: Biology 150 and Physics 107.
Mechanical principles as applied to movement; analysis and application to selected motor skills.

564. Prevention, Cause, and Basic Care of Sports Injury (3) I, II
Prerequisites: Physical Education 265, 560, 561, 563.
Sports injury: prevention, causation, and basic management.

565. Evaluation and Rehabilitation of Sports Injury (3) I, II
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) I, II, S
Prerequisites: Physical Education 560 and 561.
Etiology, characteristics, and programs for children with corrective and/or physically handicapping conditions will be discussed. This will include evaluating and implementing prescribed activities for individuals with these types of conditions.

568. Special Physical Education (2) I, II, S
Prerequisites: Psychology 101 and Physical Education 371.
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.

569. Exercise, Sport and Aging (3)
Prerequisite: Physical Education 371 or 561.
Relationships between exercise, sport and human aging including physiological, psychological, sociological, health and program considerations. Aging is viewed developmentally with emphasis on the middle and later years.

570. Psychological Bases of Physical Education (3) I, II, S
Prerequisite: Psychology 101.
Psychological parameters related to physical performance and the acquisition of motor skills.

571. Sport Psychology (3) I, II
Prerequisite: Physical Education 570.
Psychological factors underlying behavior in sport and physical activity. Emphasis on personality and motivational factors.

596. Selected Topics in Physical Education (1-3) I, II
Selected topics in physical education. May be repeated with new content and approval of instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Physics

In the College of Sciences

Faculty

Emeritus: Garrison, Kalbfell, Moe, Smith, Snodgrass, Teasdale, Wolter

Chair: Lilly

Professors: Burnett, Davis, Day, Lilly, Morris, Nichols, Oseroff, Piserchio, Rehfuss, Roeder, Shore, Sweedler, Templin

Associate Professors: Cottrell, Papin, Torikachvili

Lecturers: Berger, Ferguson, Pavis, Shackelford

Adjunct: 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.

The Major

The study of physics is considered the center of modern science. It has fascinated the finest minds of every age – from Newton to Maxwell, Einstein, Bohr, Schroedinger, Oppenheimer and Schwinger. The study of this diverse field encompasses such areas as optics, electricity, magnetism, the properties of the solid state, atomic structure, nuclear structure, motion, relativity, space and time. Physics also plays a significant role in chemistry, biology, astronomy, and geology, and in the applied sciences of engineering and technology.

Students who become physics majors will be selecting a rewarding and vital career. The great burst of activity during the last 20 years has instilled a new excitement in physics. For example, the invention of the laser in the late 1950s revolutionized the field of optics. These advances stimulated whole new areas in physics applications. Superconductivity has led to the search for a high-temperature superconductor so that electrical power might be transmitted without loss; quantum mechanical tunneling has led to the tunnel diode; and solid state physics brought about the transistor and its successors.

The career opportunities for physics graduates are as diverse as the field itself. They include research and development; management or administration in industrial laboratories or government agencies; technical sales; electronic design; laser instrument research; and secondary teaching.

Physics graduates may also enter a wide variety of graduate programs. For example, a radiological physics master's degree qualifies students for employment with the Environmental Protection Agency, nuclear power stations, government laboratories, and hospitals.

Chemical Physics Major

With the B.S. Degree in Applied Arts and Sciences
(Major Code: 19081)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." Individual master plans for each student are filed with the physics and chemistry undergraduate advisers and the Evaluations Office.

Preparation for the Major. Chemistry 200, 201, 231, 251; Mathematics 150, 151, 252, 253; Physics 195, 195L, 196, 196L, 197, 197L (47 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 42 upper division units to include Chemistry 410A-410B, 431, 457, 520A, 550; Mathematics 341A; Physics 311, 350A, 354A-354B, 357, 400A, 460. Recommended: Mathematics 341B.

Physics Major

With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 19021)

All candidates for a degree in liberal arts and sciences must complete the requirements listed in the section of this catalog on "Graduation Requirements." Individual master plans for each student are filed with both the physics undergraduate adviser and the Evaluations Office.

A minor in mathematics is required. It should include Mathematics 150, 151, 252, 253, 341A, and three units from Mathematics 341B, 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
(Major Code: 19021)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements." Individual master plans for each student are filed with both the physics undergraduate adviser and the Evaluations Office.

A minor is not required with this major.

Preparation for the major and the major consist of basic requirements in the lower and upper division for all students plus additional upper division requirements in one of the following areas: (a) Foundations 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, 253; Physics 195, 195L, 196, 196L, 197, 197L. (38 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 38-42 upper division units to include Mathematics 341A; Physics 311, 313, 350A, 354A, 354B, 357, 400A-400B, 460, and 498A-498B.

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 406, 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 561, 561L, 594.
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 311, 313, 350A, 350B, 354A, 354B, 357, 400A, 400B, 406, 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 406, 552, and 553 must be taken. Additional courses may be selected from Physics 311, 313, 354A, 400A, 499.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

Maximum credit 15 units for any combination of Physics 107, 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, 180A-180B, 195, 195L, 196, 196L, 197, 197L.

149. Special Study (1-2) I, II

Prerequisite: Consent of supervising instructor.

Individual study and laboratory work in the area of the student's major interest. Each student will be assigned a member of the staff who will supervise his work. Maximum credit two units.

180A-180B. Fundamentals of Physics (3-3) I,II

Prerequisite: Credit or concurrent registration in Mathematics 121 or 150. 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 Departmental Placement Examination, Part I.
Fundamental nature of sound and applications to hearing and speech.

204. Light, Vision, and Color (3) II
Phenomena involving light, color, and vision. Topics include mirrors, lenses, mirages, rainbows, process of vision, color specification and mixing and perception.

296. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

UPPER DIVISION COURSES
(Intended for Undergraduates)

301. Energy and Conservation (3)
Prerequisite: Completion of 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.

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.

311. Electronics for Scientists (3) I, II
Two lectures and three hours of laboratory.
Prerequisites: Physics 180B and 182B, or 196 and 196L.
AC and DC circuits, diodes, transistors, conventional and operational amplifiers. Designed to introduce science majors to modern electronic devices and their utilization in scientific instrumentation.

313. Advanced Electronics (3) I, II
Two lectures and three hours of laboratory.
Prerequisite: Physics 311 with minimum grade of C.
Conventional and operational amplifiers, oscillators, analog to digital conversion, pulse and digital electronics. Emphasis is on applications to modern scientific instrumentation.

350A-350B. Classical Mechanics (3-3) I, II
Prerequisites: For 350A, Physics 197, 197L and credit or concurrent registration in Mathematics 253. For 350B, Physics 350A and credit or concurrent registration in Mathematics 341A 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 253. For 354B, Physics 354A and credit or concurrent registration in Mathematics 341A 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 253. For 400B, Physics 400A and credit or concurrent registration in Mathematics 341A or 531.
Electrostatics, magnetostatics, electromagnetic induction, Maxwell's equations, radiation and wave propagation.

406. Optics (3)
Prerequisites: Physics 197, 197L; credit or concurrent registration in Mathematics 341A.
Relection, 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. (Formerly numbered Physics 306.)

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 341A or 531.
The mathematical and physical foundations of the quantum theory in terms of Schroedinger's wave mechanics. Applications to the properties of atoms, quantum chemistry, and nuclei.

513. Electronic Instrumentation (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.

516A-516B. Theory of Scientific Instrumentation (3-2)
Prerequisites: Physics 313; Mathematics 341A 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 406, Mathematics 253.
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 341A 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 406.
Electromagnetic theory, matrix methods of optics, propagation of Gaussian beams, optical resonators, interaction of radiation and atomic systems, theory of laser oscillation, nonlinear optics, specific laser systems, optical detectors, applications of lasers in physics.

553. Modern Optics Laboratory (3)
One lecture and six hours of laboratory.
Prerequisites: Physics 357, 406 with minimum grade of C; credit or concurrent registration in Physics 552.
Experiments in various fields of modern optics such as holography, physics of lasers, Fourier transform spectroscopy, Raman spectroscopy, light modulation techniques, fiber optics, spatial filtering, diffraction grating spectroscopy, radiometry, and nonlinear optics.

554. Topics in Optics Research (1) Cr/NC I, II
Prerequisites: Concurrent registration in Physics 498A or 498B or 797 and consent of instructor.
Student and faculty research project presentations. Maximum credit three units.

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 341A or 531. Recommended: Mathematics 524.
Relative coordinates, Lorentz transformation, covariant formation of the laws of physics, applications of special relativity, introduction to curved space time, cosmology.

596. Special Topics in Physics (1-4) I, II
Prerequisite: Consent of instructor.
Selected topics in classical and modern physics. May be repeated with the consent of the instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Political Science

In the College of Arts and Letters

Faculty

Emeritus: Crain, Generales, Gripp, Heck, Joy, Nesvold
Chair: Schultze
Professors: Andrain, Conniff, Feierabend, Funston, Heck, Hofstetter, Janssen, Johns, Jones, Kahng, Little, Loveman, Miles, Padgett, Schultze, Strand, Terrell
Associate Professors: Anderson, Cutter, Fairlie, Hobbs, Keiser, Lewin, Soule

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.

The Major

Political science is the study of governments. Its concerns, however, are not limited to formal governmental institutions such as the executive and legislative branches or the justice systems. Political science is also interested in other organizations and activities which are part of the process of government, including political parties, interest groups, and the press.

Students who become political science majors will learn about who creates the rules by which people are governed, the attitude and behavior of leaders and members of the public which cause certain decisions to be made, and how these decisions affect such values as liberty, equality, welfare, and justice. Political science is concerned with contemporary public affairs, problems in other political systems and contemporary international politics, as well as with historical growth, evolution, and decline of various types of governments.

The many career opportunities which might be available to political science graduates include teaching at the secondary level; positions with the federal government in areas such as intelligence, foreign affairs, environmental protection, and budget and computer administration; postitions with state and local governments, including administrative aide for a city manager, staff assistant for a county supervisor, and assistant to the registrar of voters; administrative positions on the staffs of national, state, and local legislators; claims adjuster or claims representative; statistical technician; marketing researcher; lobbyist for a business or trade organization; political reporter; and title office trainee.

Advising

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

Political Science Major

With the A.B. Degree in Liberal Arts and Sciences (Major Code: 22071)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

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. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

101. Introduction to Politics and the American Political System (3)
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. Maximum credit six units. (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.

Field I: Political Theory

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.

Field II: Research Methods

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.

Field III: American Government and Politics

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.

330. Women and Electoral Politics (3) I, II, S
Prerequisite: Upper division standing.
The gender gap in American politics. Major differences in attitudes and political behavior. Analysis of growing number of women holding elective office.

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.

Field IV: Public Law

UPPER DIVISION COURSES
(Intended for Undergraduates)

345. Constitutional Government (3)
Constitutionalism as a concept of legal and political philosophy; foundations of American constitutionalism; origin and framing of the American Constitution; development of constitutional principles through judicial interpretation.

346. Law and the Political System (3)
Forces influencing the making of law; relationship between social and legal change; nature and limits of the judicial function. (Formerly numbered Political Science 546.)

347A-347B. American Constitutional Law (3-3)
Substantive principles of American constitutional law. Rights and liberties protected by the Constitution against action of federal and state governments. May include problems of judicial review, federal system, separation of powers, nature of selected congressional-presidential powers. Meets graduation requirement in United States Constitution. (Formerly numbered Political Science 547A-547B.)

348. The Supreme Court and Contemporary Issues (3)
Recent decisions of the Supreme Court of the United States and their relationship to contemporary political and social issues. Not open to those students with credit for Political Science 347A-347B.

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.

Field V: Comparative Politics

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.

Field VI: International Politics

UPPER DIVISION COURSES
(Intended for Undergraduates)

375. International Relations (3)
Dynamics of conflict and cooperation among national, international and transnational actors; contributing political, economic, and social factors.

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. A minimum of six upper division units must be completed at San Diego State University.

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. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

High School Equivalents

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high school courses will not count as college credit toward graduation.

Secondary school language courses can be used as follows:

1. The first *two years* of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.
2. The first *three years* of high school level language count as the equivalent of the first two college semesters, although students with fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not receive credit for the first semester college course unless at least five years separate the last high school course and the first college course.
3. *Four years* of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

Courses

LOWER DIVISION COURSES

Native speakers of Portuguese will not receive credit for taking lower division courses in Portuguese except with advance approval from the department.

All lower division courses in Portuguese are taught in Portuguese.

101. Elementary/Intensive (5) I, II
Five lectures and one hour of laboratory.
Pronunciation, oral practice, reading on Luso-Brazilian culture and civilization, essentials of grammar. Not open to students who have completed three years of high school Portuguese unless the third course was completed five or more years ago.

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: Alf, Carlson, Harari, Harrison, Hunrichs, Kaplan, O., Karen, Kidwell, Koppman, Leukel, O'Day, Psomas, Segal, Smith, Turner, Voeks
Chair: Hillix
Professors: Borges, Bryson, J., Bryson, R., Dicken, Fenson, Franzini, Gallo, Graf, Graham, Grossberg, Hillix, Hornbeck, Kaplan, R., Kass, Leckart, Levine, Litrownik, Lorwin, Martin, McDonald, Mollenauer, Penn, Plotnik, Radlow, Rodin, Saccuzzo, Sattler, Schulte, Sheposh, Spinetta, Stevens, Yaremko
Associate Professors: Brown, Defran, Ingram, Lee, Lynn, Marshall, McCordick, Murphy, Price, Scollay
Assistant Professor: Reilly
Lecturer: Pollchik

Offered by the Department

Doctor of Philosophy degree in clinical psychology.
Master of Arts degree in psychology.
Master of Science degree in psychology.
Major in psychology with the A.B. degree in liberal arts and sciences.
Minor in psychology.

The Major

Psychology is the scientific study of the behavior of humans and animals. Psychologists use scientific methods in an attempt to understand and predict behavior, to develop procedures for changing behavior, and to evaluate treatment strategies. Research might be conducted in the laboratory where the factors studied can be controlled; or it may take place in a real life setting where more natural behavior is studied.

There are many areas of psychology, each attempting to explain behavior from a slightly different perspective. Social psychology is concerned with the effects of social situations on human behavior. Personality theorists study individual behavior. Developmental psychologists study principles and processes responsible for change throughout life. Comparative psychologists study particular animal behaviors across the range of species, while physiological psychologists are concerned with the biological bases of behavior. Learning is an area of psychology exploring how new behaviors are learned and maintained. Cognitive psychology pursues the world of memory, thought, problem solving, and the psychological aspects of learning.

Clinical psychologists study ways to help individuals and groups of individuals change their behavior. Industrial/organizational psychologists are concerned with the physical and social aspects of people's work environments as they affect work output.

Some psychologists, particularly clinical psychologists and industrial/organizational psychologists, also work in applied settings.

Numerous and varied career opportunities are open to students who hold the bachelor's or master's degree in psychology. These include careers in business, such as management, public relations, personnel, and staff training; in agencies responsible for mental health service delivery in clinics, hospitals, and special schools; in teaching for child care facilities, preschools, and in conjunction with a teaching credential in elementary and secondary schools; in research, to conduct surveys, program evaluations, and basic study.

A bachelor's degree in psychology serves as preparation for graduate programs in psychology, social work, education, counseling, law, medicine, and business. A Ph.D. in psychology is required for teaching at the university level and for licensing as a psychologist (independent practice of psychotherapy).

Psychology Major

With the A.B. Degree in Liberal Arts and Sciences (Major Code: 20011)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

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, 211, 260, 270. (12 units.) Recommended courses in related fields: Six units in General Education courses in biology; three units in a General Education course in philosophy; and six units in General Education courses in anthropology and/or sociology.

Foreign Language Requirement. Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 24 upper division units in psychology to include twelve units selected from Psychology 330, 340, 350, 351, 380, 388. 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, 211, 260, 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 26 upper division units in psychology to include Psychology 410, 470; four units selected from 412, 413, 415, 416, 417, 418, 419; nine units selected from 330, 340, 350, 351, 370, 380, 388; and six units selected from courses in consultation with the departmental adviser.

Psychology Minor

Qualification on the Mathematics Departmental Placement Examination 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, 211, and 270 or equivalent; 14 units of upper division psychology to include Psychology 410 and three of the following: Psychology 316, 416, 417, 419, 587. (23 units.)

Industrial/Organization: Psychology 101 and 270 or equivalent; 12 units of upper division psychology to include Psychology 320, 470, and two of the following: Psychology 321, 322, 326, 342. (18-19 units.)

Personality and Social: Psychology 101 and 211 or 260; 12 units of upper division psychology of which nine must be selected from Psychology 330, 340, 350 and 351. (18 units.)

Physiological: Psychology 101, 211, 260, and 270 or equivalent; 11 units of upper division psychology to include Psychology 410, 413 and 460. (23 units.)

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

101. Introductory Psychology (3) I, II (CAN PSY 4)
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.

211. Learning (3) I, II, S
Prerequisite: Psychology 101.
Basic principles and research in animal and human learning. (Formerly numbered Psychology 210.)

260. Introduction to Physiological Psychology (3) I, II
Prerequisite: Psychology 101.
Elementary physiology of the nervous system. Physiological mechanisms underlying the psychological phenomena of sensation, perception, emotion, arousal, motivation, learning and memory, and cortical specialization.

270. Statistical Methods in Psychology (3) I, II
Prerequisites: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental Placement Examination, Part I. Proof of completion of prerequisites required. Recommended: Psychology 101.
Quantitative methods in psychology. Measures of central tendency and variability, graphic methods and percentiles, linear correlation and regression, applications of the normal probability curve, and an introduction to statistical inference including analysis of variance and chi-square. Students with credit or concurrent registration in 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 summer lectures by distinguished behavioral, biomedical, and social scientists on subjects related to current understanding of contemporary concerns. Reading and reports required of students enrolled for credit. See Class Schedule for specific content. Maximum credit three units.

302. Human Sexuality (1) Cr/NC Offered only in Extension
Prerequisite: Psychology 101.
New sex roles and their impact on male and female sexuality; coping with problems in love and sex. Topics include cohabitation, marriage, gay relationships, birth control, sexually transmitted diseases, lovemaking, sex and aging. Not open to students with credit in Psychology 455. Credit received in Psychology 302 not applicable to the psychology major.

303. Drug Use, Abuse, and Treatment (1) Cr/NC Offered only in Extension
Prerequisite: Psychology 101.
Motivational and personality factors involved in drug use and abuse; psychological, physiological, and neurological effects of commonly used drugs; and methods to treat drug-related problems. Credit received in Psychology 303 not applicable to the psychology major.

304. Stress, Anxiety, and Coping (1) Cr/NC Offered only in Extension
Prerequisite: Psychology 101.
Psychological and physiological effects of stress. Topics include body's response to normal stressors, development of psychosomatic problems, and reduction of stress-related problems through psychological coping techniques. Credit received in Psychology 304 not applicable to the psychology major.

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.

316. Operant Behavior (3)
Prerequisite: Psychology 101. Recommended: Psychology 211.
Contingencies of reinforcement, stimulus control, response shaping, aversive control, and other basic principles of operant behavior applied to the understanding and modification of human behavior.

317. Comparative Animal Psychology (3)
Prerequisite: Psychology 101 or other introductory course in a social or biological science.
Behavior of both captive and wild animals. Psychological factors and behavioral differences across species and their evolutionary and developmental histories. (Formerly numbered Psychology 314.)

320. Personnel and Industrial Psychology (3)
Prerequisites: Psychology 101, and 270 or statistics in another field.
Psychological principles applied to industrial problems of selection, placement and training.

321. Organizational Psychology (3)
Prerequisite: Psychology 101.
Human behavior in the context of organizational life. Factors related to effectiveness of individuals and groups within organizations, including organization design, leadership and control, motivation, cooperation and conflict.

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.
Psychological development of the normal individual from conception through childhood, adolescence, and maturity. Emphasis on the interdependence of various periods of the individual's life.

335. Psychology of Adult Development and Aging (3)
Prerequisite: Psychology 101.
The psychological, physiological, and sociological factors influencing behavior in the later years of life.

340. Social Psychology (3) I, II
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)
Two lectures and two hours of activity.
History, methods, and problems of public opinion and attitude measurement. Emphasis on applications in politics, marketing, personnel work, journalism, and radio and television audience measurement. Field experience.

347. Psychology of Contemporary Social Problems (3)
Prerequisite: Psychology 101.
Discussion of social issues and problems of importance to the contemporary world, from the point of view of psychological theory, method and knowledge.

350. Abnormal Psychology (3) I, II
Prerequisite: Psychology 101.
Causes and treatment of abnormal behavior with emphasis on major behavior disorders.

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.
Fundamentals of regulation, administration, tolerance, dependence, and physiological activity of drugs. Effects of stimulants, depressants, opiates, psychedelics, and psychotherapeutic drugs on the nervous system and on cognitive, personality, and behavioral functioning.

370. Intermediate Statistics (3) I, II
Two lectures and two hours of activity.
Prerequisite: Psychology 270.
Analyses of realistic data sets characteristic of psychological research. Includes analysis of variance, multiple regression, analysis of categorical data, and use of personal computers.

375. Computer Methods in Psychology (3)
Prerequisite: Psychology 270.
Principles and techniques of programming in a modern computer language with applications in statistical and other quantitative topics in psychology.

380. Cognitive Psychology (3) I, II
Prerequisite: Psychology 101. Recommended: Psychology 211.
Theory and research on attention, learning, memory, thinking, understanding, and language. (Formerly numbered Psychology 310.)

388. Sensation and Perception (3)
Prerequisite: Psychology 101.
Theory and research in sensory and perceptual processes.

401. Philosophical Issues in Psychology (3)
Prerequisite: Six units of psychology.
Modern empiricism and the philosophy of science as related to issues in contemporary psychology. (Formerly numbered Psychology 481.)

410. Introduction to Experimental Psychology (4) I, II
Two lectures and six hours of laboratory.
Prerequisites: Psychology 211 and 270.
Understanding of experimental design, quantitative methods, and experimental reports as they are applied to all areas of psychology.

412. Experimental Psychology: Social (4) I, II
Two lectures and six hours of laboratory.
Prerequisite: Psychology 410.
Experimental literature, assigned and original laboratory projects in the field of social psychology.

413. Experimental Psychology: Physiological (4)
Two lectures and six hours of laboratory.
Prerequisites: Psychology 260 or 460; and Psychology 410.
Experimental literature, assigned and original laboratory projects in the field of physiological psychology. Small animal surgery, histological and pharmacological techniques.

415. Experimental Psychology: Personality and Clinical (4) I, II
Two lectures and six hours of laboratory.
Prerequisite: Psychology 410. Recommended: Psychology 350 or 351.
Experimental and theoretical literature, assigned and original laboratory projects in the field of personality and clinical psychology.

416. Experimental Psychology: Learning (4)
Two lectures and six hours of laboratory.
Prerequisite: Psychology 410.
Experimental literature, assigned and original laboratory projects in the field of learning.

417. Experimental Psychology: Primate Behavior (4)
Two lectures and six hours of laboratory.
Prerequisites: Psychology 101; 260 or three units of biology or three units of anthropology; and Psychology 270. Recommended: Psychology 410.
Experimental literature, assigned and original observational and experimental projects in the field of primate learning and behavior.

418. Experimental Psychology: Child Development (4) I, II
Two lectures and six hours of laboratory.
Prerequisite: Psychology 410. Recommended: Psychology 330.
Methods, techniques and principles used in the scientific study of child behavior.

419. Experimental Psychology: Memory and Cognition (4)
Two lectures and six hours of laboratory.
Prerequisite: Psychology 410. Recommended: Psychology 380.
Experimental literature, assigned and original laboratory projects in human memory and cognition. Examination of information-processing capacities and processes in perception, learning, memory, and other cognitive activities.

432. Advanced Topics in Developmental Psychology (3)
Prerequisite: Psychology 330.
Selected areas in developmental psychology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

446. Advanced Topics in Social Psychology (3)
Prerequisite: Psychology 340.
Selected areas in social psychology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

452. Introduction to Counseling and Therapy (3) I, II
Two lectures and two hours of activity.
Prerequisite: Psychology 350 or 351.
A survey of theory, methods and research in psychological approaches to personality and behavior change. Practice in basic interviewing and critical analysis of interviews. Not open to students with credit in Psychology 650 or Counselor Education 660.

453. Advanced Topics in Abnormal Psychology (3)
Prerequisite: Psychology 350.
Selected areas in abnormal psychology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

454. Mental 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.

470. Psychological Testing and Measurement (3) I, II
Prerequisite: Psychology 270, or a semester of statistical methods in any other department.
Measurement theory and the basic principles of testing. The election and critical evaluation of group tests of intelligence, personality, aptitude, interest and achievement. (Formerly numbered Psychology 405.)

495. Readings and Practice in Companionship Therapy (3) I, II
Prerequisite: Six units from Psychology 330, 340, 350, or 351.
Students are paired with troubled or potentially troubled clients from selected community agencies, supervised by both the instructor and the agency. Assigned readings, small group meetings, written reports required. May be repeated with new client and agency. Maximum credit six units.

496. Selected Topics in Psychology (1-4)
Prerequisite: Psychology 101.
Intensive study in specific areas of psychology. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

497. Senior Project (1-3) I, II
Prerequisites: Twelve units of psychology and consent of instructor.
An individual investigation and report on a research project. Maximum credit six units.

499. Special Study (1-3) I, II
Prerequisite: Consent of department chair.
Individual study, including library or laboratory research and a written report. Maximum credit six units.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

501. History of Psychology (3)
Limited to psychology majors with senior standing or graduate students.
The historical background of modern psychology. (Formerly numbered Psychology 580.)

551. Clinical Psychology: Theory and Practice (4)
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.

587. Advanced Principles of Learning and Cognition (3)
Prerequisites: Psychology 211 and 270.
Empirical data, basic principles and theoretical positions of major theorists in learning and cognitive psychology.

596. Selected Topics in Psychology (3)
Prerequisites: Psychology 101 and consent of instructor.
Intensive study in specific areas of psychology. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Public Administration and Urban Studies

In the College of Professional Studies and Fine Arts

Public Administration and Urban Studies is a Member of the National Association of Schools of Public Affairs and Administration (NASPAA).

Faculty

Emeritus: Bigger, Kitchen, Kochanski, Leiffer, Love
Director: Rea
Professors: Boostrom, Clapp, Gazell, Gilbreath, Gitchoff, Gupta, Rea, Sparrow, Sutton
Associate Professors: Calavita, Caves, Henderson, Pugh, Stock, Waste
Assistant Professors: Lee, Walshok

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).

The Major

Today, more than ever before, the nation is in need of effective leadership and competence in the administration of public affairs. The growth of all levels of government and public service organizations and their increasing responsibilities in a complex society have led directly to the need for more capable public administrators. The primary purpose of the public administration major is to provide knowledge and skills for students who wish to prepare themselves for management careers in government, community agencies, private not-for-profit organizations, planning and consulting firms, and private sector organizations that work in partnership with the public sector.

The undergraduate public administration major is an interdisciplinary program. In addition to the courses taken within the department, provisions have been made for the student to select additional courses in areas as diverse as economics, sociology, social welfare, political science, and psychology. Required preparatory courses for the major include classes in accountancy, economics, information and decision systems, political science, and statistics.

Career opportunities in public administration can be found throughout the public and private sectors, and the future is represented by an expanding job market. The Public Administration Center within the School of Public Administration and Urban Studies provides a comprehensive file of current job openings locally, throughout California, and across the country.

Upon graduation, students have secured a wide variety of administrative positions within government, the private sector, and community agencies. For example, graduating students have recently been placed with city personnel and finance departments, county operating departments, special districts, hospitals, and consulting firms.

Public Administration Major

With the A.B. Degree in Applied Arts and Sciences
(Major Code: 21021)

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 212, Information and Decision Systems 180, Economics 101 and 102, Political Science 102, Public Administration 200, and a three-unit course in statistics. (22 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 36 upper division units to include 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
(Major Code: 21021)

Preparation for the Major. Accountancy 212, Economics 101 and 102, Information and Decision Systems 180, Political Science 102, Public Administration 200, and a three-unit course in statistics. (22 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 36 upper division units to include Public Administration 301, 310, 330, 340, 450, 460, 497 or 498; and Public Administration 320, 420, 525, and two courses selected from Public Administration 341, 350, 510, and 512. A master plan of courses taken to fulfill this emphasis must be approved by a city planning program faculty adviser and filed with the Evaluations Office one semester before graduation.

Public Administration Minor

The minor in public administration consists of 24 units to include Political Science 102 and a course in statistics or Information and Decision Systems 180, Public Administration 301, 310 or 312 or 315, 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. A minimum of six upper division units must be completed at San Diego State University.

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.

Courses

LOWER DIVISION COURSE

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.

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.

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. Not open to students with credit in Management 352.

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. Not open to students with credit in Management 351 or Psychology 321.

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.

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: Hanson
Chair: Dustin
Professors: Dixon, Duncan, Dustin, Gattas, Geba
Associate Professors: Hutchinson, Lamke, Peterson, Rankin
Assistant Professor: Namba
Lecturers: Beck, Nickerson, Philips

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.

The Major

A commitment to working with people to enhance the quality of their lives is important to a study of recreation.

Increasingly diverse opportunities are available in the park and recreation profession. The major offers a sufficiently wide range of courses for students who may wish to enter diverse recreation, park, or human services fields.

Students in this major elect one of three areas of emphasis. The outdoor recreation emphasis stresses conservation, natural science, ecology, and recreation administration. Society's efforts to sustain a balance between the environment and recreational use are studied.

Recreation systems management stresses the effective organization, administration and supervision of recreation and park agencies, both public and private.

Recreation therapy prepares students to work with the disabled. It stresses elements of both psychology and social science, as well as recreation leadership skills.

Outdoor recreation graduates serve as naturalists, outdoor education specialists, outdoor recreation planners, park interpreters, and park rangers.

Recreation systems management graduates find employment as administrators with public, private or commercial park recreation agencies and as recreation supervisors. They also assume professional positions with boys' clubs, Girl Scouts, Jewish community centers, YMCA organizations, condominium associations, and private clubs.

Recreation therapy graduates may become therapeutic recreation specialists, registered and certified by the State Board of Personnel. They are employed typically by hospitals, convalescent and rehabilitation centers, and retirement communities.

Recreation Administration Major

With the A.B. Degree in Applied Arts and Sciences
(Major Code: 21031)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

The major in recreation administration may be planned with an emphasis in one of the following three areas: (1) Outdoor Recreation, (2) Recreation Systems Management, or (3) Recreation Therapy.

A minor is not required with this major.

Emphasis in Outdoor Recreation

Preparation for the Major. Recreation 101, 107, 204, 205, 284; Biology 100, 100L; Geography 101; Geological Sciences 100, 101; Psychology 101; Sociology 101. (32 units.)

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 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 482, 496, 548, 549.

Emphasis in Recreation Systems Management

Preparation for the Major. Information and Decision Systems 290; Psychology 101; Recreation 101, 107, 204, 205, 284; Sociology 101; six units selected from Accountancy 100; Economics 101; Finance 140; Information and Decision 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 and Decision Systems 290; Psychology 101; Recreation 101, 107, 204, 205, 284; Sociology 101. (31 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 336; 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 21 units to include Recreation 101, 107, 204, 205, and nine upper division units selected from Recreation 340, 351, 361, 371, 452, 464, 475, 485, 486, 496, 548, 549, 565, 575, 580. Prerequisites to the minor include Psychology 101 and Sociology 101.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

101. Introduction to Recreation Systems (3) I, II
Basic role of recreation and park systems in today's society. Scope of recreation services, their history, philosophy, facilities, programs, personnel and evaluation.

107. Recreation Planning and Leadership (3) I, II
Two lectures and three hours of laboratory.
Theories, principles and techniques of group leadership, group dynamics, communication, problem solving, creativity, program planning, and publicity as they relate to selected recreation systems.

110. Principles of Camp Counseling (3)
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.

284. Supervised Field Work (3) I, II, S Cr/NC
Prerequisites: Consent of instructor or department chair, credit or concurrent registration in Recreation 107, and 125 hours experience in recreation leadership.
Observation and participation in community recreation leadership. Practical experience in a variety of recreational settings. Minimum of one hour per week in class plus eight hours per week at an agency.

296. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a Bachelor's degree.

UPPER DIVISION COURSES
(Intended for Undergraduates)

300. Honors Course (1-3)
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)
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) I, II
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.

482. Principles of Outdoor Education (3) II
Prerequisite: Recreation 101.
Multisensory methods of incorporating ecological attitudes and concepts in outdoor recreation programs. Awareness of natural environment and application of instructional techniques in outdoor education.

484. Directed Leadership (3) I, II, S Cr/NC
One lecture and eight hours of supervised activity.
Prerequisite: Recreation 284.
Supervised leadership experience in public and private recreation agencies. Maximum credit six units.

485. Outdoor Recreation Planning and Policy (3) I, II
Nature and scope of recreation in nonurban areas. Public demand for recreation and its impact on natural resources. Management, planning, research and operation of regional and national park and recreation areas.

486. Interpretative Techniques in Outdoor Recreation (3) I, II
Concepts of interpretation. Role of the interpreter. Designing nature trails, exhibits and centers. Audiovisual aids to interpretation.

496. Experimental Topics (1-4)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

498. Internship in Recreation Systems (6 or 12) 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.

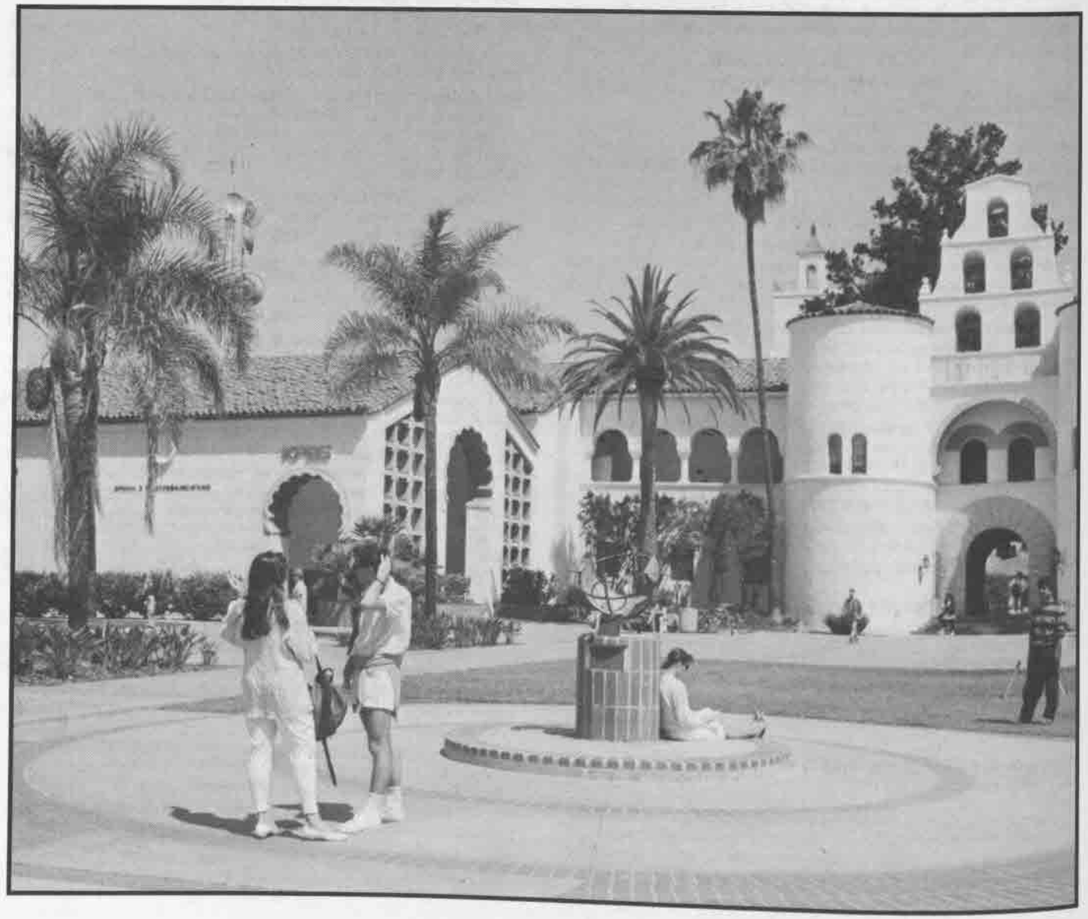
549. Camp Administration (3)
Prerequisite: Recreation 110.
Operation of resident, day and travel camps. Staff management, health and safety, finances, food services, maintenance, planning and publicity.

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.

575. Designing Recreation Areas and Facilities (3) I, II
Prerequisite: Recreation 101.
Design principles and concepts applied to planning and development of park and recreation areas and facilities.

580. Leisure and the Aging Process (3) II
Concepts of the relationship between leisure and gerontology are examined. Influence of leisure and recreation on work and life satisfaction of older adults.

GRADUATE COURSES
Refer to the Graduate Bulletin.



Religious Studies

In the College of Arts and Letters

Faculty
Emeritus: Anderson, Jordan
Chair: Sparks
Professors: Downing, Friedman, Sparks
Associate Professor: Khalil
Assistant Professors: Hermansen, Holler
Lecturers: Johnson, Molnar, Mueller, Nelson, Thomas

Offered by the Department
Major in religious studies with the A.B. degree in liberal arts and sciences.
Minor in religious studies.

The Major

Religious studies seeks to explore the role of religion as an important part of human history. It is designed to improve understanding of religion, not to advocate religious belief or any particular religious tradition.

Religious studies students examine the major Eastern and Western religions, their founders and leaders, myths and rituals, theologies, creeds and scriptures, and institutional forms, as well as the relationship between religion and literature, the arts, ethics, science, and psychology.

Career opportunities available to religious studies graduates include positions such as university, college, community college, or secondary school teacher (graduate study and/or teaching credential required); counselor and social worker (graduate study required); religious education director, rabbi, priest, or minister in a church or synagogue setting (graduate training required); religion reporter or editor for a newspaper or magazine; textbook editor. The religious studies program is also a good background for graduate professional programs in such areas as law, business, and foreign service.

Advising

All College of Arts and Letters majors are urged to consult with their department adviser as soon as possible; they are required to meet with their department adviser within the first two semesters after declaration or change of major. Students seeking a minor in religious studies under Option 4 below must confer with the department adviser in the first semester of their study.

Religious Studies Major

With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 15101)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

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;

or AN INDIVIDUALIZED PROGRAM of 12 upper division units approved in advance by the department adviser.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

101. World Religions (3) I, II
Major figures, attitudes and teachings of world religions.

102. Introduction to Religion (3) I, II
Nature, meaning, and presuppositions of religious experience.

201. Ways of Understanding Religion (3)
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 Ethics (3) I
Prerequisite: Three units of religious studies.
Values, morality, and responsibility, from religious perspectives. Application to contemporary moral issues.

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.

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

GRADUATE COURSES
Refer to the Graduate Bulletin

Russian

In the College of Arts and Letters

Faculty
Emeritus: Dukas
Chair: Wulbern
Professors: Fetzer, Kozlik
Lecturer: Shapovalov

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.

The Major

Russian is one of the most widely used languages in the world today. About one-third of all scientific articles are published in Russian. Some of the world's great literature has been produced by Russian writers such as Tolstoy, Chekhov, and Solzhenitsyn. The political impact of the Soviet Union is felt internationally. Knowledge of Russian will provide students with a better understanding of one of the world's important and influential countries.

The Russian program offers a wide range of courses, including specialized courses in literature and linguistics. This major is useful preparation for graduate programs in international trade, international law, librarianship, public administration, and journalism. For students interested in pursuing further studies in the Russian language, a Master of Arts degree is offered. This program requires intensive scholarly investigation and may prepare students for careers in which fluency in Russian is essential.

Knowlege of Russian, particularly when combined with business-related courses, is becoming a valuable asset. Many American firms have opened offices in Moscow and Leningrad, and the volume of American trade with the Soviet Union has been growing at a rapid pace. As a result, there are indications of an expanding interest in Russian graduates by American business organizations with employment possibilities in the United States and the Soviet Union.

Other career possibilities include Russian specialists, generally employed by the federal government; high school teachers; librarians; translators; and interpreters.

Advising

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

Russian Major

With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 11061)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

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 With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 11061)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under 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 coursework for preparation for the major.

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 30 upper division units in Russian to include 301, 302, 305A-305B, 430, 580, 581; and nine upper division units in Russian.

Proficiency Examination. Before taking a student teaching assignment in Russian, the candidate for the credential may be required to pass an oral and written proficiency examination in the language, administered by the Department of German and Russian Languages and Literatures. The candidate must consult with the chair of the Department of German and Russian Languages and Literatures concerning this examination.

Russian Minor

The minor in Russian consists of a minimum of 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. A minimum of six upper division units must be completed at San Diego State University.

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 coursework is Russian 101, 102, and 201. Refer to section of catalog on "Graduation Requirements" for additional ways to satisfy competency.

High School Equivalents

High school foreign language courses may be used for purposes of placement in college courses and may be counted toward meeting the foreign language requirement in various majors. These high

school courses will not count as college credit toward graduation.

Secondary school language courses can be used as follows:

1. The first *two years* of high school level language count as the equivalent of the first semester of a college level course, although students with fewer than three years of high school level language may complete the first semester college course for graduation credit.

2. The first *three years* of high school level language count as the equivalent of the first two college semesters, although students with fewer than four years of high school level language may complete the second semester college course for graduation credit. Students who have completed three years of foreign language in high school will not receive credit for the first semester college course unless at least five years separate the last high school course and the first college course.

3. *Four years* of high school level language count as the equivalent of three college semesters, thus fulfilling the foreign language requirement.

Courses

LOWER DIVISION COURSES

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. Taught in English with readings in English.

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.

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)

501. Translation (3)
Prerequisite: Russian 302.
Comparison of Russian and English through translation of a variety of texts from Russian to English and from English to Russian.

555. Russian Short Story, Drama and Poetry of the Nineteenth Century (3)
Prerequisites: Russian 202 and 212.
Development of the Russian short story, drama and poetry of the nineteenth century. (Formerly numbered Russian 555A-555B.)

561. Russian Novel of the Nineteenth Century (3)
Prerequisites: Russian 202 and 212.
Development of the Russian novel of the nineteenth century. (Formerly numbered Russian 561A-561B.)

563. Russian Literature of the Twentieth Century (3)
Prerequisites: Russian 202 and 212.
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. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Social Science

In the College of Arts and Letters

Faculty

Social Science is administered through the Social Science Committee. Albert O'Brien, Department of History, is coordinator.

The Major

Social science is a multidisciplinary program, encompassing the faculties and courses of twelve departments – Anthropology, Economics, Geography, History, Political Science, Sociology, Afro-American Studies, American Indian Studies, Mexican American Studies, Psychology, Religious Studies, and Women's Studies. The major aims to promote an appreciation for the interrelatedness of these disciplines by exposing students to their varied methodologies. This program, therefore, is especially appropriate for students who wish to be liberally educated in a broad spectrum of understandings, insights, and appreciations. Students may devise their own focus or select either the emphasis outlined in Africa and the Middle East or in Environment.

The social science major is appropriate for many beginning positions in government and, when supplemented with a business administration minor, for careers in business. For students who continue in graduate study after receiving their bachelor's degrees, it is an excellent preparation for graduate and professional programs in law, social work, public administration, librarianship, counseling, business, and the ministry. Students who complete the Single Subject Teaching Credential in Social Science are prepared to teach world history, United States history, geography, government, and economics in high school.

The social science major with an emphasis in environment provides an opportunity for the student to gain an interdisciplinary perspective on some of the major quality of life, public health, and natural resource conservation problems facing the world today. The course offerings available in the emphasis will provide a basic understanding of the nature of the problems, as well as give more specific insights into such practical aspects as the economics and politics associated with these environmental challenges. The large range of courses from which students may choose allows them latitude to pursue their individual interests.

Students selecting the emphasis in environment will be prepared to pursue careers in a wide variety of fields associated with natural resource management, such as county, state, or federal agencies that manage parks, recreation areas, or other public lands. Entry-level jobs with planning or consulting firms are other possibilities. The emphasis will also provide students with a broad background that will be useful in a variety of graduate programs dealing with the natural environment or with natural resource conservation.

Advising

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

Social Science Major

With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 22011)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

Preparation for the Major. Three units of statistics selected from Economics 201, Mathematics 250, Political Science 201, Psychology 270, or Sociology 201. A six-unit sequence in each of three of the following departments selected from: (1) Anthropology 101, 102; (2) Economics 100, 101, 102; (3) Geography 101, 102; (4) History 105, 106, 110A-110B, 115A-115B; (5) Mexican American Studies 110A-110B, 120A-120B; (6) Political Science 101, 102, 103; (7) Sociology 101, 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 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, 480, 481.

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, 480, 481.
Psychology 320, 321, 322, 330, 340, 342, 347, 350, 351, 452, 453, 454, 455.
Religious Studies 301, 305, 314, 316, 318, 340, 353, 363, 365, 401, 403.
Women's Studies 310, 320, 325, 330, 340, 341A-341B, 360, 370, 375, 390, 480.

Emphasis in Africa and the Middle East

The adviser for this emphasis is Dr. Charles H. Cutter, Department of Political Science.

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 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, 475A, 475B, and 574; and Political Science 363 or 364. In addition, the following courses are recommended: Anthropology 350, 424, 529; Art 365, 569; Economics 365, 489; Political Science 361, 381; Religious Studies 340.

Emphasis in Environment

The adviser for this emphasis is Dr. Philip R. Pryde, Department of Geography.

Preparation for the Major. Biology 100 and 100L; a six-unit sequence in each of three of the following fields: (1) anthropology, (2) economics, (3) geography, (4) history, (5) political science, and (6) sociology. (22 units.) Courses recommended for these sequences are as follows: Anthropology 101 and 102, Economics 101 and 102, Geography 101 and 102, History 105, 106, or 110A-110B or 115A-115B, Political Science 101 and 102, Sociology 101 and 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 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, 378, 570, 573, 574, 575, 576; History 340, 540; Political Science 334, 335; Sociology 350, 508, 557. Recommended: Biology 454, 500, 544; Geological Sciences 303; Physics 301.

Social Science Major

For the Single Subject Teaching Credential
With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 22011)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under 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 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 410A-410B, 442A-442B, 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 selected from History 305A-305B, 407A-407B, 415A-415B, 420, 421, 473A-473B, 475A-475B, 551A-551B; Political Science 301A-301B, 302, 356, 358, 359, 361, 363, 364, 375, 378, 381, 566, 568. At least three units must be taken from each department.

Three units of geography selected from Geography 312, 321, 350, 354, 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, 428, 432, 529; Economics 330, 336, 338, 360, 489, 490; Psychology 330, 340, 347, 350, 351, 455; Sociology 325, 350, 400, 404, 422, 424, 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, as follows: three units selected from Economics 201, Political Science 201, Sociology 201; three units selected from Mathematics 107 or three one-unit sections of Social Science 201; 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. Courses in the certificate may not be counted toward the major or minor.

* Additional prerequisites required for these courses.

Courses

LOWER DIVISION COURSES

201A. Statistical Computer Package: SPSS[x] (1) I, II Cr/NC

Eleven hours of supervised laboratory instruction and nineteen hours of supervised technical activity.

Prerequisite: Credit or concurrent registration in an elementary statistics course.

Organization and modification of numerical data for computer analysis. Use of selected statistical procedures from the Statistical Package for the Social Sciences (SPSS[x]) including frequency distributions, crosstabulation, t-tests, correlation and regression. Maximum combined credit of three units of Social Science 201A, 201B, 201C, 201D applicable to a bachelor's degree.

201B. Statistical Computer Package: BMDP (1) I, II Cr/NC

Eleven hours of supervised laboratory instruction and nineteen hours of supervised technical activity.

Prerequisite: Credit or concurrent registration in an elementary statistics course.

Organization and modification of numerical data for computer analysis. Use of selected statistical procedures from the Biomedical Computer Programs (BMDP) including data description, t-tests, multiway frequency tables, multiple linear regression, analysis of variance and covariance, and nonparametric procedures. Maximum combined credit of three units of Social Science 201A, 201B, 201C, 201D applicable to a bachelor's degree.

201C. Statistical Computer Package: TSP (1) I, II Cr/NC

Eleven hours of supervised laboratory instruction and nineteen hours of supervised technical activity.

Prerequisite: Credit or concurrent registration in Economics 347.

Organization and modification of numerical data for computer analysis. Use of selected statistical procedures from the Times Series Processor (TSP) computer program including ordinary least squares regression, residual analysis, autocorrelation correction, correction for heteroskedasticity and two stage least squares regression. Maximum combined credit of three units of Social Science 201A, 201B, 201C, 201D applicable to a bachelor's degree.

201D. Statistical Computer Package: SAS (1) I, II Cr/NC

Eleven hours of supervised laboratory instruction and nineteen hours of supervised technical activity.

Prerequisite: Credit or concurrent registration in an elementary statistics course.

Organization and modification of numerical data for computer analysis. Use of selected statistical procedures from the SAS computer program including frequency distributions, crosstabulation, correlation, regression, analysis of variance, t-tests, and nonparametric procedures. Maximum combined credit of three units of Social Science 201A, 201B, 201C, 201D applicable to a bachelor's degree.

GRADUATE COURSES

Refer to the Graduate Bulletin.

Social Work

In the College of Health and Human Services

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, Cohen, Haworth, Herman, Ishikawa, Kahn, Maxwell, Morgan, Ontell, Reichert, Riehman, Stumpf, Watson

Director: Harbert

Associate Director: Siman

Professors: Butler, Davis, Dean, Griffin, Harbert, Kelley, Kukkonen, Lee, Stanford, Valle, Zuniga

Associate Professors: Ellis, Gallegos, Guidry, Hall, Harris, Pritchard, Roberts-DeGennaro, Rumelhart, Sardinas, Schmidt, Siman

Assistant Professors: Ajemian, Jimenez, Lockery, Raymer, Stoesz, Sucato

Lecturer: Packard

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.

The Major

The profession of social work is deeply committed to the relief of human distress and inequality, and to the assistance of people in the meeting of their social, psychological, and economic needs. The objective of the School of Social Work is to assist students in acquiring the essential knowledge, philosophy, and basic skills required for beginning professional social work practice; namely, to develop a philosophy which recognizes individual human welfare as the purpose and goal of social policy, to develop an awareness and understanding of human behavior, to attain a level of competence in practice methods and skills, to acquire knowledge in methods of research in social work, and to accept responsibility for continued development of competence in their practice after they have completed their academic education.

The social work major is designed to apply to a wide variety of social work practice settings. Preparatory coursework for the major includes a basis in the liberal arts and sciences. The upper division curriculum is intensive, encompassing coursework in cultural pluralism, human behavior, social policy and program evaluation, social work practice, and social work research. Required field experience is an integral part of the program.

The A.B. degree prepares students for immediate employment in those social work positions which do not require graduate level preparation, as well as providing the foundation for graduate study.

Social Work Major

With the A.B. Degree in Liberal Arts and Sciences or in Applied Arts and Sciences (Major Code: 21041)

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 entitled "Graduation Requirements."

A minor is not required with this major.

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 250. (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. Students in the liberal arts and sciences major must select with the approval of the adviser three of the six units of electives outside of social work.

Recommended course sequence: Below is the recommended course sequence in the major. Students who cannot follow this sequence may have problems in completing the major and they should consult the Program Adviser.

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 three units of electives in social work.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Human Services Paraprofessional Certificate

This certificate is designed 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 Undergraduate Social Work Program adviser.

Awarding of the certificate requires completion of an approved pattern of ten courses (30 units) with a minimum grade point average of 2.0, to include Social Work 350, 360, 370A*, 381, 382, 489A*, 489B* (3 units); Health Science 574; 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. Fifteen units in the certificate program may be counted toward the major in Social Work, but may not be counted toward the minor. For further information, consult the Undergraduate Social Work Program adviser.

* Prerequisites waived for these courses.

Courses

LOWER DIVISION COURSES

110. Human Societies and Social Problems (3) I, II
Perspectives on problems of human societies and their relation to contemporary social problems and issues. Emphasis on distributive problems and forms of stratification.

120. Explorations in Human Services (3) I, II
Two lectures and three hours of 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.

596. Experimental Topics (1-4)
Selected topics in social work. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

Refer to the Graduate Bulletin.

Sociology

In the College of Arts and Letters

Faculty

Emeritus: Daniels, DeLora, Johnson, Kirby, Klapp, Milne, Somerville, Sorensen, Stephenson, Wendling

Chair: Hohm

Professors: Bloomberg, Cottrell, El-Assal, Gillette, Hohm, Hough, Kolody, Mouratides, Sanders, Sandlin, Schulze, Weeks, Winslow, Wood

Associate Professors: Buck, Chandler, Emerick, Gay, Ima, Kennedy, Kirkpatrick, Preston, Rumbaut, Scheck, 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.

The Major

Sociology is the scientific study of social life and the social causes and consequences of human behavior. Sociology's subject matter ranges from the intimate family to the hostile mob, from crime to religion, from the divisions of race and social class to the shared beliefs of a common culture, from the sociology of work to the sociology of sport. In fact, few fields have such broad scope and relevance.

Sociology seeks to understand the interaction of individuals with institutions and social organizations in which we are inextricably involved, and the norms, values, beliefs, and traditions that make social life possible and meaningful.

The Department of Sociology offers its majors a field internship program, which allows students to gain hands-on experience selected from a wide variety of community agencies and private business organizations. Many students have found permanent employment through their internships.

Employment opportunities for individuals with B.A. degrees in sociology are, as for all liberal arts graduates, quite varied. Many students work for various private and public agencies; some go on to graduate work in sociology; others go on to other graduate programs such as law, medicine, and social work. Sociologists with M.A. and Ph.D. degrees are generally employed at colleges and universities or government agencies. However, a growing number of sociologists with graduate degrees are being employed by private businesses.

Advising

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

Sociology Major

With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 22081)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

Students majoring in sociology must complete a minor in another field.

Preparation for the Major. Sociology 101, 150, 201. (9 units.)

Foreign Language Requirement. Competency (equivalent to that which is normally attained through three consecutive courses of college study) is required in one foreign language as part of the preparation for the major. Refer to section of catalog on "Graduation Requirements."

Upper Division Writing Requirement. Passing the University Writing Examination or Sociology 396W with a grade of C (2.0) or better.

Major. A minimum of 27 upper division units in sociology to include Sociology 400 or 401 or 403; 310 or 410 or 412 or 525. No more than three units of Sociology 499 or 597 and six units of 496 or 596 may be applied to the major. In addition to the basic requirements, the student must complete the requirements in one of the following areas:

(a) General Sociology

Major (continued). Sociology 406 or 407 or 408; six units of electives in sociology; and twelve units selected from one of the following groups:

Family, Sexuality, and the Life Cycle: Sociology 320, 420, 421, 522, 527, 528.

Social Organization: Sociology 335, 338, 430, 431, 433, 436, 439, 531, 537, 539.

Social Control: Sociology 410, 441, 443, 444, 543.

Social Change: Sociology 350, 351, 355, 450, 455, 456, 457, 459, 555, 556, 557.

(b) Applied Social Research

Major (continued). Sociology 406, 407, 408, 505; and nine units of electives in sociology.

Sociology Minor

The minor in sociology consists of a minimum of 18 units to include Sociology 101 and 150 or 201; three units selected from Sociology 310, 410, or 412; and nine units selected from one of the following areas:

Theory and Methods: Sociology 305, 400, 401, 403, 407.

Family, Sexuality, and the Life Cycle: Sociology 320, 420, 421, 522, 527, 528.

Social Organization: Sociology 335, 338, 430, 431, 433, 436, 439, 531, 537, 539.

Social Control: Sociology 441, 443, 444, 445, 543.

Applied Social Research: Sociology 505 required; and six units selected from 406, 407, 408.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

101. Introductory Sociology: The Study of Society (3) I, II
This course is prerequisite to all upper division courses in sociology.
Major ideas, concepts, and methods in the study of society to include socialization, culture, social structure, social stratification, deviance, social control, and social change.

150. Contemporary Social Problems (3) I, II
Prerequisite: Sociology 101.
Contemporary social problems. Topics may include poverty, inequality, unemployment, crime and deviance, population and ecological problems, health, family issues, and the role of ideology and interest groups in the definition of social problems. (Formerly numbered Sociology 110.)

201. Elementary Social Statistics (3) I, II
Prerequisites: Sociology 101 and qualification on the Mathematics Departmental Placement Examination, Part I.
Basic statistical techniques in sociology. Tables and graphs, measures of central tendency and variability, correlations, cross-classification, and introduction to multivariate analysis, sampling and statistical inference. Computer applications may be included.

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.

305. Sociological Laboratory II (1)
Three hours of laboratory.
Prerequisite: Must be taken in conjunction with a three-unit upper division course.
Application of experimental, quantitative or qualitative methods to sociological problems and the use of experimental, social simulation teaching techniques. (Formerly numbered Sociology 405.)

310. Love, Jealousy, and Envy: The Sociology of Emotions (3)
Prerequisite: Sociology 101.
Sociological understanding of human emotions developed through consideration of history of sex and love, social psychology of jealousy, and political implications of envy. Understanding and management of emotions analyzed from a sociological point of view. (Formerly numbered Sociology 334.)

320. Sex/Gender Roles in American Society (3) I, II
Prerequisite: Sociology 101.
Male-female relationships in occupational, educational, and familial settings. Changing concepts of femininity and masculinity. Images of men and women in literature, in the mass media, and in laws and judicial decisions. (Formerly numbered Sociology 333.)

335. Mass Communication and Popular Culture (3)
Prerequisite: Sociology 101.
Development of popular culture as influenced by the growth of mass media of communication, including popular music, television, film, newspapers, and advertising. The power, functions, and effects of the mass media in society and in social change. (Formerly numbered Sociology 545.)

338. Sociology of Religion (3) II
Forms of religious belief, knowledge, practice, and experience tied to different social arrangements and historical periods. Consequences of religion for society. Secularization and conversion processes in modern industrial societies. (Formerly numbered Sociology 538.)

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.

351. Comparative Societies (3) I, II
Prerequisite: Sociology 101.
Human societies in world-historical perspective, from agrarian societies to the modern world system. Comparative study of societies based on changing technologies of production (agriculture, industrial) and different social structures (despotic, slave-owning, feudal, capitalist, socialist).

355. Minority Group Relations (3) I, II
Prerequisite: Sociology 101.
Historical and comparative analysis of race and ethnic relations. Origins and maintenance of ethnic stratification systems; discrimination and prejudice; the adaptation of minority communities; role of social movements and government policies in promoting civil rights and social change. (Formerly numbered Sociology 325.)

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.
World-historical survey of social thought prior to the late nineteenth century classical theorists, from the traditions of tribal societies and early civilizations to pre-Socratic and classical Greek philosophers, and from the Italian Renaissance to the Age of Enlightenment.

401. Classical Sociological Theory (3) I, II
Prerequisite: Sociology 101.
Theories of major European and American sociologists since the mid-nineteenth century, including Comte, Marx, Tocqueville, Spencer, Summer, Durkheim, Pareto, Weber, Simmel, Mead, and Park. Relevance of classical social theory to contemporary sociology.

403. Contemporary Sociological Theory (3)
Prerequisite: Sociology 101.
Major figures and trends in American and European sociological theory since World War II, with emphasis on such schools as structural-functionalism, Marxism, symbolic interactionism, and critical theory.

406. Quantitative Methods in Social Research (3) II
Prerequisite: Sociology 201.
Statistical techniques in the analysis of social research data and hypothesis testing, including analysis of variance, covariance, partial correlation, multiple and logistic regression, logit and log-linear models, discriminant and factor analysis. Practical application with the use of statistical packages. (Formerly numbered Sociology 460.)

407. Survey and Experimental Research Methods (3) I, II
Prerequisite: Sociology 201.
Research process from research design through data processing, analysis, and interpretation. Quantitative research techniques including universe enumeration, sampling, questionnaire construction, scaling techniques, structured interviews, and experimental designs. (Formerly numbered Sociology 464.)

408. Qualitative Research Methods (3)
Prerequisite: Sociology 201.
Field research methods including interviewing, observation, participant observation and case studies. Problems in research design, gaining and maintaining rapport, and analysis and interpretation of qualitative data. (Formerly numbered Sociology 465.)

410. Social Psychology: Mind, Self, and Society (3) I, II
Prerequisite: Sociology 101.
Major theories, problems, and findings concerning the relationship of the individual and society. Topics include consciousness and construction of meaning, self-concept and social identity, socialization and interaction, group behavior and group membership. (Formerly numbered Sociology 440.)

412. Social Construction of Reality (3) II
Prerequisite: Sociology 101.
Analysis of reality as an ongoing social process. Creation and internalization of social worlds through language. Common sense and the multiple realities of everyday life. Dynamic emergence of social structure.

420. Sexuality in Modern Society (3) I, II
Prerequisite: Sociology 101.
Current research on contemporary sexual attitudes and behaviors, including changing norms in premarital, marital, and extramarital relationships. Controversies and implications for the individual and society. (Formerly numbered Sociology 534.)

421. The American Family and Its Alternatives (3) I, II
Prerequisite: Sociology 101.
Changes in intimacy in American family. Selection of mating partners, spousal and parenting relationships, and alternatives to traditional family forms. Changing functions of the family viewed in historical perspective. Present realities and future prospects. (Formerly numbered Sociology 535.)

430. Social Organization (3) I, II
Prerequisite: Sociology 101.
Social structure analyzed from the micro-level of roles and interaction to groups, institutions, complex organizations, societies, and the world as a social system. Basic concepts of sociology and their application in concrete case studies. (Formerly numbered Sociology 422.)

431. Workers, Managers, and Bureaucracy (3) II
Prerequisite: Sociology 101.
Sociology of work in formal organizations. From classic theories on division of labor, industrial capitalism, and bureaucracy, to transformation of work in the twentieth century. Theories and ideologies of management and worker motivation in corporations and government agencies.

433. Wealth, Status, and Power (3) I, II
Prerequisite: Sociology 101.
Distribution of wealth, power, privilege, and prestige in society. Causes, outcomes, and dynamics of inequality. Processes of upward and downward social mobility. Relationship of social class to politics, the economy, and other institutions. (Formerly numbered Sociology 424.)

436. Sociology of Health and Illness (3) I, II
Prerequisite: Sociology 101.
Sociological perspectives on health, disease, and healing. Socialization, roles, conflict, and change in medical work settings. Health and medical institutions in comparative social contexts. Social transformation of American medicine. (Formerly numbered Sociology 526.)

439. Housing and the American Dream (3) II
Prerequisite: Sociology 101.
Cultural ideals and structural realities concerning housing in the United States. Economic, political, social, and demographic factors affecting affordability, availability, and adequacy of housing; rent control. Speculation, gentrification, and homelessness. (Formerly numbered Sociology 559.)

441. Sociology of Mental Illness (3) I, II
Prerequisite: Sociology 101.
Social, cultural, and political factors involved in definition of "madness" and control of mental illness in various societies. Review of research about the incidence, prevalence, and social ecology of mental illness and its distribution by social class. (Formerly numbered Sociology 523.)

443. Crime and Society (3) I, II
Prerequisite: Sociology 101.
Social origins, forms, and functions of criminal law; and sociological theories about the causes and consequences of crime. Measurement and distribution of violent crimes, property crimes, victimless crimes, white collar crime, and their impact on society. (Formerly numbered Sociology 513.)

444. Juvenile Delinquency (3) I, II
Prerequisite: Sociology 101.
Nature and extent of delinquency; the causative factors involved; methods of control and prevention, with special attention to protective and remedial measures offered by the school, home, juvenile court, correctional institutions and camps, probation and parole, and recreational agencies. (Formerly numbered Sociology 514.)

445. Deviance and Social Control (3) I, II
Prerequisite: Sociology 101.
Conformity and nonconformity; the relationship between individual liberty and social control; stigma and the labeling of deviant behavior such as prostitution, alcoholism, drug addiction, and crime. (Formerly numbered Sociology 510.)

450. 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. (Formerly numbered Sociology 404.)

455. Asian American Communities (3) I
Prerequisite: Sociology 101.
Comparative social analysis of selected Asian and Pacific Islander communities in the United States. Entrance, reception, response, and future prospects. Assessment of public policies of current issues and future prospects.

456. Collective Behavior: Crowds, Cults, and Crazes (3)
Prerequisite: Sociology 101.
Processes of social behavior in masses and groups, including crowd behavior, mass hysteria, riots, mobs, fads, fashions, crazes, panics, rumors, and scapegoating. Sects and cults; social movements; the effects of mass communications and propaganda. (Formerly numbered Sociology 546.)

457. Protests, Reforms, and Revolutions (3) I, II
Prerequisite: Sociology 101.
Revolutionary and reform movements in relationship to the larger society. Conditions leading to development of social movements, emergence of leadership, ideologies, strategies, recruitment of members, and social consequences; case studies. (Formerly numbered Sociology 547.)

459. Sociology of the Future (3)
Prerequisite: Sociology 101.
Alternative futures in selected areas of social life, such as family, technology, work, and leisure, from local to global levels of analysis. Review and assessment of research into the future. (Formerly numbered Sociology 508.)

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.

496. Experimental Topics (1-4) I, II
Prerequisite: Consent of the instructor.
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

499. Special Study (1-3) I, II
Prerequisite: Consent of instructor.
Individual study. Maximum credit six units.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

505. Applied Sociological Research (3) I, II
Prepequisite: Sociology 407 or 408.
Types and methods of applied sociological research; and an overview of their application in substantive areas. Practical research skills. (Formerly numbered Sociology 560.)

522. The Family in Comparative and Historical Perspectives (3) II
Prerequisite: Sociology 101. Recommended: Sociology 535.
Comparative study of selected family systems in the past and present. Family and parafamily forms in intentional communities of the nineteenth century compared with contemporary communal experiments. Ethnic and class differences in family organization. (Formerly numbered Sociology 536.)

525. Life Crises and Coping: Sociological Perspectives (3) II
Prerequisite: Sociology 101.
Social variation in the occurrence of life crises, personal and social coping strategies, and psychosocial outcomes.

527. Aging and Society (3) I
Prerequisite: Sociology 101.
Status and roles of men and women in the second half of the life cycle. Ethnic, sex and class variables in aging. Cross-cultural comparisons of occupational, educational, familial, recreational and political opportunities for the aging.

528. Death and Dying (3) I
Prerequisite: Sociology 101.
Sociological concepts and theories of the process of dying. Comparative study of death and dying with emphasis on social, psychological, and social organization approaches. Consideration of contemporary social-ethical issues surrounding dying in our society.

531. Working and Society (3) II
Prerequisite: Sociology 101.
Work and occupations in the division of labor. Paid and unpaid labor; work at home and in the marketplace. The social drama of work: identity, role conflict, and change. Power, pay, and status ranking of occupations; the professionalization of work. (Formerly numbered Sociology 521.)

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.

537. Political Sociology (3)
Prerequisite: Sociology 101.
Social organization of political processes. Power and authority, social class, primary groups, collective behavior, social change, and other sociological factors considered in their relationships to political processes.

539. Sociology of Education (3) I, II
Prerequisite: Sociology 101.
Social organization of education in the United States and other societies. Structure and functions of educational institutions. Formal and informal education. Class, ethnic, and other social factors affecting the educational process. Implications of educational decision making and testing.

543. Police, Courts, and Corrections: The Sociology of Crime and Punishment (3) I
Prerequisite: Sociology 101.
Historical sociology of the American criminal justice system. Development and functions of police, criminal courts, prisons, parole, and probation. Theories and ideologies of punishment and rehabilitation. Review of contemporary research. (Formerly numbered Sociology 516.)

555. Immigrants and Refugees in Contemporary American Society (3) I
Prerequisite: Sociology 101.
Contemporary migration to the United States, especially from Latin America and Asia. Political and economic migration. Immigrant and refugee adaptation. Theoretical controversies, research applications, and policy implications.

556. Topics in Comparative Societies (3) II
Prerequisite: Sociology 101.
Social structures, social problems, and social change in selected areas of the world in comparative and historical perspectives. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units. (Formerly numbered Sociology 519.)

557. Urban Sociology (3) I, II
Prerequisite: Sociology 101.
The structure and function of the modern city; types of neighborhoods; forms of recreation; social forces in a metropolitan area; types of urban personalities and groups; rural-urban conflicts of culture. Practical field studies required.

596. Current Topics in Sociology (1-3) I, II
Prerequisite: Sociology 101.
Selected specialized, controversial or currently relevant topics in sociology. Maximum opportunity provided for student initiative in determining course content and procedures. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree. (Formerly numbered 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, Higgs, Jiménez-Vera, Lemus, Segade, Silverman
Associate Professors: Castillo, O'Brien, Santaló, Talamantes, Weeter, Young
Assistant Professor: Hidalgo
Lecturers: Goldfarb, Tamburo, Van Stichel

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.
Certificate in Court Interpreting (available at Imperial Valley Campus only).

The Major

Spanish is the fourth most widely spoken language in the world and the second most frequently used language in the Southwest. Because of San Diego's proximity to Mexico and other Spanish-speaking countries, many students here are interested in learning Spanish. Their reasons range form practical application in jobs, travel, reading or recreation to a curiosity about the culture or literature of Spanish-speaking countries. The Department of Spanish and Portuguese offers a wide range of courses and programs designed to satisfy the varied needs of students who enter the Spanish major.

A major in Spanish for the single subject teaching credential can lead directly to a career in secondary teaching. The federal government also employs those with Spanish-speaking ability in both civil service and diplomatic areas. In addition, many fields which involve contact with the public require knowledge of Spanish. These types of public contact fields include law enforcement, medicine, banking, tourism, government, library positions, foreign affairs, public relations, advertising, missionary assignments, and social services.

Advising

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

Spanish Major

With the A.B. Degree in Liberal Arts and Sciences (Major Code: 11051)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

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 coursework for preparation for the major.

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 24 upper division units in Spanish to include Spanish 301, 302; six units selected from Spanish 305A, 305B, 306A, 306B; three units from Spanish 440, 441, 442; three units from Spanish 448 or 449; Spanish 450; and three units from Spanish 303 or from any Spanish 500-level course. At least 12 upper division units must be taken in residence at SDSU.

Spanish Major

For the Single Subject Teaching Credential in Foreign Languages With the A.B. Degree in Liberal Arts and Sciences (Major Code: 11051)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under 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 coursework for preparation for the major.

Upper Division Writing Requirement. Passing the University Writing Examination or completing one of the approved writing courses with a grade of C (2.0) or better.

Major. A minimum of 30 upper division units in Spanish to include Spanish 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. At least 15 upper division units must be taken in residence at SDSU.

Spanish Minor

The minor in Spanish consists of a minimum of 18 units, at least twelve of which must be in upper division Spanish courses.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

Certificate in Translation

The Department of Spanish and Portuguese Languages and Literatures offers a Certificate in Translation. The certificate requires 18 units in Spanish dealing with problems of translation and includes translation from Spanish to English and from English to Spanish.

A prospective candidate for the certificate should possess a bilingual facility in Spanish and English. The student must complete with a grade of B or better English 305W (or pass the University Upper Division Writing Competency Examination), and Spanish 301, 302, and 450 prior to starting work on the certificate.

After meeting the basic requirements for admission, the student must complete with a GPA of 3.0 or better 15 units to include Spanish 304, 493, 556, 557*, and either 499 or 596 when offered with appropriate certificate-related content.

* Linguistics prerequisite waived for Spanish 557.

Upon completing the 15 units of coursework, the student must take a departmental examination for the certificate. Upon successful completion of the examination, the student will be awarded the certificate. Courses in the certificate may not be counted toward the major or minor.

Certificate in Court Interpreting (Imperial Valley Campus)

The Imperial Valley Campus offers a Certificate in Court Interpreting. The certificate requires 18 units in Spanish dealing with problems of court interpreting and includes interpreting from Spanish to English and from English to Spanish.

A prospective candidate for the certificate should possess a bilingual facility in Spanish and English. The student must complete with a grade of B or better English 305W (or pass the University Upper Division Writing Competency Examination), and Spanish 301, 302, and 450 prior to starting work on the certificate.

After meeting the basic requirements for admission, the student must complete with a GPA of 3.0 or better 15 units to include Spanish 494 (six units) and nine units selected from 304, 493, 556, 557*, and either 499 or 596 when offered with appropriate certificate-related content.

Upon completing the 15 units of coursework, the student must take a departmental examination for the certificate. Upon successful completion of the examination, the student will be awarded the certificate.

* Linguistics prerequisite waived for Spanish 557.

Foreign Language Requirement for the 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.

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.

Courses

LOWER DIVISION COURSES

Native speakers of Spanish from foreign countries will not receive credit for taking lower division courses in Spanish, except with advance approval from the department.

All lower division courses in Spanish are taught in Spanish.

No credit will be given for Spanish 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. Intermediate (4½) I, II, S
Four lectures and one hour of laboratory.
Prerequisite: Spanish 102 or three years of high school Spanish.
Review and practical application of fundamental principles of grammar and use of modern Spanish through study of cultural materials, for proficiency in understanding the language.

202. Intermediate (4) I, II, S
Prerequisite: Spanish 201 or four years of high school Spanish.
Continuation of Spanish 201, with additional outside readings and 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.

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.

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.

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).

494. Court Interpreting in Spanish-English and English-Spanish (3) I, II (Offered at IVC only)
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.

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. Contemporary Argentine Literature (3)
Prerequisites: Spanish 306A-306B.
Literature of contemporary Argentina. Leading prose writers to include Borges, Cortázar, Mallea, Sábato.

530. Nineteenth Century Spanish Novel and Short Story (3)
Prerequisites: Spanish 305A-305B.
The development of the novel and short story in Spain in the nineteenth century.

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.

560. Golden Age Literature (3) I, II, S
Prerequisites: Spanish 305A-305B.
Major writers and works, concentrating on prose and lyric poetry. (Formerly numbered Spanish 460 and 550.)

561. Methods in Teaching Spanish as a Second Language (3)
Prerequisite: Spanish 448 or 450.
Teaching of Spanish as a second language: contemporary theory and methods. Not open to students with credit or concurrent enrollment in French 561.

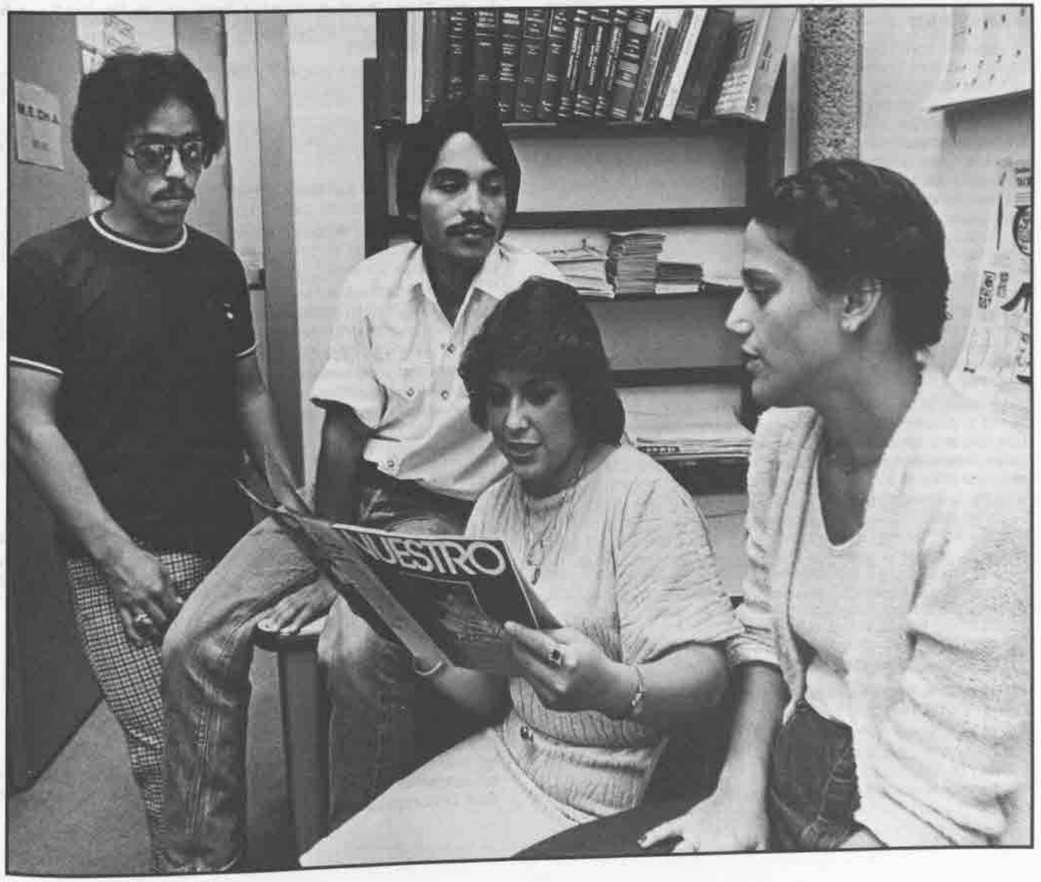
570. Spanish American Poetry (3) I, II, S
Prerequisites: Spanish 306A-306B.
Spanish American poetry of the nineteenth and twentieth centuries. (Formerly numbered Spanish 470.)

571. Spanish American Short Story (3) I, II, S
Prerequisites: Spanish 306A-306B.
Principal Spanish American short story writers. (Formerly numbered Spanish 471.)

572. Spanish American Theater (3) I, II, S
Prerequisites: Spanish 306A-306B.
Principal Spanish American dramatists and movements. Use of dialogue as a dramatic expression in modern Spanish American theater with examples from novels. (Formerly numbered Spanish 472.)

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 of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.



Speech Communication

In the College of Professional Studies and Fine Arts

Faculty

Emeritus: Adams, Benjamin, Mills, Sanders
Chair: Weitzel
Professors: Andersen, J., Hellweg, Lustig, Mandel, Samovar, Weitzel
Associate Professors: Andersen, P., Beach, Gaske
Assistant Professor: Dionisopoulos

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 Major

Speech communication is the study of all aspects of human communication. The major in speech communication offers a curriculum that recognizes the importance of communication theory and skills in an increasingly complex society. Communication concepts and practices are grounded in traditional and contemporary theories and research methods to ensure the broadest possible education and the most direct utilization of knowledge for both immediate and future goal attainment. Appreciation for, and personal growth in, social and political relationships and ethical standards are also goals of the curriculum.

Recent surveys of business, industry, and other institutions indicate the most important talent required of prospective employees is effective communication skills. Thus, providing career-relevant training is another major theme of the curriculum. Instruction in logical and practical reasoning, interpersonal skills, interviewing, and other skills complement training in public speaking and argumentation.

Majors also may elect a program leading to a high school teaching credential which entitles them to teach speech, English, and literature.

In addition, the major in speech communication is particularly well suited to prepare students for postgraduate education in communication, law, and other areas. An advanced degree in speech communication prepares students to teach and do research in communication at universities or to work in the corporate world as communication experts, trainers, or personnel or human resource specialists.

In addition to classroom experiences, the department sponsors a debate and forensics team that competes nationally; individual students' speaking skills are sharpened through participation in a program that consistently ranks in the top ten nationwide.

Availability of speech communication classes may be limited by existing enrollment demands.

Speech Communication Major

With the A.B. Degree in Applied Arts and Sciences (Major Code: 15061)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

A minor is not required with this major.

Preparation for the Major. Speech Communication 105, 135, 160, and six units of electives in Speech Communication (except Speech Communication 102 or 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. 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 With the A.B. Degree in Applied Arts and Sciences (Major Code: 15061)

All candidates for a teaching credential must complete all requirements as outlined in this section of the catalog under 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. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

90. Improving Speaking Confidence (1) I, II Cr/NC
Two hours of activity.
Prerequisite: Must be taken prior to or concurrent with Speech Communication 103.
Anxiety reduction and skill enhancement for students experiencing anxiety in oral communication situations. Not applicable to a bachelor's degree or general education. (Formerly numbered Speech Communication 102.)

103. Oral Communication (3) I, II
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
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.

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 interscholastic 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.

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: Approval of the Director of Internships; Speech Communication 105; a 2.5 GPA in the major; and four of the following upper division courses: Speech Communication 315, 345, 362, 391, 392, 406, 407, 475, 535, 580, 592.
Prearranged and supervised fieldwork or activity extension of academic coursework in speech communication. Maximum credit six units, no more than three of which may be taken in any one semester.

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.

584. Communication in Law and Medicine (3)
Prerequisite: Speech Communication 345.
Courtroom interrogation and testimony and medical diagnostic interactions studied as unique types of everyday conversation. Communication practices and constraints in institutional contexts.

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 of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Telecommunications and Film

In the College of Professional Studies and Fine Arts

Faculty
Emeritus: Jones, Lee
Chair: Real
The Van Deerlin Professor: Land
Professors: Anderson, Heighton, Jameson, Johnson, Madsen, Real, Steen, Witherspoon, Wylie
Associate Professors: Martin, Meador
Assistant Professors: Blue, Blumenthal

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.

The Major

As a result of the rapid development of new communications technology and applications, there is an increasing demand for effective communicators and management personnel in the fields of telecommunications and film. The goals of the radio-television major are to provide students with operational skills and experience in the various phases of radio, television and film, production, and management.

To fulfill these needs, the curriculum provides a professionally oriented, academically sound education in the art, management, and science of communication through the media of telecommunications and film.

To name but a few, career opportunities for radio-television majors include positions in public relations and advertising; in television, with positions in management, sales, programming, writing, producing and directing, and art direction; in radio, with positions in management, sales, programming, writing, and producing and directing; in film, with positions in cinematography, directing, editing, producing, art direction, writing, studio management and production management; and in new technologies, including videodisc, teletext, and satellites.

Radio-Television Major

With the A.B. Degree in Applied Arts and Sciences
(Major Code: 06031)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

The 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
(Major Code: 06031)

All candidates for a degree in applied arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

The B.S. degree is designed to prepare students for professions in 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, 121, 122, 123, 160. Telecommunications and Film 120, 260, and 280 are required for students selecting the production sequence; 260 or 280 is required for students selecting 401 in the management sequence. (18-27 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, 551, and nine units selected from Telecommunications and Film 520, 550, 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 410, 430, 537; Speech Communication 345, 354, 362, 391, 392, 406, 407, 475, 535, 580, 589, 592.

Criticism: Linguistics 551; Music 351; Philosophy 523, 531, 541, 542; Speech Communication 530.

Education: Educational Technology 471A-471B, 540, 541, 544; Telecommunications and Film 570.

* *Graphic Art:* Art 340, 341, 443; Industrial Arts 381, 482.

* *Industrial Arts:* Industrial Arts 341, 361, 443, 444, 462, 563.

* *Information Systems:* Information and Decision Systems 480, 482.

International Media: Geography 312, 350, 354; Political Science 375, 381, 382, 577; Telecommunications and Film 363, 590.

Law and Government: Journalism 502; Political Science 335, 346, 347A, 347B; Telecommunications and Film 505.

* Additional prerequisites required for courses in these sequences.

Management: Management 350, 352, 356, 453, 454; Telecommunications and Film 401, 500.

Mass Communication: Journalism 408, 500, 503, 509; Political Science 310, 326; Psychology 322, 326, 342; Sociology 335, 406, 410, 430, 456; Telecommunications and Film 400, 562, 575.

News: Journalism 310, 320, 425, 474, 475, 502, 529; Telecommunications and Film 310, 505.

Performance: Drama 431, 445, 532; Speech Communication 392, 508, 592; Telecommunications and Film 390, 391.

Playwriting: Drama 420; English 524, 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 550, 551.

Research Methods: Telecommunications and Film 400; Information and Decision Systems 301, 366; Journalism 509; Psychology 322, 342, 470; Sociology 406, 407.

Radio-Television Minor

The minor in radio-television consists of a minimum of 15-18 units, 12 units of which must be in upper division. The minor is a focused pattern of courses selected with the approval of the departmental adviser for minors. Requirements for admission to the minor are sophomore standing (30 or more units completed) with a minimum grade point average of 3.0 overall and a grade of B or better in either Telecommunications and Film 100, 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*, and nine units selected from the following: Telecommunications and Film 400*, 440, 530*, 535*, 540, 575.

Obtaining courses to fulfill this minor is not easy because of the high demand for courses.

Courses in the minor may not be counted toward the major, but may be used to satisfy preparation for the major and general education requirements, if applicable. A minimum of six upper division units must be completed at San Diego State University.

* For students in the minor, Telecommunications and Film 315 may be substituted for Telecommunications and Film 100 as a prerequisite for these courses.

Courses

LOWER DIVISION COURSES

100. Background 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
Prerequisites: Satisfaction of the English Placement Test and Writing Competency requirements. Ability to type. 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 three hours of activity.
Prerequisite: Limited to telecommunications and film majors; and to drama majors with design for television emphasis who have approval of the emphasis adviser. Proof of prerequisite required. Students who cannot prove prerequisite completion will be administratively dropped from class.
Aesthetic considerations and technical practices in staging, lighting, and graphics for television and film. Practical experience in university sponsored productions.

121. Audio Production (3) I, II
Two lectures and three hours of activity.
Prerequisite: Limited to telecommunications and film majors.
Theory of audio production, use of basic audio equipment, and basic sound production. Practical experience in University sponsored productions.

122. Still and Motion Picture Photography (3) I, II
Two lectures and three hours of activity.
Prerequisite: Limited to telecommunications and film majors.
Basic film equipment and its use in preparation of photographic materials for film and TV production. Practical experience in University sponsored productions.

123. Video Production (3) I, II
Two lectures and three hours of activity.
Prerequisite: Limited to telecommunications and film majors.
Television control room, studio, and auxiliary equipment and their use in production of programs. Practical experience in University sponsored productions.

160. Cinema as Art and Communication (3) I, II
An appreciative survey of cinema in its diverse forms. Historical and stylistic influences on the aesthetic values and social implications of cinema. Illustrated by screen examples.

260. Film Techniques (3) I, II
Two lectures and more than 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
Prerequisite: Ability to type.
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) I, II
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.

325. Video and Film Production for Non-Majors (3) I, S
Two lectures and three hours of laboratory.
Prerequisite: Upper division standing.
Technical and aesthetic principles and practices applicable to nonfictional and fictional presentations by video and film. Practical experience in basic video and film production and postproduction techniques. Not open to telecommunications and film majors and students with credit in Educational 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 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 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 or 325. Normally taken concurrently with Telecommunications and Film 560 or 580.
Financing, preproduction planning, and postproduction of television and film.

440. Broadcast Commercial Practices (3)
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 Telecommunications and Film (1-3)
Study of some problem in radio, television or film. Maximum credit six units. (Formerly numbered Telecommunications and Film 495A.)

496. Experimental Topics (1-3)
Prerequisites: Upper division standing, permission of instructor.
Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

497. Internship in Telecommunications and Film (3) I, II Cr/NC
Supervised work in area telecommunications and film organizations under combined supervision of professionals and professors. (Formerly numbered Telecommunications and Film 495B.)

499. Special Study (1-3) I, II
Prerequisite: Consent of instructor.
Individual study. Maximum credit six units.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

500. Broadcast Management (3) I, II
Prerequisite: Telecommunications and Film 100.
Administration and organization of radio and television, including 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 three hours of activity.
Prerequisite: 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 Programming (3) II
Two lectures and three hours of scheduled activity.
Prerequisites: Telecommunications and Film 100 and 121.
Formats, policies, production practices and research in modern programming. Student work is broadcast on KPBS-FM.

535. Television Programming (3) I
Prerequisite: Telecommunications and Film 100.
Structure of television programming. Problems such as ratings, advertisers and scheduling. Social effects and criticism of television programming.

540. 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.

550. Art Direction for Television and Film (3) I, II
One lecture and four hours of activity.
Prerequisites: Telecommunications and Film 260 or 280 or 325 and consent of instructor.
Aesthetic, technical, and administrative aspects of design for television and film. Experience in scenic design, construction, decoration, lighting, and special effects. Practical experience in University-sponsored productions. (Formerly numbered Telecommunications and Film 550B.)

551. Production Design for Television and Film (3) I, II
Prerequisite: Credit or concurrent registration in Telecommunications and Film 401.
Theory and analysis of production design concepts for television and film. Determination of stylistic and technical requirements for fictional and nonfictional productions. (Formerly numbered Telecommunications and Film 550A.)

560. Advanced Film Production (3) I, II
One lecture and more than six hours of activity.
Prerequisites: Telecommunications and Film 260, 510 and consent of instructor.
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 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 of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the Graduate Bulletin.

Women's Studies

In the College of Arts and Letters

Faculty
Chair: Zimmerman
Professors: Boxer, Watson, Zimmerman
Associate Professors: Cayleff, Huckle, Jones, Kohen
Assistant Professor: Romero
Lecturers: Phillips, Truant

Offered by Women's Studies
Major in women's studies.
Minor in women's studies.

The Major

Women's studies explores who women were, who women are, who they might be, and how their lives and human interactions are affected by society's values, traditions, and institutions. SDSU has offered courses in women's studies since 1969 and has one of the strongest academic programs in the nation. Its origins are in the women's movement, and its vision includes a world free of sexual, racial, age, and class distinctions and other inequalities.

Courses are designed to provide students with a coherent, integrated, and academically rigorous education. Content areas include concepts of self and family, theories of sex differences, history, cultural contributions, and the study of society's institutions. The emphasis is on increasing the awareness of objective conditions in women's lives throughout the world, and on developing critical analytical skills.

A degree in women's studies may be used as preparation for a wide range of careers. Professional opportunities exist in political and social agencies working with women and developing public policy on women's issues such as health care, employment, family violence, and education. Women's studies students prepare for careers in such fields as law, journalism, public admnistration, social services, personnel, and psychology. The skills that women's studies majors develop in critical thinking and analysis are highly valued in many additional occupations and professions today. A women's studies major may also go on to advanced academic work preparing for a career as a women's studies scholar.

Many women's studies majors plan double majors to enhance their career opportunities.

Women's Studies Major

With the A.B. Degree in Liberal Arts and Sciences
(Major Code: 49991)

All candidates for a degree in liberal arts and sciences must complete the graduation requirements listed in the section of this catalog on "Graduation Requirements."

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. A minimum of six upper division units must be completed at San Diego State University.

Courses

LOWER DIVISION COURSES

100. New Views of Women (1) Cr/NC
Lecture series.
Overview of new research and fresh interpretation about women, feminism and changing relationships between the sexes. Presentations from the perspective of various disciplines.

101. Women: Self and Society (3) I, II
Perspectives on women's personal and public lives. Emphasis on integrating individual experiences with social and cultural contexts.

201. 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.

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) I, II
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) I, II
History of American social, cultural, economic, political, and intellectual institutions, focusing on the role and perspective of women. Semester I: From colonization to 1860; Semester II: From 1860 to the present. 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, II
Literature by and about women; appraisals of women's place in various literary genres; historical and contemporary themes; evolution of forms and techniques.

356. Women in Popular Culture (3)
Images and concepts of womanhood found in popular culture and mass media. Topics include critical theories, popular literature, television, women's magazines, myth and ritual, and the impact of feminism.

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)
History of women in education; the educational process and female role socialization; research into personnel policies, law, and curriculum; women and girls as consumers and producers of education; feminist research and pedagogy.

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)
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)
Prerequisites: Women's Studies 352; or three units in women's studies and an upper division literature course.
Literary, historical, and social consideration of women writers; may focus on one author, era, or theme. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units. Limit of three units applicable to the major in women's studies.

480. Women: Comparative National Development and Politics (3)
Prerequisite: Three upper division units in women's studies.
Comparative analysis of the place of women in selected political and economic systems, and processes which determine political power. Role of women as agents and recipients in development programs. Theoretical and methodological research issues.

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 Internship (3) I, II Cr/NC
Prerequisites: Three upper division units in women's studies and consent of instructor.
Observation and analysis of public and private agencies which deal primarily with women in the San Diego area. Maximum credit six units.

499. Special Study (1-3)
Prerequisites: Three upper division units and consent of the department chair and instructor.
Individual study. Maximum credit six units.

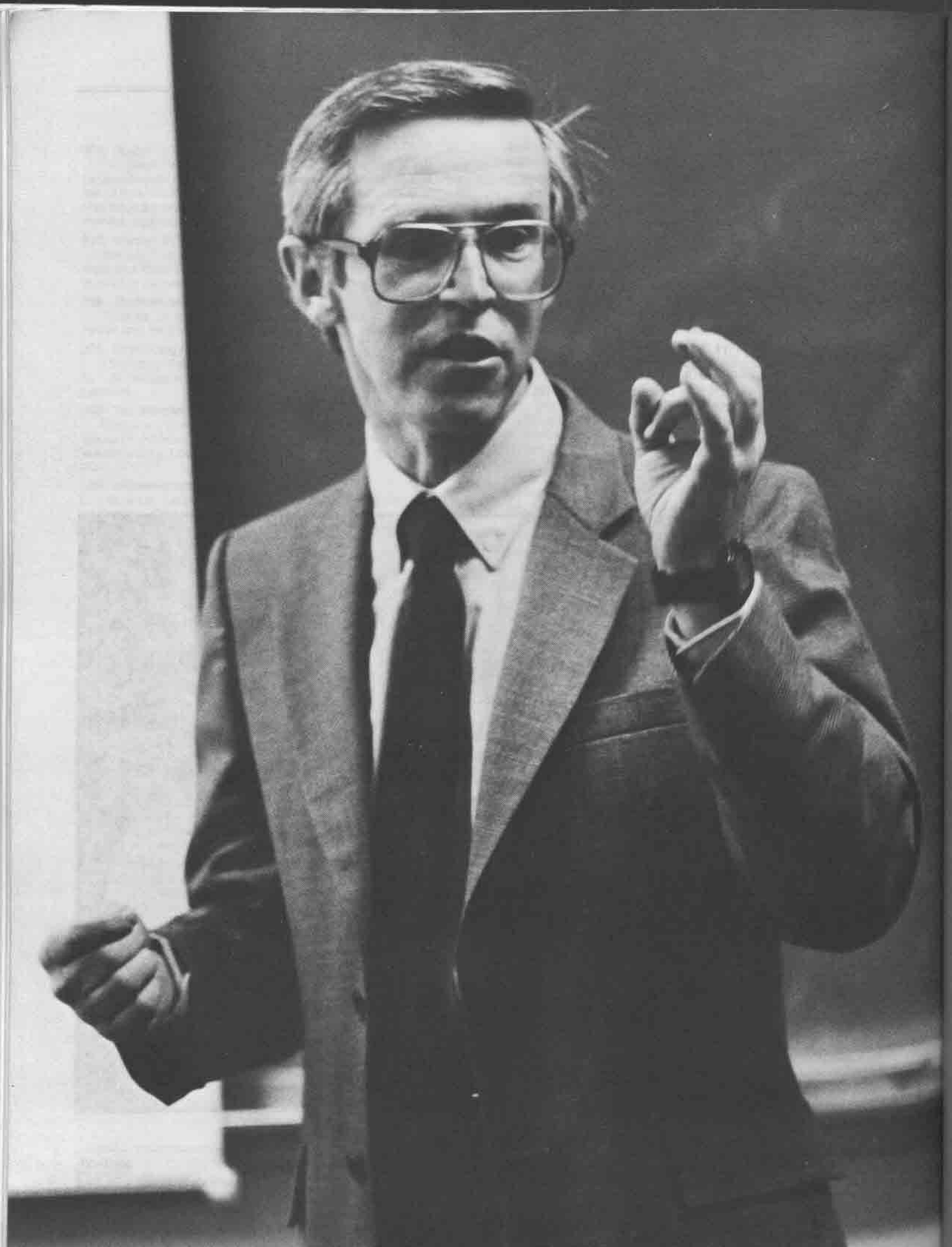
UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

590. Feminist Thought (3) I
Prerequisite: Six upper division units in women's studies.
Readings in feminist theory and contemporary theoretical perspectives on core concepts and issues in feminist scholarship. Focus on understanding from a feminist perspective and on the significance of analyzing female experiences.

595. Seminar in Women's Studies (3) II
Prerequisites: Six upper division units in women's studies and consent of instructor.
Directed research in women's studies. Field of investigation will vary with instructor. Methods of investigation, development of bibliography, presentation of paper based on original research. See Class Schedule for specific content.

597. Research Project (3) I, II
Prerequisites: Six upper division units in women's studies and permission of adviser.
Individual research project. May be taken in place of Women's Studies 595, Seminar in Women's Studies.

GRADUATE COURSES
Refer to the Graduate Bulletin.



Addenda

Faculty and Administration 1987 – 1988

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.

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ADDO, THEOPHILUS (1987). Assistant Professor of Information and Decision Systems. B.Sc., University of Ghana; M.B.A., Indiana University; M.S.T.M., American University.

AGUADO, EDWARD (1982). Associate Professor of Geography. B.A., M.A., University of California, Los Angeles; Ph.D., University of Wisconsin.

AITKEN, STUART C. (1986). Assistant Professor of Geography. B.Sc., Glasgow University; M.A., Miami University; Ph.D., University of Western Ontario.

AJEMIAN, JAMES A. (1970). Assistant Professor of Social Work. A.B., Harvard University; M.S., Columbia University; Ph.D., University of Michigan.

ALCOSSER, SANDRA B. (1986). Associate Professor of English and Comparative Literature. B.A., Purdue University; M.F.A., University of Montana.

ALLEN, BROCKENBROUGH S. (1982). Associate Professor of Educational 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.

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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 University, Northridge; M.S., San Diego State University.

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ANDERSEN, JANIS F. (1981). Professor of Speech Communication. B.A., M.A., Bradley University; Ed.D., West Virginia University.

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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, Berkeley.

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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 Educational Technology. A.B., University of California, Los Angeles; Ed.M., Ed.D., Rutgers University.

APPLE, L. EUGENE (1985). Assistant Professor of Marketing. B.A., William Jewell College; Ph.D., University of North Carolina at Chapel Hill.

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ARIAS, ARMANDO, JR. (1984). Associate Dean; Lecturer in Sociology, Imperial Valley Campus. B.A., M.A., Ph.D., University of California, San Diego.

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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). Director of Library Services; 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.

BABER, CAROLYN (1987). Senior Assistant Librarian. B.S., Illinois State University; M.S., University of Illinois at Urbana-Champaign.

BABILOT, 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 Student Services. A.B., M.S., San Jose State University.

BAILEY, ALLAN R. (1968). Dean, College of Business Administration; Professor of Accountancy. B.S., San Diego State University; M.B.A., Ph.D., University of California, Los Angeles.

BAILEY, G. W. (1982). Associate Professor of Industrial Studies. B.A., M.A., San Diego State University; Ed.D., Arizona State University.

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BALKWELL, CAROLYN K. (1981). Professor of Family Studies and Consumer Sciences. B.S., Michigan State University; M.S., Kansas State University; Ph.D., University of Georgia.

BALL, JOSEPH W. (1975). Professor of Anthropology. A.B., Fordham University; M.A., Ph.D., University of Wisconsin.

BALLESTEROS, DAVID (1983). Dean, Imperial Valley Campus; Professor of Spanish and Policy Studies in Language and Cross-Cultural Education, Imperial Valley Campus. B.A., University of Redlands; M.A., Middlebury College; Ph.D., University of Southern California.

BALLEW, VAN B. (1981). Professor of Accountancy. B.B.A., Ph.D., University of Houston.

BANKS, JAMES H. (1976). Professor of Civil Engineering. B.E., Vanderbilt University; M.S., Ph.D., University of California, Berkeley.

BARBER, WILLIAM F. (1959). Director, Graduate Programs, College of Business Administration; Professor of Marketing. B.B.A., M.B.A., Ph.D., University of Washington.

BAR-LEV, ZEV (1979). Professor of Linguistics. A.B., Columbia College; M.A., Cornell University; Ph.D., Indiana University.

BARNES, STEPHEN F. (1977). Assistant Vice President for Student Affairs. A.B., University of California, Santa Barbara; M.S., San Diego State University; Ph.D., University of Oregon.

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BECKLUND, LESTER A. (1967). Professor of Teacher Education. B.S., M.Ed., Ph.D., University of Minnesota.

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BORJA, JOSEPH C. (1985). Assistant Professor of Aerospace Studies. B.S., Southern Illinois University; M.A., Central Michigan University.

BORKAT, ROBERTA F. (1969). Professor of English and Comparative Literature. A.B., Cornell University; Ph.D., University of California, San Diego.

BORMANN, JILL (1984). Lecturer in Nursing. B.S.N., Augustana College; M.S.N., University of Texas at Austin.

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BOST, JOHN C. (1979). Associate Professor of Finance. B.S., San Diego State University; J.D., Hastings College of the San Francisco Law.

BOXER, MARILYN JACOBY (1974). Dean, College of Arts and Letters; Professor of Women's Studies. A.B., University of Redlands; M.A., Ph.D., University of California, Riverside

BOYD, WILLIAM D. (1986). Director, Financial Aid. B.A., M.Ed., Pennsylvania State University

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BARCKLEY, ROBERT E., Ph.D. (1955-1985). Professor of Economics.

BARCLAY, A. BERNICE, M.A.L.S. (1962-1986). Associate Librarian.

BARNES, ALFRED C., H.S.D. (1977-1981). Associate Professor of Health Science.

BAUER, EDWARD G., M.S. (1956-1976). Professor of Mechanical Engineering.

BECKER, GEORGE J., Ph.D. (1969-1986). Professor of Teacher Education.

BECKER, GERALD A., Ph.D. (1958-1986). Professor of Mathematics.

BELCHER, DAVID W., Ph.D. (1957-1986). Professor of Management.

BENJAMIN, ROBERT L., Ph.D. (1953-1986). Professor of Speech Communication.

BENTON, CARL W., Ed.D. (1948-1983). Professor of Physical Education.

BIGELOW, MARYBELLE S., M.A. (1956-1980). Professor of Art.

BIGGER, W. RICHARD, Ph.D. (1952-1981). Professor of Public Administration and Urban Studies.

BIGGS, MILLARD R., Ph.D. (1958-1986). Professor of Music.

BILTERMAN, HENRY L., M.A. (1956-1977). Assistant Professor of Mechanical Engineering.

BIRCH, AILEEN J., M.A. (1949-1978). Assistant Professor of Elementary Education.

BLACK, BARBARA B., M.S. (1970-1988). Professor of Nursing.

BLANC, SAM S., Ed.D. (1966-1981). Professor of Elementary Education.

BLICK, JAMES D., Ph.D. (1966-1985). Associate Professor of Geography.

BLYTH, JOHN D., Ed.D. (1957-1983). Professor of Music.

BOGGS, WILMA T., M.S. (1971-1977). Assistant Professor of Family Studies and Consumer Sciences.

BOHNSACK, KURT K., Ph.D. (1956-1983). Professor of Zoology.

BONEY, ELAINE E., Ph.D. (1963-1986). Professor of German.

BOTKIN, PATRICIA T., Ed.D. (1969-1988). Associate Professor of Teacher Education.

BOWNE, WILLIAM F., M.A. (1959-1979). Associate Professor of Art.

BRADLEY, WALLACE W., M.A. (1961-1973). Assistant Professor of Secondary Education.

BRANSTETTER, R. DEANE, Ph.D. (1955-1981). Professor of Mathematics.

BRENNEN, E. CLIFFORD, D.S.W. (1978-1983). Professor of Social Work.

BRIGGS, ROBERT M., Ed.D. (1957-1985). Professor of Teacher Education.

BROADBENT, HARRY H., M.S. (1949-1979). Associate Professor of Physical Education.

BRODSHATZER, ARTHUR, D.B.A. (1956-1986). Professor of Accounting.

BROOKS, BAYLOR, B.A. (1931-1966). Professor of Geology.

BROWN, EUGENE P., M.A. (1947-1966). Professor of Accounting.

BROWN, RUTH M. C., Ph.D. (1971-1986). Associate Professor of English and Comparative Literature.

BROWN, WILLIAM L., B.S.E.E. (1962-1983). Professional Degree in Electrical Engineering, Associate Professor of Electrical and Computer Engineering.

BRYANT, STEVEN J., Ph.D. (1964-1978). Associate Professor of Mathematics.

BRYDEGAARD, MARGUERITE A., Ph.D. (1936-1976). Professor of Education.

BURNETT, GAIL A., Ph.D. (1947-1968). Professor of English and Classics.

CAMPBELL, L. BERYL, M.A. (1947-1973). Associate Professor of Elementary Education.

CANNON, NONA H., Ed.D. (1959-1979). Professor of Family Studies and Consumer Sciences.

CAPP, MARTIN P., M.S. (1953-1975). Dean, School of Engineering.

CARLSON, HILDING B., Ph.D. (1948-1969). Professor of Psychology.

CAVE, MARY F., M.A. (1946-1977). Associate Professor of Physical Education.

CHADWICK, LEONARD E., B.S. (1949-1973). Associate Professor of Economics.

CHAN, S. YUN, Ph.D. (1965-1979). Professor of Electrical Engineering.

CHARLES, CAROL M., Ph.D. (1961-1988). Professor of Teacher Education.

CHATER, ELIZABETH E., M.A. (1964-1977). Professor of English.

CLARK, MARGARET A., Ed.D. (1966-1986). Associate Professor of Teacher Education.

CLARK, MARY E., Ph.D. (1969-1986). Professor of Biology.

CLARY, VIRGINIA L., M.S.W. (Under contract 1967-1970, 1970-1979). Associate Professor of Social Work.

COCHRAN, ALICE A., M.A. (1965-1988). Assistant Professor of Counselor Education.

COHEN, LESTER M., M.S.W. (Under contract 1969-1970; 1970-1984). Assistant Professor of Social Work.

COLOMBO, ALBERT A., M.A. (1967-1982). Assistant Professor of Geography.

COVENY, CECELIA T., M.P.H. (1957-1977). Professor of Nursing.

CRAIN, MELVIN, Ph.D. (1959-1983). Professor of Political Science.

CRAWFORD, MAURICE L., Ed.D. (1954-1988). Professor of Information and Decision Systems.

CROUCH, JAMES E., Ph.D. (1932-1973). Professor of Zoology.

CRUM, CLYDE E., Ed.D. (1955-1982). Professor of Secondary Education.

CULLEN, F. PATRICIA, Ph.D. (1964-1985). Professor of Physical Education.

DANIELS, MORRIS J., Ph.D. (1956-1981). Professor of Sociology.

DARLEY, RICHARD D., Ph.D. (1961-1980). Professor of Marketing.

DeLORA, JACK R., Ph.D. (1955-1986). Professor of Sociology.

DIRKS, JOHN H., M.F.A. (1947-1976). Professor of Art.

DODDS, LOWELL J., M.B.A. (1957-1975). Professor of Accounting.

DORRIS, HELEN L., M.S. (1952-1982). Professor of Family Studies and Consumer Sciences.

DUKAS, VYTAS, Ph.D. (1959-1988). Professor of Russian.

DUNKLE, HARVEY I., Ph.D. (1963-1987). Associate Professor of German.

EAGLE, JOHN, Ed.D. (1946-1974). Professor of Mathematics.

EARNEST, SUE W., Ph.D. (1947-1973). Professor of Speech Pathology and Audiology.

EIDEMILLER, DONALD I., Ph.D. (1956-1983). Professor of Geography.

ELGIN, SUZETTE, Ph.D. (1972-1981). Associate Professor of Linguistics.

ELLIOTT, ROSALIE C., Ph.D. (1968-1982). Professor of Elementary Education.

ERICKSON, PAUL, Ed.D. (1963-1986). Professor of Teacher Education.
ERZEN, PAUL E., Ph.D. (1978-1987). Associate Professor of Management, Imperial Valley Campus.
ESTES, RUSSELL G.,Ed.D. (1963-1986). Professor of Music.
EZELL, PAUL H., Ph.D. (1956-1977). Professor of Anthropology.
FELLERS, STANFORD, Ed.D. (1966-1979). Associate Professor of Health Science and Safety.
FERREL, DALE B., M.B.A. (1957-1977). Professor of Accounting.
FISHBURN, CLARENCE E., Ed.D. (1955-1982). Professor of Secondary Education.
FISHER, HORACE H., Ph.D. (1955-1977). Associate Professor of Finance.
FISHER, J. SHERRICK, Ph.D. (1953-1977). Professor of Elementary Education.
FLAGG, DENIS A., Ph.D. (1955-1986). Professor of Economics.
FLYE, RICHARD C., M.A. (1950-1982). Assistant Professor of Music.
FORMAN, ROBERT B., Ed.D. (1963-1985). Professor of Music.
FOX, KATHLEEN, Ph.D. (1962-1986). Professor of Physical Education.
FRANKLIN, ROBERT J., Ph.D. (1967-1988). Associate Professor of History, Imperial Valley Campus.
FRIEDMAN, ABRAHAM M., Ph.D. (1963-1983). Associate Professor of Physical Education.
FRIEDRICH, KURT, Ed.D. (1949-1977). Professor of Secondary Education.
FULCOMER, DAVID M., Ph.D. (1973-1988). Professor of Family Studies and Consumer Sciences.
FULKERSON, GLEN E., Ed.D. (1954-1981). Professor of Secondary Education.
GARRISON, JOHN D., Ph.D. (1956-1983). Professor of Physics.
GATES, GERALD F., Ed.D. (1955-1986). Professor of Teacher Education.
GEGA, PETER C., Ed.D. (1955-1987). Professor of Teacher Education.
GENERALES, MINOS D. (1949-1977). Degree in Law and Political Science, Professor of Political Science.
GHILBERT, JEANNE S., M.A. (1965-1982). Assistant Professor of French.
GIBSON, E. DANA, Ph.D. (1947-1971). Professor of Information Systems.
GJERDE, CLAYTON M., Ph.D. (1948-1974). Dean of Continuing Education; Professor of Secondary Education.
GRANRUD, CAROLYN A., B.S.L.S. (1960-1987). Senior Assistant Librarian.
GRAY, ROBERT T., Ed.D. (1956-1987). Professor of Teacher Education.
GREENE, JOANNE H., M.S.L.S., M.A. (1967-1986). Catalog Librarian.
GRIFFIN, HERSCHEL E., M.D. (1980-1987). Professor of Public Health.
GRIPP, RICHARD C., Ph.D. (1958-1985). Professor of Political Science.
GROFF, PATRICK J., Ed.D. (1955-1981). Professor of Elementary Education.
GROSS, GEORGE C., Ph.D. (1961-1985). Professor of English and Comparative Literature.
GUNNING, BARBARA E., Ph.D. (1969-1988). Professor of Family Studies and Consumer Sciences.
HALE, E. ALAN, Ph.D. (1957-1987). Professor of Marketing.
HAMMACK, ISABELLA S., M.A. (1936-1957). Associate Professor of Education.
HANCHETT, WILLIAM F., Ph.D. (1956-1987). Professor of History.
HANSON, ROBERT F., Rec.D. (1962-1983). Professor of Recreation.
HARARI, HERBERT, Ph.D. (1966-1987). Professor of Psychology.
HARDER, DONALD F., Ed.D. (1960-1983). Counselor, Counseling Services.
HARMON, JAMES E., Ph.D. (1964-1981). Associate Professor of Political Science, Imperial Valley Campus.
HARNED, W. WALLACE, Ph.D. (1962-1978). Professor of Accounting.
HARPER, LEROY A., Ed.D. (1959-1979). Professor of Health Science.
HARRINGTON, NEIL J., Ed.D. (1948-1977). Professor of Chemistry.
HARRIS, VINCENT C., Ph.D. (1950-1976). Professor of Mathematics.
HARRISON, ROBERT C., Ph.D. (1953-1986). Professor of Psychology.
HARVEY, A. RAYMOND, Ph.D. (1949-1983). Professor of Mathematics.
HASKELL, HARRIET, Ph.D. (1940-1971; except 1943-1945). Professor of English.
HAWLEY, PEGGY J., Ph.D. (1968-1988). Professor of Counselor Education.
HAWORTH, GLENN O., D.S.W. (1966-1987). Professor of Social Work.
HAZEN, WILLIAM E., Ph.D. (1962-1988). Professor of Biology.
HERMAN, ELSIE, M.A. (1969-1982). Associate Professor of Social Work.
HIGGINS, WINIFRED H., Ph.D. (1964-1983). Professor of Art.
HILL, WAYNE O., Ed.D. (1955-1983). Professor of Elementary Education.
HODGE, STANLEY B., M.A. (1968-1981). Associate Professor of Art.
HOLOWACH, FRANK S., M.A. (1960-1986). Professor of Journalism.
HOLT, HOWARD B., Ed.D. (1961-1983). Professor of Educational Administration.
HOOVER, GRACE V., B.S.L.S. (1956-1981). Associate Librarian.
HOPKINS, JACK R., M.F.A. (1961-1986). Professor of Art.
HOSTETLER, DAVID K., Ed.D. (1966-1982). Counselor.
HOWARD, GORDON S., Ph.D. (1968-1983). Professor of Drama.
HOWARD, ROY J., Ph.D. (1963-1988). Professor of Philosophy.
HUFFMAN, EDWARD W., Ph.D. (1955-1980). Professor of Zoology.
HULS, HARRY E., Ph.D. (1961-1983). Professor of Elementary Education.
HUNGATE, ROBERT P., Ph.D. (1961-1987; except 1965-1969). Professor of Finance.
HUNRICHS, WILLIAM A., Ph.D. (1957-1985). Professor of Psychology.
HURD, III, LYMAN C., M.M. (1958-1979). Professor of Music.
INGHAM, MURIEL B., Ph.D. (1967-1981). Professor of English.
IRGANG, FRANK J., Ph.D. (1956-1982). Professor of Industrial Studies.
ISENSEE, ROBERT W., Ph.D. (1948-1982). Professor of Chemistry.
ISHIKAWA, WESLEY H., D.S.W. (1969-1988). Professor of Social Work.
JACKSON, ELIZABETH R. (1969-1986). Doctorat, Professor of French.
JACKSON, EVERETT GEE, M.A. (1930-1963). Professor of Art.
JENCKS, CLINTON E., Ph.D. (1964-1986). Professor of Economics.
JOHNS, GERALD E., M.S.L.S. (1967-1986). Associate Librarian.
JOHNSON, C. DALE, Ph.D. (1963-1986). Professor of Sociology.
JOHNSON, PHILIP E., M.S.C.E. (1958-1987). Professor of Civil Engineering.
JONES, JR., KENNETH K., M.A. (1948-1983). Professor of Telecommunications and Film.
JORDAN, JR., G. RAY, Ph.D. (1966-1987). Professor of Religious Studies.
JOSEPH, LIONEL, Ph.D. (1947-1971). Professor of Chemistry.
JOY, NED V., Ph.D. (1953-1982). Dean of the College; Professor of Political Science.
KAHN, MARION J., M.S. (1967-1983). Professor of Social Work.
KALBFELL, DAVID C., Ph.D. (1948-1972). Lecturer in Physics.
KAPLAN, OSCAR J., Ph.D. (1946-1983). Professor of Psychology.
KAREN, ROBERT L., Ph.D. (1964-1985). Professor of Psychology.
KASCH, FREDERICK W., Ed.D. (1948-1981). Professor of Physical Education.
KELLY, BEATRICE L., Ph.D. (1967-1983). Professor of Microbiology.
KENNEY, LOUIS A., Ph.D. (1961-1981). University Librarian.
KIDWELL, WILLIAM M., Ed.D. (1949-1970). Director of Placement and Financial Aid; Professor of Psychology.
KIEWIET DE JONGE, ENGBERT J. C., Ph.D. (1963-1983). Professor of Geography.
KINDER, JAMES S., Ph.D. (1953-1966). Professor of Education.
KING, BONNIE B., M.A. (1970-1984). Assistant Professor of English, Imperial Valley Campus.
KINSEY, MARGARET E., M.A. (1961-1972). Circulation Librarian.
KIRBY, BERNARD C., Ph.D. (1954-1974). Professor of Sociology.
KITCHEN, JAMES D., Ph.D. (1957-1981). Professor of Public Administration and Urban Studies.
KITZINGER, ANGELA M., Ph.D. (1945-1969). Professor of Health Science and Safety.
KLANN, CORINNE F., M.A. (1962-1983). Assistant Professor of Elementary Education.
KLAPP, ORRIN E., Ph.D. (1948-1973). Professor of Sociology.
KOCHANSKI, ADRIAN J., Ph.D. (1969-1983). Professor of Public Administration and Urban Studies.
KOPP, HARRIET G., Ph.D. (1970-1983). Professor of Communicative Disorders.
KOPPMAN, JERRY W., Ph.D. (1963-1987). Professor of Psychology.
KRUMMENACHER, DANIEL, Ph.D. (1968-1988). Professor of Geology.
LAIHO, ETHEL E., M.S. (1964-1982). Associate Professor of Nursing.
LAMB, ALMA S., B.S. (1962-1988). Assistant Librarian.
LAMBERT, ARTHUR A., Ph.D. (1960-1983). Professor of Music.
LANDIS, JEAN, M.S. (1968-1979). Assistant Professor of Physical Education.
LANGENBACH, ROBERT G., Ed.D. (1959-1981). Professor of Information Systems.

LaPRAY, MARGARET H., Ph.D. (1969-1977). Professor of Elementary Education.
LAUER, ROSEMARY Z., Ph.D. (1969-1979). Professor of Philosophy.
LAWSON, RICHARD H., Ph.D. (1957-1984; except 1976-1984). Professor of German.
LEARNED, VINCENT R., Ph.D. (1968-1981). Professor of Electrical and Computer Engineering.
LeBARRON, EVANGELINE M., B.A., B.S. (1946-1975; except 1948-1949). Professor of Information Systems.
LEE, ROBERT E., M.A. (1956-1983). Professor of Telecommunications and Film.
LEIFFER, DONALD B., Ph.D. (1948-1971). Professor of Public Administration and Urban Studies.
LESLIE, NORMAN C., M.N. (1969-1988). Assistant Professor of Nursing.
LEUKEL, FRANCIS P., Ph.D. (1956-1983). Professor of Psychology.
LIENERT, CHARLES, Ed.D. (1954-1977). Professor of Educational Administration.
LINGREN, PAUL A., M.A. (1957-1985). Professor of Art.
LOCKMAN, EVELYN, M.A. (1948-1977). Professor of Physical Education.
LODGE, CHESTER R., Ph.D. (1954-1988). Professor of Electrical and Computer Engineering.
LONGENECKER, MARTHA, M.F.A. (1955-1981). Professor of Art.
LOOMIS, DAVID M., M.M. (1961-1983). Associate Professor of Music.
LOVELY, LOUISE P., M.A., M.L.S. (1979-1988). Librarian, Imperial Valley Campus.
LuPONE, ORLANDO J., Ph.D. (1964-1974). Professor of Elementary Education.
MacDONALD, GRETCHEN, Ph.D. (1966-1981). Associate Professor of Study Skills.
MADDEN, RICHARD, Ph.D. (1939-1966; except 1961-1964). Professor of Education.
MALCOLM, DAVID D., Ph.D. (1953-1983). Professor of Counselor Education.
MANJOS, THELMA D., Ph.D. (1969-1975). Professor of Counselor Education.
MANN, RICHARD L., M.S.E.E. (1968-1982). Professor of Electrical and Computer Engineering.
MAROSZ, WANDA A., M.A. (1967-1986) Associate Professor of Mathematics.
MARTIN, MARY F., M.S. (1958-1980). Assistant Professor of Family Studies and Consumer Sciences.
MAX, STEFAN L., Ph.D. (1964-1984). Professor of French.
MAXWELL, JEAN M., M.S.S. (1963-1978). Professor of Social Work.
McALLISTER, R. WAYNE, M.A. (1966-1983). Assistant Professor of Educational Technology and Librarianship.
McAMIS, LESSLEY C., B.A. (1959-1971). Documents Librarian.
McBLAIR, WILLIAM, Ph.D. (1948-1982). Professor of Biology.
McCLARD, Q. DONAVON, Ph.D. (1966-1986). Professor of Special Education.
McEUEN, ROBERT B., Ph.D. (1969-1979). Professor of Geology.
McFALL, JOHN B., Ph.D. (1966-1985). Professor of Marketing.
McLONEY, WIRT, Ed.D. (1949-1974). Professor of Industrial Studies.
McMULLEN, JAMES D., Ed.D. (1958-1984). Professor of Industrial Studies.
MEEK, DORIS A., Ed.D. (1968-1981). Professor of Secondary Education.
MEIER, ROBERT A., Ph.D. (1972-1986). Professor of Accounting.
MERZBACHER, CLAUDE F., Ed.D. (1947-1978). Professor of Natural Science.
MESSIER, LEONARD N., Ph.D. (1946-1979). Professor of French.
MILLS, JACK, Ph.D. (1957-1985). Professor of Speech Communication.
MILNE, DAVID S., Ph.D. (1946-1976). Professor of Sociology.
MILNE, THAIR S., M.A. (1968-1979). Associate Professor of Family Studies and Consumer Sciences.
MOE, CHESNEY R., Ph.D. (1931-1972). Professor of Physics.
MOE, JEAN T., M.A. (1966-1983). Associate Professor of Music.
MONTEVERDE, JOHN P., Ph.D. (1954-1986). Professor of English and Comparative Literature.
MORGAN, CHARLES, M.S. (1949-1985). Professor of Mechanical Engineering.
MORGAN, RUTH H., D.S.W. (1968-1976). Professor of Social Work.
MOSES, DOROTHY V., M.S. (1958-1979). Professor of Nursing.
MURDOCK, DORIS G., B.S.L.S. (1960-1972). Catalog Librarian.
MURPHY, MARGARET M., Ed.D. (1955-1981). Professor of Physical Education.
NARDELLI, ROBERT R., Ph.D. (1953-1983). Professor of Elementary Education.
NASATIR, ABRAHAM, Ph.D. (1928-1974). Professor of History.
NELSON, BURT, Ph.D. (1957-1988). Director of the Mt. Laguna Observatory; Professor of Astronomy.
NELSON, HILDA B., Ph.D. (1965-1988). Professor of French.
NELSON, SHERWOOD M., Ph.D. (1956-1982). Professor of Philosophy.
NESVOLD, BETTY A., Ph.D. (1967-1986). Professor of Political Science.
NEUNER, JR., EDWARD J., Ph.D. (1957-1986). Professor of Economics.
NEYNDORFF, HANS (1962-1983). Doctorandus, Senior Assistant Librarian.
NORLAND, CALVERT E., M.S. (1947-1976). Professor of Zoology.
NORMAN, NELSON F., Ph.D. (1960-1983). Professor of History.
O'DAY, EDWARD F., Ph.D. (1957-1986). Professor of Psychology.
ODMARK, VERN E., Ph.D. (1952-1982). Professor of Accounting.
OLSEN, ALBERT W., Ed.D. (1957-1983). Professor of Physical Education.
OLSON, JR., ANDREW C., Ph.D. (1946-1980). Professor of Zoology.
ONTELL, ROBERT, D.S.W. (1965-1979). Professor of Social Work.
O'REILLY, NATHALIA CRANE (1958-1983). Special Study at Barnard College, University of Madrid, and Sorbonne, Assistant Professor of English and Comparative Literature.
O'REILLY, PETER, Ph.D. (1968-1983). Professor of Philosophy.
PERKINS, WILLIAM A., Ph.D. (1955-1984). Professor of English and Comparative Literature.
PERSON, GERALD A., Ph.D. (1957-1981). Professor of Secondary Education.
PFAFF, PAUL L., Ph.D. (1931-1971). Professor of Speech Pathology and Audiology.
PIERSON, ALBERT CHAD, Ph.D. (1954-1983). Professor of Management.
PINCETL, JR., STANLEY J., Ph.D. (1955-1986). Professor of History.
PLATZ, MARVIN H., Ed.D. (1955-1983). Professor of Secondary Education.
POROY, IBRAHIM I., Ph.D. (1967-1987). Professor of Economics.
POSNER, WALTER H., M.A., M.A.L.S. (1962-1988). Senior Assistant Librarian.
POVENMIRE, E. KINGSLEY, M.F.A. (1946-1971). Professor of Drama.
PRICE, Q. LEE, Ph.D. (1966-1986). Associate Professor of Family Studies and Consumer Sciences.
PROUTY, HELEN L., Ph.D. (1950-1976). Professor of Secondary Education.
PSOMAS, THEMISTOCLES, Ph.D. (1952-1982). Associate Professor of Psychology.
QUIETT, FREDRICK T., M.S., J.D. (1957-1981). Professor of Civil Engineering.
RADER, DANIEL L., Ph.D. (1954-1983). Professor of History.
RAO, M. V. RAMA, Ph.D. (1957-1982). Professor of Mechanical Engineering.
RASMUSSEN, AARON P., Ph.D. (1971-1980). Associate Professor of Industrial Studies.
RATTY, FRANK J., Ph.D. (1954-1984). Professor of Biology.
REDDING, MARY WORDEN, Ph.D. (1967-1983). Associate Professor of English and Comparative Literature.
REDDING, ROBERT W., Ph.D. (1966-1985). Associate Professor of English and Comparative Literature.
REICHERT, KURT, Ph.D. (1970-1981). Professor of Social Work.
RICHARDSON, ROBERT W., Ph.D. (1939-1972; except 1946-1947). Professor of Geography.
RIDOUT, LIONEL U., Ph.D. (1946-1976; except 1949-1950). Professor of History.
RIEHMAN, LYNNE, D.S.W. (1976-1986). Associate Professor of Social Work.
RIGGS, DOROTHY J., Ed.D. (1966-1986). Professor of Teacher Education.
RIGGS, LESTER G., Ph.D. (1950-1978; except 1951-1952). Professor of Mathematics.
ROBERTS, ELLIS E., Ph.D. (1949-1979). Professor of Geology.
RODNEY, JOSEPH A., Ed.D. (1957-1976). Dean, Imperial Valley Campus; Professor of Education.
ROGERS, SPENCER L., Ph.D. (1930-1971). Professor of Anthropology.
ROHFLEISCH, KRAMER, Ph.D. (1947-1974). Professor of History.
ROHFLEISCH, MARJORIE C., M.A. (1966-1975). Associate Professor of Music.
ROST, NORMAN, M.M. (1951-1977). Professor of Music.
ROWE, ROBERT D., Ph.D. (1946-1971). Professor of Chemistry.
RUJA, HARRY, Ph.D. (1947-1979). Professor of Philosophy.
SAMPLES, GORDON, A.B., B.S. (1950-1983). Associate Librarian.
SANDELIN, MARY LEE, M.L.S. (1968-1983). Senior Assistant Librarian.

SANDERLIN, GEORGE W., Ph.D. (1954-1983). Professor of English and Comparative Literature.
SANDERS, FREDERICK C., Ph.D. (1967-1981). Associate Professor of Speech Communication.
SANDSTROM, GLENN A., Ph.D. (1956-1983). Professor of English and Comparative Literature.
SANNER, RICHARD L., Ed.D. (1965-1981). Media Specialist.
SCHALLES, FRANCES I., A.B. (1950-1968). Education and Curriculum Materials Librarian.
SCHMIER, WALTER D., J.D. (1967-1975). Associate Professor of Business Law.
SCHRUPP, MANFRED H., Ph.D. (1948-1974). Dean, School of Education, Professor of Secondary Education.
SCHUTTE, WILLIAM H., M.S. (1947-1975). Professor of Physical Education.
SCHWOB, MARION L., M.S. (1934-1960). Associate Professor of Physical Education.
SEBOLD, FREDERICK D., Ph.D. (1969-1987). Professor of Economics.
SEGAL, EVALYN F., Ph.D. (1973-1983). Professor of Psychology.
SELLMAN, HUNTON D., M.S. (1946-1971). Professor of Drama.
SENDER, FLORENCE H., M.A. (1964-1973). Associate Professor of Spanish.
SETTLE, ROBERT B., Ph.D. (1972-1988). Professor of Marketing.
SHAW, PETER W., Ph.D. (1955-1986). Professor of Mathematics.
SHIELDS, ALLAN E., Ph.D. (1949-1977; except 1969-1970). Professor of Philosophy.
SHIRA, JR., DONALD W., M.A.L.S. (1958-1986). Senior Assistant Librarian.
SHOUSE, CLAUDE F., Ph.D. (1946-1972). Professor of English.
SHULL, JR., CHARLES M., Ph.D. (1969-1983). Professor of Natural Science.
SHUTTS, WILLIAM H., Ph.D. (1958-1977). Professor of Aerospace Engineering.
SINGER, JR., ARTHUR, Ph.D. (1959-1983). Professor of Special Education.
SKAAR, DONALD L., M.S. (1960-1981). Professor of Electrical and Computer Engineering.
SMITH, CLIFFORD E., Ph.D. (1937-1969). Professor of Astronomy.
SMITH, DEANE F., M.Mus. (1939-1970). Associate Professor of Music.
SMITH, HAYDEN R., Ph.D. (1957-1981). Professor of Secondary Education.
SMITH, JOHN R., Ph.D. (1957-1986). Associate Professor of Psychology.
SMITH, JR., LOUIS E., Ph.D. (1946-1979). Professor of Physics.
SMITH, NEWTON B., Ph.D. (1954-1986). Professor of Mathematics.
SNIDER, MERVIN S., M.A. (1953-1983). Professor of Music.
SNODGRASS, HERSCHEL R., Ph.D. (1967-1978). Professor of Physics.
SNUDDEN, LESLIE W., D.B.A. (1959-1987). Professor of Accounting.
SOMERVILLE, ROSE M., Ed.D. (1967-1977). Professor of Family Studies and Consumer Sciences and Sociology.
SORENSEN, GEORGE W., Ph.D. (1967-1986). Professor of Journalism and Sociology .
SORENSON, GEORGE N., M.A. (1946-1976). Professor of Art.
SPANGLER, JOHN A., Ph.D. (1946-1981). Professor of Chemistry.
SPAULDING, JR., WILLIAM E., Ph.D. (1970-1985). Professor of Information Systems.
SPENCER, MARJORIE J., M.A. (1969-1978). Associate Professor of Art, Imperial Valley Campus.
SPORTSMAN, CHARLES C., M.S. (1947-1968). Associate Professor of Physical Education.
SPRINGSTON, CHRISTINE, M.A. (1930-1966). Professor of Music.
SRBICH, ALEXANDER L., Ph.D. (1959-1983). Professor of Management.
STEPHENSON, III, JOHN S., Ph.D. (1969-1986). Professor of Sociology.
STONE, HAMILTON L., B.S. (1947-1971). Associate Professor of Mechanical Engineering.
STORM, ALVENA S., M.A. (1926-1966). Professor of Geography.
STOUGH, MORROW F., Ph.D. (1950-1976; except 1966-1971). Professor of Education.
STOUT, ZOE E., Ph.D. (1965-1977). Associate Professor of Family Studies and Consumer Sciences.
STRAND, MARGUERITE R., Ph.D. (1955-1977). Counselor, Professor of Secondary Education.
STRAUB, LURA LYNN, M.C.S. (1948-1978). Professor of Information Systems.
STUART, ROBERT J., Ph.D. (1969-1987). Professor of Electrical and Computer Engineering.
STUMPF, JACK E. A., Ph.D. (1965-1983). Professor of Social Work.
SULLIVAN, EDWARD D. S., Ph.D. (1967-1983). Assistant Professor of English and Comparative Literature.
SWIGGETT, JEAN D., M.F.A. (1946-1977). Professor of Art.
SZABO, ANDREW, Ph.D. (1955-1978). Collection Development Librarian.
TANZER, JOANN L., Ed.D. (1956-1986). Professor of Art.
TAYLOR, JAMES W., Ph.D. (1950-1980). Professor of Geography.
TAYLOR, KENNETH M., Ph.D. (1949-1978). Professor of Biology.
TEASDALE, JOHN G., Ph.D. (1956-1982). Professor of Physics.
TERRY, WILLIAM L., Ed.D. (1946-1974). Professor of Physical Education.
THEOBALD, JOHN R., Ph.D. (1946-1969). Professor of English.
THIEL, DONALD W., Ph.D. (1957-1986). Professor of Industrial Studies.
THOMAS, BEATRICE A., M.A. (1954-1977). Professor of Nursing.
THOMAS, BLAKEMORE E., Ph.D. (1956-1977). Professor of Geology.
THREET, RICHARD L., Ph.D. (1961-1981). Professor of Geology.
TIDWELL, JAMES N., Ph.D. (1947-1976). Professor of Linguistics.
TOLLEFSEN, DOROTHY J., M.A. (1946-1972). Professor of Physical Education.
TOSSAS, LEILA de IRIZARRY, Ed.D. (1961-1977). Professor of Elementary Education.
TOZER, LOWELL, Ph.D. (1954-1986). Professor of English and Comparative Literature.
TRIMMER, RUSSELL L., Ph.D. (1955-1976). Professor of Special Education
TUNBERG, JACQUELINE D., Ph.D. (1966-1983). Associate Professor of English and Comparative Literature
TURNER, MARJORIE S., Ph.D. (1954-1977). Professor of Economics
TURNER, MERLE B., Ph.D. (1950-1974). Professor of Psychology
VERGANI LUISA M. (1969-1983). Dottorato in Lettere, Professor of Italian
VOEKS, VIRGINIA W., Ph.D. (1949-1971). Professor of Psychology
WALBA, HAROLD, Ph.D. (1949-1986). Professor of Chemistry
WALCH, JR., HENRY A., Ph.D. (1955-1985). Professor of Biology
WALLACE, ROBERT D., D.Litt. (1957-1986). Professor of Art
WALLING, CURTIS R., E.E. (1931-1969). Professor of Electrical and Electronic Engineering
WARBURTON, JOHN T., Ed.D. (1968-1982). Associate Professor of Educational Administration
WARMER, MARGERY B., Ph.D. (1956-1976). Professor of Family Studies and Consumer Sciences
WARREN, LEROY J., Ph.D. (1955-1988). Professor of Mathematics.
WATSON, ELIZABETH V., M.S. (1968-1977). Associate Professor of Social Work
WEBB, CHARLES R., Ph.D. (1949-1972; except 1965). Professor of History
WEDBERG, HALE L., Ph.D. (1959-1983). Professor of Botany
WEIR, MARY JANE, Ph.D. (1970-1982). Assistant Professor of Educational Technology and Librarianship
WENDLING, AUBREY, Ph.D. (1954-1982). Professor of Sociology
WETHERILL, WILLIAM H., Ph.D. (1957-1982). Professor of Educational Administration
WHITNEY, FREDERICK C., Ph.D. (1970-1979). Associate Professor of Journalism
WICK, ARNE N., Ph.D. (1958-1974). Professor of Chemistry
WIJNHOLDS, HEIKO J., Jur.D. (Econ.). (1967-1980). Professor of Finance
WILDING, JOHN H., Ed.D. (1960-1986). Professor of Teacher Education
WILHELM, BETTY JANE, M.A. (1961-1980). Assistant Professor of Physical Education
WILLERDING, MARGARET F., Ph.D. (1956-1976). Professor of Mathematics
WILLIAMSON, GLORIA R., M.A. (1961-1979). Associate Professor of Physical Education
WIMER, ARTHUR C., M.A. (1950-1971). Professor of Journalism
WOLF, ERNEST M., Ph.D. (1947-1976). Professor of German
WOLTER, GERHARD, M.S. (1957-1975). Professor of Physics
WRIGHT, WILLIAM H., Ph.D. (1921-1962). Professor of Accounting
YAHR, CHARLES C., Ph.D. (1955-1988). Professor of Geography.
YARBOROUGH, JOHN M., Ph.D. (1959-1972). Director of Housing; Professor of Education.
ZIEGENFUSS, GEORGE, Ed.D. (1948-1980). Professor of Physical Education.

Part-Time Faculty 1987 – 1988

ARTS AND LETTERS

Abraham, Charles B., Ph.D., Arts and Letters, General
Adler, Fran, M.A., English and Comparative Literature
Agatucci, Cora S., M.A., Academic Skills
Allister, Shirley L., M.A., Academic Skills
Anderson, Kristine R., M.A., English
Baker, Francoise D., M.A., French and Italian Languages and Literatures
Baker, Phyllis L, M.A., Sociology
Barkley, Christine D., M.A., English and Comparative Literature
Bassler, James D., Ph.D., Economics
Begler, Elsie B., Ph.D., Arts and Letters, General
Belknap, Michal R., Ph.D., History
Bergstrom, George W., Jr., Ph.D., Political Science
Biehl, Patricia L., M.A., English and Comparative Literature
Boger, Don H., M.S., Afro-American Studies
Borgens, Helen A., M.A., English and Comparative Literature
Brenna, Harold D., M.A., English and Comparative Literature
Butler, Evelyn A., Ph.D., English and Comparative Literature
Butler, Raymond J., M.A., Economics
Butler, Renate F., Ph.D., German
Chu, Andrea Wong, M.A., Classical and Oriental Languages and Literatures
Clanton, Gordon, Ph.D., Sociology
Duran, David J., M.A., Academic Skills
Eaton, Gerald, G., Ph.D., Sociology
Emery, Laura C., Ph.D., Arts and Letters, General; English and Comparative Literature
Escalera, Faustino, Jr., Ph.D., Mexican American Studies
Evans, Diane, Ph.D., Afro-American Studies
Evans, Elizabeth, Ph.D., Afro-American Studies
Finkelhor, David, Ph.D., Sociology
Finn, Richard D., M.A., English and Comparative Literature
Fish, Hedda A., M.A., English and Comparative Literature
Fixmer, Clyde H., Ph.D., English and Comparative Literature
Flagg, Denis, A., Ph.D., Economics
Freeman, Roderick A., Ph.D., Philosophy
Freilicher, Melvyn S., M.A., English and Comparative Literature
Friberg, Runa R., M.A., Academic Skills
Gadalla, Mahmoud Saad, Ph.D., Sociology
Galloway, Fredrick J., M.A., Economics
Gerlach, Murney, Ph.D., Arts and Letters, General; History
Gillman, John L., Ph.D., Religious Studies
Grayson, Della C., M.A., English and Comparative Literature
Greene, Myron, M.A., History
Gregg, John A., M.A., English and Comparative Literature
Guthrie, Robert V., Ph.D., Afro-American Studies
Guthrie, Wayne L., Ph.D., History
Hall, Dana M., M.F.A., English and Comparative Literature
Heine, Georgia, G., M.A., Arts and Letters, General
Hepp, Beatrice D., L., French and Italian Languages and Literatures
Hirsch, Susanne, Ph.D., French and Italian Languages and Literatures
Horlor, W. Barry, M.A., Academic Skills
Indermill, Lawana G., M.A., English and Comparative Literature
Ingham, Charles A., M.Phil., English and Comparative Literature
Jaffe, Maggie S., M.A., English and Comparative Literature
Jenner, Stephen R., Ph.D., Arts and Letters, General
Johnson, Willard L., Ph.D., Religious Studies
Kehrenberg, Graziella, D.L., French and Italian Languages and Literatures
Kelly-Cochrane, Dale R., M.A., Economics
Kowit, Steve M., M.A., English and Comparative Literature
Krekorian, Michael H., M.F.A., English and Comparative Literature
Kulkarni, Vijayalakshmi C., Ph.D., Economics
Lasky, Michael, M.A., History
Levine, Marilyn A., Ph.D., Arts and Letters, General
Lewis, Starla H., M.S., Afro-American Studies
Mack, James B., Ph.D., English and Comparative Literature
Maggio, Virginia M., M.A., Academic Skills
McCoy, Sheila P., M.A., Sociology
McKanna, Clare V., M.A., History; American Indian Studies
McNulty, Mark A., M.A., Economics
Melsh, Stephen A., M.A., Sociology
Miller, Elise, M.A., Academic Skills
Molnar, Charles, Ph.D., Religious Studies
Morales, Richard A., Ph.D., Mexican American Studies
Mueller, Howard R., Ph.D., Religious Studies
Mylan, Sheryl A., Ph.D., English and Comparative Literature
Nalven, Joseph G., Ph.D., Arts and Letters, General
Neils, Patricia C., Ph.D., Arts and Letters, General
Nelson, Lance E., Ph.D., Religious Studies
Neumeyer, Helen S., M.A., English and Comparative Literature
Nutkiewicz, Michael E., Ph.D., History
Ornatowski, Cezar M., M.A., English and Comparative Literature
Orton, Bruce I., M.A., Academic Skills, English and Comparative Literature
Palmer, Mona G., M.A., English and Comparative Literature
Paynter, Edward L., Ph.D., History
Phillips, Ashley E., M.A., Women's Studies
Pincell, Giselle A., M.A., French and Italian Languages and Literatures
Quinn, Ronald J., Ph.D., History
Ramirez, Arthur, Ph.D., Mexican American Studies
Ridgway, Jeanette F., Ph.D., English and Comparative Literature
Rockland, Steven G., M.A., Economics
Rodriguez, Elena F., M.A., Sociology
Rosenthal, Sherry L., Ph.D., English and Comparative Literature
Ross, Michael J., Ph.D., Political Science
Rowden, Tonita H., M.A., English and Comparative Literature
Ruppert, Richard W., Ph.D., Economics
Russ, John E., III, M.B.A., Economics
Sahar, Gary N., Ph.D., Political Science
Schlesinger, Steven A., M.A., Philosophy
Shahrokhi, Shahrokh, Ph.D., Economics
Shekem, Peggy L., M.A., English and Comparative Literature
Smith, Lawrence G., M.A., Economics
Somerville, Rose M., Ed.D., Sociology
Soroka, Michael P., Ph.D., Sociology
Spaulding, Robert F., M.S., Economics
Spirito, Donald P., M.A., Economics
Stamon, Peggy J., Ph.D., English and Comparative Literature
Stoddard, Michael Mathis, Ph.D., Political Science
Stromberg, Wayne H., Ph.D., Philosophy
Thomas, Jesse J., Ph.D., Religious Studies
Thompson-Lewis, Mary J., M.A., Academic Skills
Tumminia, Diana J., M.A., Sociology
Turner, Robert D., M.A., English and Comparative Literature
Wautischer, Helmut, Ph.D., Philosophy
Wawrytko, Sandra A., Ph.D., Philosophy
Weeks, William E., Jr., Ph.D., History
White, Richard J., Ph.D., Philosophy
Whitehorse, David, M.A.U.R.P., American Indian Studies
Williamson, Janet S., M.A., English and Comparative Literature
Zappia, Charles A., C.Phil., History

BUSINESS ADMINISTRATION

Bader, Gloria E., Ed.D., Management
Bertrand, Lee S., M.B.A., Finance
Blanco, Thomas Anthony, M.B.A., Information and Decision Systems
Branca, Melanie R., Ph.D., Information and Decision Systems
Brooks, Richard D., M.B.A., Marketing
Brown, Scott J., M.S., Finance
Chadwick-Brown, David, Ph.D., Management
Colombo, Carl J., M.B.A., Finance

Cutsinger, Shannon L., M.S., Finance
Dintrone, Patricia L., Ph.D., Management
Edge, Jerry T., M.B.A., Management
English, Richard J., M.S., Marketing
Emerson, Jeanne M., M.S., Accountancy
English, Richard J., M.S., Marketing
Erzen, Paul E., Ph.D., Management
Glaser, Roger B., Ph.D., Information and Decision Systems
Glazer, Jeffrey W., M.B.A., Finance
Griffith, Peter W., B.S., Finance
Harrington, Don L., J.D., Finance
Hinkle, Sharon A., M.A., Information and Decision Systems
Holbrook, Douglas D., Ph.D., Finance
Jaques, Kathryn M., B.A., Accountancy
Kelley, Timothy F., M.S., Accountancy
Krepshaw, Leonard J., M.B.A., Accountancy
Kriger, Joel M., J.D., Finance
Ledbetter, Donald H., M.B.A., Management
Lees, Steven E., J.D., Marketing
Lindsay, Mark W., J.D., Accountancy
McDevitt, Dennis M., L.L.M., Accountancy
McGee, Curtis L., Ph.D., Management
Mones, Rhoda R., M.A., Information and Decision Systems
Muse, Charles W., B.A., Finance
Olson, James E., M.A., Finance
Omens, Alan E., Ph.D., Management
Pacco, Richard C., M.S., Finance
Pollick, Mark, J.D., Finance
Sannwald, William W., M.B.A., Marketing
Schelhorse, Larry D., Ph.D., Finance
Segui, William A., B.A., Accountancy
Shaw, Edward A., Ph.D., Management
Shaw, Karyll N., Ph.D., Management
Smith, William F., M.S., Finance
Snyder, William S., Jr., M.B.A., Accountancy
Solomon, Norman S., M.S., Accountancy
Varon, Jerome E., J.D., Finance
Ward, William T., B.S., Accountancy
Wong, Derek C., Ph.D., Information and Decision Systems
Wright, Candace E., M.A., Finance

EDUCATION

Acuna-Ramirez, Celia, M.A., Policy Studies in Language and Cross-Cultural Education
Alfaro, Cristina, M.A., Policy Studies in Language and Cross-Cultural Education
Bartz, Carol A., M.S., Teacher Education
Beck, George D., Jr., M.S., Policy Studies in Language and Cross-Cultural Education
Bee, Mary, M.A., Teacher Education
Begler, Elsie B., Ph.D., Teacher Education
Bippert, Judith K., M.A., Teacher Education
Brimner, Larry D., M.A., Teacher Education
Brogan, Michael A., M.A., Teacher Education
Brown, Kristin L., M.A., Educational Technology
Brucker, Eugene F., M.A., Administration, Rehabilitation and Postsecondary Education
Bruington, Christine E., M.A., Educational Technology
Childs, Leigh T., M.A., Teacher Education
Coover, Kris W., M.A., Teacher Education
Cummins, Pat, M.A., Teacher Education
Day, Shirley, M.A., Teacher Education
DeFelice, Walter, Jr., M.A., Administration, Rehabilitation and Postsecondary Education
Dodge, June Ann, M.A., Educational Technology
Doyle, Dennis M., M.A., Policy Studies in Language and Cross-Cultural Education
Dunne, Aubrey C., B.S., Teacher Education
Erickson, Marilyn J., B.S., Teacher Education
Flanigan, George, Ed.D., Administration, Rehabilitation and Postsecondary Education
Flood, Sharon R., Ed.D., Teacher Education
French, Charlotte B., Ed.D., Teacher Education
Gast, Sondra, M.A., Teacher Education
Golden, Sandra F., Ph.D., Teacher Education
Gray, James M., M.Ed., Teacher Education
Gunst, Rosemary, B.S., Teacher Education
Hafner, Janet E., M.S., Counselor Education
Hall, Robert B., M.A., Administration, Rehabilitation and Postsecondary Education
Haney, Jarleen, M.S., Teacher Education
Harmon, Paul, B.A., Educational Technology
Heine, Georgia G., M.A., Teacher Education
Heras, Patricia, Ph.D., Counselor Education
Hockwalt, Ronald Wayne, Ed.D., Administration, Rehabilitation and Postsecondary Education
Holowach, Kathleen E., M.S., Teacher Education
Huey, Mary Ellen, M.A., Counselor Education
Hurtado, Juan, Ph.D., Policy Studies in Language and Cross-Cultural Education
Ibarra, Herbert, M.A., Administration, Rehabilitation and Postsecondary Education
Johnson, Frances S., Ph.D., Teacher Education
Kelso, Brady P., B.A., Teacher Education
Kneer, Phyllis, Ph.D., Teacher Education
Lopez, Lusina, Policy Studies in Language and Cross-Cultural Education
Lungren, Linda E., Ph.D., Teacher Education
Lynch, Martha E., M.A., Teacher Education
Malcolm, David D., Ph.D., Counselor Education
Markland, Cecil J., M.A., Teacher Education
Marr, Candice, M.A., Teacher Education
Mauerman, Leslie P., M.Ed., Teacher Education
McKinney, Elinor, M.A., Special Education
McNary, Nancy W., M.A., Teacher Education
Meerson, Mary Lou J., M.A., Teacher Education
Michaelson, Janet, M.S., Teacher Education
Moore, Barbara K., Ph.D., Teacher Education
Moss, Rocio F., M.S., Policy Studies in Language and Cross-Cultural Education
Murphy, B. Diane, Teacher Education
Nachison, Jon, Ph.D., Counselor Education
Nadeau, Adel T., Ph.D., Policy Studies in Language and Cross-Cultural Education
Neumeyer, Helen S., M.A., Teacher Education
Ollerman, Dennis L., M.A., Counselor Education
Omark, Donald R., Ph.D., Policy Studies in Language and Cross-Cultural Education
Perkowski, Sharon M., M.S., Counselor Education
Plank, Carmen C., M.A., Policy Studies in Language and Cross-Cultural Education
Priestley, Maureen, Ed.S., Counselor Education
Richman, Carol, M.A., Teacher Education
Roeder, Phoebe E., Ph.D., Teacher Education
Romo-Rodriguez, Solia, Policy Studies in Language and Cross-Cultural Education
Rowell, Lonnie L., M.S., Counselor Education
Sage, Maureen E., M.A.Ed., Teacher Education
Santa, Carol M., Ph.D., Teacher Education
Solis, Barbara L., M.S., Administration, Rehabilitation and Postsecondary Education
Stainback, W. Dru., M.A., Special Education
Steinbarth, James J., M.S., Administration, Rehabilitation and Postsecondary Education
Strauss, Barbara, M.A., Teacher Education
Strayer, Margaret J., M.A., Educational Technology
Strohbehn, Connie, M.S., Counselor Education
Tobias, Manuel D., Ph.D., Counselor Education
Torres, Salvador R., M.A., Policy Studies in Language and Cross-Cultural Education
Tran, My-Luong T., Ph.D., Policy Studies in Language and Cross-Cultural Education; Teacher Education
White, Sally, M.A., Teacher Education
Willey, Janis A., M.A., Educational Technology
Williams, Gilbert, III, M.S., Administration, Rehabilitation and Postsecondary Education
Wise, Claire Y., M.S., Counselor Education
Wylie, Mary, M.A., Administration, Rehabilitation and Postsecondary Education
Yavno, Pat L., M.S., Counselor Education

ENGINEERING

Abney, Richard M., B.S.E.E., Electrical Engineering
Akers, David J., B.S.C.E., Civil Engineering
Assaderaghi, Farhad, M.S., Civil Engineering
Bakhru, Keshoolal, Ph.D., Electrical Engineering
Bast, Fred E., B.S., Civil Engineering
Berger, Lev I., Ph.D., Electrical Engineering
Blevins, Robert D., Ph.D., Aerospace Engineering
Bradley, Jeffrey B., Ph.D., Civil Engineering
Breshears, Vance F., Civil Engineering
Brevig, Ola, Ph.D., Aerospace Engineering
Bull, Harold T., Ph.D., Electrical Engineering
Cox, Malvin M., B.S., Electrical Engineering
Dhingra, Kailash C., Ph.D., Electrical Engineering
Ditolla, Robert J., Ph.D., Aerospace Engineering; Civil Engineering
Furry, Robert G., M.S., Civil Engineering
Gaeto, Thomas A., M.B.A., Civil Engineering
Gebremeskel, Asfaha, Ph.D., Electrical Engineering
Gilligan, Sidney R., B.S.E.E., Electrical Engineering
Higgs, James, A., M.S.E.E., Electrical Engineering
Hu, David P., Ph.D., Civil Engineering
Lee, Ti-Ta, Ph.D., Aerospace Engineering; Civil Engineering
Mark, Melvin, M.S., Civil Engineering
McFadden, Dennis E., A.A., Civil Engineering
McIntosh, Jack E., M.S.E.E., Electrical Engineering
Mehran, Farokh, M.S.E.E., Electrical Engineering
Mertz, Robert L., Ph.D., Electrical Engineering
Nagel, Christian B., M.S., Electrical Engineering
Napear, Stephen A., B.S., Electrical Engineering
Nguyen, Albert, B.S.E.E., Civil Engineering
Nowak, Edward W., M.Sc., Electrical Engineering
Penzes, Leslie E., Ph.D., Aerospace Engineering
Prickett, Michael J., M.S., Electrical Engineering
Rao, Balakrishna, Sc.D., Civil Engineering
Rosenbaum, Eugene S., M.S., Aerospace Engineering
Schappelle, Robert H., M.A., Aerospace Engineering
Sczepaniak, Alan L., M.S., Electrical Engineering
Stein, Jerome E., Ph.D., Civil Engineering
Stump, Cary J., M.Arch., Civil Engineering
Tang, Wang, Ph.D., Electrical Engineering
Torre, William V., M.S., Electrical Engineering
Vo, Tri T., M.S., Electrical Engineering
Wehner, Donald R., M.S., Electrical Engineering
Wernicke, Rene D., B.S., Engineering, General
Winn, Richard C., M.E., Civil Engineering

HEALTH AND HUMAN SERVICES

Adler, Jacqueline B., M.A., Communicative Disorders
Aspinall, Lenore M., M.A., Communicative Disorders
Baytop, R. Donna, M.D., Public Health
Bellman, Beryl L., Ph.D., Social Work
Bernstein, Henry W., M.A., Communicative Disorders
Bryant, Nancy B., M.S.W., Health Science
Butler, Elizabeth H., M.S.W., Social Work
Colwell, Carolyn B., M.A., Nursing
Criqui, Michael H., M.D., Public Health
Dacso, Sheryl E., Dr.P.H., Public Health
Dotson, Leroy, M.A.Ed., Health Science
Drakulich, Persida, Ph.D., Health Science
Dunaway-Hall, Claudia A., M.A., Communicative Disorders
Evans, Michael S., M.S.W., Social Work
Evernham-Whitehors, Lorraine, M.P.H., Health Science
Faber, Myron M., M.D., Public Health
Fischer, Marlowe K., M.A., Communicative Disorders
Fong, Terri A., M.S.W., Social Work
Frank, Ruby A., M.A., Communicative Disorders
Gadalla, Mahmoud Saad, Ph.D., Health and Human Services, General
Garcia, Piedad, M.S.W., Social Work
Gaw, Ka Tong S., M.S.W., Social Work
Goldberger, Diane D., M.N., Nursing
Golden, Kenneth M., Ed.D., Social Work
Golden, Lauren J., M.S.W., Social Work
Hamid, Myrna I., M.S.W., Social Work
Haynes, Titus, Ph.D., Social Work
Heifetz, Ruth M., M.D., Health Science
Hill, Linda L., M.D., Public Health
Irvin, Merle J., M.A., Communicative Disorders
Isom, Ruby N., Ph.D., Health Science
Kolombatovic, Vadja V., M.A., Communicative Disorders
Krepelin, Earle W., M.A., Health Science
Lee, Joel M., D.P.H., Public Health
Lischke, Nancy L., M.A., Nursing
Long, Linda M., M.S.N., Nursing
Lu, Yu-Hwa E., M.S.W., Social Work
Mackersie, Carol L., M.A., Communicative Disorders
Mangan, Kenneth R., Ed.D., Communicative Disorders
Marsden, Martha A., Ph.D., Social Work
Milstein, Marjorie F., M.S.W., Social Work
Newkirk, Don E., B.A., Communicative Disorders
Oatsvall, La Von A., M.S.W., Social Work
Richardson, Elvera R., Ph.D., Nursing
Richardson, Marcelle, M.A., Communicative Disorders
Roppe, Beatrice E., B.A., Health Science
Rowe, Linda J., M.S., Communicative Disorders
Salazar, Esther R., M.S.W., Social Work
Sallis, James F., Jr., Ph.D., Public Health
Schreiber, Mary Louise, M.S., Nursing
Schumacher, Janis L., M.A., Communicative Disorders
Shey, Thomas H., Ph.D., Social Work
Smith, Annette R., Ph.D., Social Work
Spitler, B. J. Curry, D.S.W., Social Work
Sproul, Annette, M.S.W., Social Work
Szafran, Karen K., M.S.N., Nursing
Takvorian, Diane L., M.S.W., Social Work
Thedell, Terry D., Ph.D., Public Health
Weeks, Paula B., M.A., Communicative Disorders
Young, Russell L., Ph.D., Public Health
Zeisler, Carolyn, M.A., Communicative Disorders

PROFESSIONAL STUDIES AND FINE ARTS

Adkins, Roberta W., A.B., Art
Allen, M. Linda, M.S., Family Studies and Consumer Sciences
Anderson, Bonnie M., Ph.D., Drama
Aufsesser, Kathryn S., M.A., Physical Education
Avery, Margo W., M.S., Family Studies and Consumer Sciences
Baber, Walter F., Ph.D., Public Administration
Barker, George Andrew, M.A., Art
Barkett, Ronald S., M.A., Public Administration
Barns, Jonathan P., B.F.A., Physical Education
Bedford, Russell B., III, M.M., Music
Begault, Durand R., Ph.D., Music
Bellman, Beryl L., Ph.D., Telecommunications and Film
Benton, Carl W., Ed.D., Physical Education
Bergendorff, Fred L., Ph.D., Telecommunications and Film
Blumberg, Abraham S., Ph.D., Public Administration
Bradley, Ronald E., B.S., Public Administration
Bruington, Neil E., M.A., Industrial Arts
Burakoff, Paul, J.D., Public Administration
Burns, Larry A., J.D., Public Administration
Buttles, Linda, B.A., Physical Education
Cable, George W., A.A., Music
Callaway, Peggy Anne, M.A., Industrial Arts
Casey, Ann L., M.A., Physical Education
Center, Allen H., B.A., Journalism
Chadwick, David L., M.D., Family Studies and Consumer Sciences
Clegg, Charles P., B.A., Physical Education
Cleveland, James O., Ed.D., Family Studies and Consumer Sciences
Comstock, Paul B., M.A., Telecommunications and Film
De Anda, Ruben, B.A., Art
Dobbs, Matti F., Ph.D., Public Administration
Drinan, Mary Ann H., M.A., Public Administration
Dupraw, Christine L., M.P.H., Family Studies and Consumer Sciences
Durbin, Gregory C., M.F.A., Telecommunications and Film
Edwards, William H., Ph.D., Physical Education
Elliott, Jerald B., M.A., Art; Industrial Arts
Engbritson, David P., M.F.A., Art
Farber, Amanda J., M.F.A., Art
Fare, Gerald L., M.S., Public Administration
Feldman, David A., M.S., Journalism
Francis, Lloyd G., Physical Education
Francis, Lorna L., Ph.D., Physical Education
Galling, Walter, B.A., Journalism
Garrett, Jack D., B.A., Telecommunications and Film
Gerlach, David M., B.A., Physical Education
Gittings, Richard W., M.P.A., Public Administration
Goodwin, Mary K., Ed.D., Industrial Arts
Goss, John D., M.S., Public Administration
Gray, Justin G., A.B., Drama
Griffin, Elizabeth, M.S., Physical Education
Hall, Eric J., M.P.A., Public Administration
Hamada, Gary T., B.A., Art
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Williams, Gerald M., Telecommunications and Film
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Ziter, Alan R., B.S., Drama

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Matloff, Jeffrey L., Ph.D., Psychology
McDonald, Barbara A., Ph.D., Psychology
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Pugh, Henry L., Ph.D., Psychology
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Schlesinger, Beth M., M.A.T., Mathematical Sciences
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Snider, Leslie J., Ph.D., Natural Science
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Terry, Ann H., M.S., Geological Sciences
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Townsend-Merino, Katherine L., M.S., Psychology
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Vargas, Alice M., Ph.D., Psychology
Wingerd, Bruce D., M.S., Biology
Young, Andrew T., Ph.D., Astronomy
Zimmer, James O., M.S., Biology
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Zmarzly, Deborah, Ph.D., Biology

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Bible, Dana J., M.B.A.
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Brown, Gary C., B.A.
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Clegg, Charles P., B.A.
Devine, Stephen W., M.S.
Dietz, James C., M.S.
Gaines, David, M.S.
Hanks, Maury D., M.Ed.
Hegerle, Susan L., B.A.
Henn, John T., B.S.
Hoke, Jon, B.S.
Kaverman, Donald L., M.A.
Keeter, Lonnie W., M.Ed.
Klein, John H., B.A.
Kondratek, Gary B., B.S.
Lux, Thomas D., M.A.
Martin, Jan L., B.S.
Masterson, Marie R., B.A.
Mattera, Peter A., B.S.
McLeod, Kevin, B.A.
Mims, Anthony R., B.A.
Moses, H. Wayne, B.A.
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Plunkett, Carol S., M.S.
Reeder, Dava, B.A.
Riggins, Earnest E., M.A.
Schmidt, Edward A., B.A.
Sheffield, Rhan D., B.A.
Spillers, James D., B.A.
Spradley, Linda P., M.S.
Stathas, Gary W., B.S.
Stolz, Dennis E., M.S.
Suwara, Rudolph, M.S.
Underwood, Dan D., M.A.
Warner, Mark A., B.A.
Weeks, Kenneth L., M.Ed.

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Blek, George, L., Ed.D.
Blumberg, Louis, M., Ph.D.
Bowen, Von, L., M.S.T.
Briggs, John H., M.S.
Cochran, Alice J., M.A.

Coons, Kimra L., M.A.
Davies, Thomas M., Jr., Ph.D.
Fragale, Richard P., M.A.
Franklin, Ella G., A.B.
Galaz-Fontes, Jesus F., M.A.
Gonzalez, Refugio A., M.S.
Holt, Roberta L., A.B.
Larsson, Harold J., M.A., Ed.M.
Lazer, Linda S., B.A.
Lear, Robert L., M.A.
Livingston, Nancy M., Ed.D.
Meadows, Marciana A., B.A.
Merino, Alfred, Ed.D.
Murray, David D., M.A.
Natwick, Eric T., M.S.
Nunn, Pauline, M.A.
Perry, Gene G., M.B.A.
Puddy, William H., M.A.
Ramage, Jean C., Ph.D.
Ramirez, Arthur, Ph.D.
Rood, Barbara M., M.A.
Roth, Margaret, B.S.
Ruiz, Olivia T., Ph.D.
Shaver, Barbara M., Ph.D.
Shinn, Mary O., M.Ed.
Spinetta, John J., Ph.D.
Stalnaker, Judith A., M.A.
Villarino, Jose R., Ph.D.
Zertuche, Alejandrina H., M.A.

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ARTS AND LETTERS

Adona, Gabriel, M.S., Academic Skills
Anderson, John P., Ph.D., Sociology
Cochetti, Stefano, Ph.D., Sociology
Davis, Thomas, Ph.D., History
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Enright, Gwyn, M.S., Academic Skills
Feldman, Arthur W., Ph.D., Arts and Letters, General
Flor, Salvador B., M.S., Academic Skills
Hauch, Charles C., Ph.D., Arts and Letters, General
Hector, Susan M., Ph.D., Arts and Letters, General
Hwang, Jengyuan, Ph.D., Sociology
Johnston, Timothy, M.S., Academic Skills
Keesey, Miriam, M.A., Academic Skills
Keitel, Bruce A., M.A., Academic Skills; English and Comparative Literature
Kimbrough, Jack J., D.D.S., Afro-American Studies
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Martinez, Fabio A., M.A., Mexican American Studies
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Pregill, Gregory K., Ph.D., Biology
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Solomon, Jerry H., Physics
Sullivan, Robert M., Ph.D., Biology
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Thompson, Muriel A., Dr.P.H., Biology
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Weiss, Herbert V., Ph.D., Chemistry
Williams, Philip, Ph.D., Biology
Worley, Michael B., D.V.M., Biology
Yoss, Kenneth M., Ph.D., Astronomy
Zirino, Alberto R., Ph.D., Chemistry

Index

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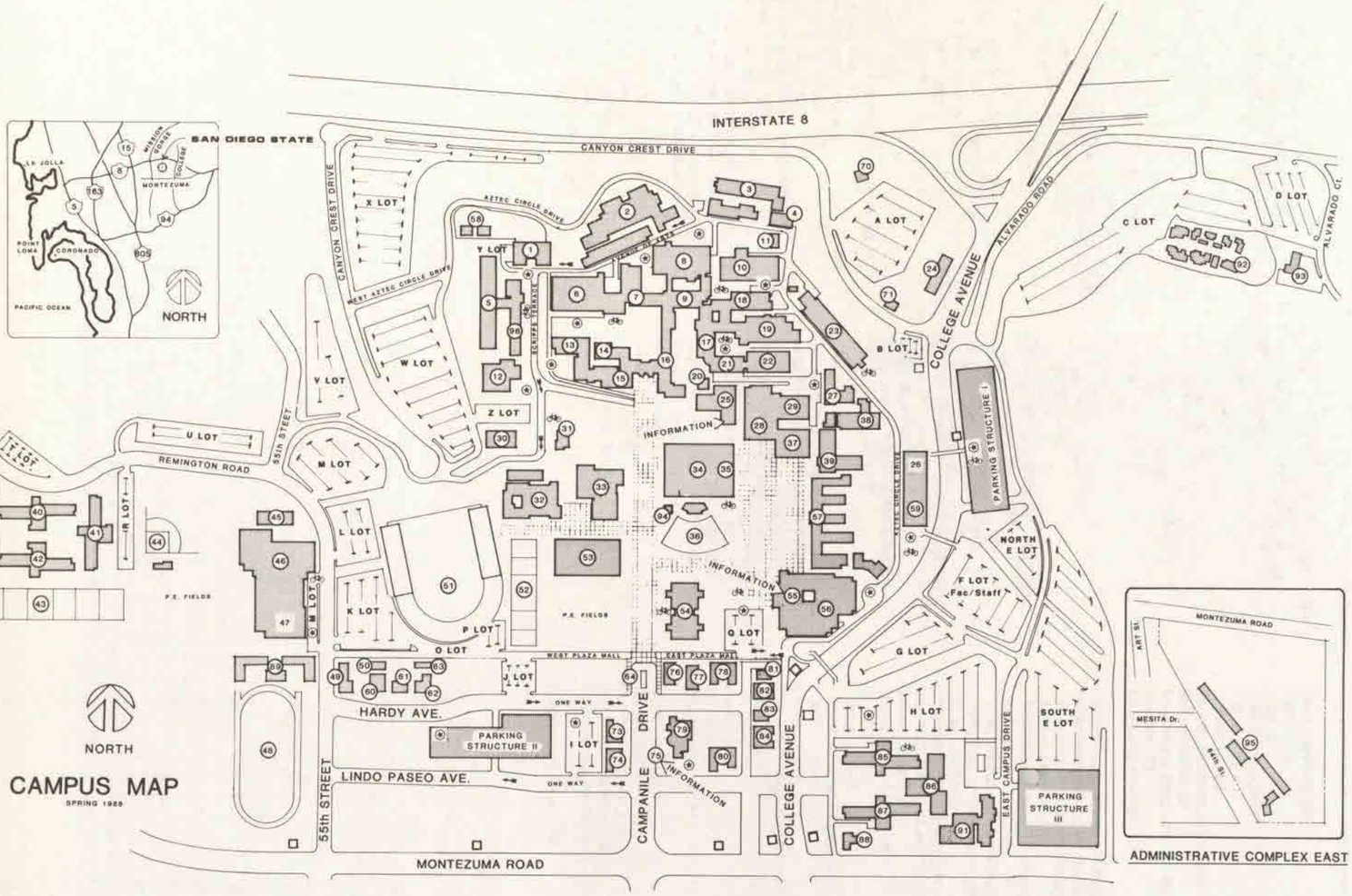

CAMPUS MAP INDEX

57 Academic Advising (University Advising Center)
54 Adams Humanities
25 Administration/Admissions & Records
95 Administrative Complex East
76 American Language Institute (Hardy 5814/HA 814)
2 Art
49 Aztec Athletic Foundation
51 Aztec Bowl (WG 800)
56 Aztec Center
37 Aztec Shops (Bookstore)
59 Business Administration & Mathematics
73 Campanile 5170-86 (CA 170-86)
74 Campanile 5154-68 (CA 154-68)
57 Campus Laboratory School
57 Cashiers Office
30 Central Chilling Plant
95 Central Mail Facility (ACE 102)
23 Chemistry-Geology
58 Child Care Center
4 Cogeneration Plant
78 College Annex (Hardy 5852-82/HA 852-82)
62 College of Extended Studies
50 College of Extended Studies (CES) Classrooms
63 College of Extended Studies Registration Office
26 Computer Center
27 Communications Clinic
78 Counseling Services & Placement (Hardy 5868/HA 868)
33 Dramatic Arts
29 East Commons Cafeteria
39 Education
83 Educational Opportunity Programs (College 5168-72½/CO 168-172½)
84 El Nido (College 5164/CO 164)
10 Engineering
18 Engineering Lab
80 Emerald Isle
25 Evaluations
Extended Studies – see College of
20 Faculty Staff Centre
1 Family Studies and Consumer Sciences
57 Financial Aid
89 Football Coaches Offices
89 Football Operations Center
82 Foundation Offices (College 5178/CO 178)
61 Hardy Avenue 5564 (HA 564)
7 Hardy Memorial Tower
79 Health Services
16 Hepner Hall
14 Hepner Hall 31 (Little Theatre)
88 Housing & Residential Life Office
19 Industrial Arts
75 INFORMATION – PARKING
55 INFORMATION CENTER
13 KPBS-FM Studio
84 KPBS-TV Offices (College 5164/CO 164)
15 KPBS-TV Studio
77 Leisure Connection
35 Library East
8,9 Life Sciences, North/South
14 Little Theatre
34 Love Library
71 Maintenance Garage
87 Maya Residence Hall
56 Montezuma Hall
53 Music Classrooms
96 Nasatir Hall
38 North Education
85 Olmeca Residence Hall
36 Open Air Theater
94 Open Air Theater Dressing Room
89 Outdoor Weightroom (Athletics)
46 Peterson Gymnasium
17 Physical Sciences
22 Physics
21 Physics-Astronomy
45 Physical Education/Athletics
43 P.E. Tennis Courts (PG 650)
3 Physical Plant
78 Police/Public Safety
6 Professional Studies & Fine Arts
Public Health, Graduate School of, 6505 Alvarado Road
70 Radioactive Storage
56 Registration Area
93 Rehabilitation Center
28 Residence Commons Cafeteria
Residence Halls – see (West) Tarastec, Toltec, Zapotec (East) Maya, Olmeca, Tenochca, Villa Alvarado, Zura
81 Seabury Hall (College Avenue 5194/CO 194)
57 Scholarships Office
31 Scripps Cottage and Park
11 Shipping and Receiving/Stores
44 Smith Field (PG 630)
24 Soule Building
15 Speech and Telecommunications
48 Sportsman Field (PG 500 & 510)
5 Storm Hall
57 Student Resource Center
42 Tarastec Residence Hall
91 Tenochca Residence Hall
47 Terry Pool
35 Test Office
40 Toltec Residence Hall
64 Transit Center
95 University Press
25 Veterans Affairs
92 Villa Alvarado Residence Hall
12 West Commons Cafeteria
32 Women's Gymnasium
52 Women's Playfield and Tennis Courts (WG 700-730)
41 Zapotec Residence Hall
86 Zura Residence Hall

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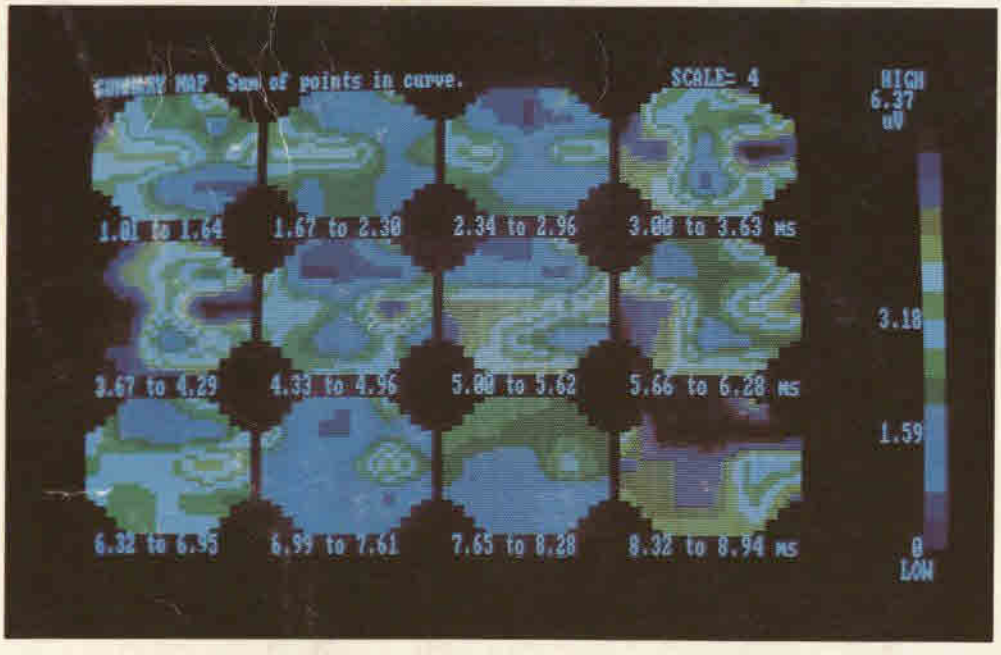

The images on the front and back of this bulletin are brain maps from a normal hearing young adult. These maps represent voltage changes in the brain's electrical activity in response to an auditory stimulus. These voltage changes are reflected in variations in color that correspond to the color bars to the right of the images, with the dark red color reflecting high positive voltage and the dark blue color reflecting high negative voltage. The maps reflect the dynamic electrical activity across various portions of the cortex at the exact point in time indicated by the right hand cursor that cuts through the wave forms displayed. Each individual wave form represents the averaged evoked potential over a period of ten milliseconds from the twenty individual electrode locations on the surface of the scalp.

This new technology provides clinicians and researchers with a method to view ongoing electrical activity of the brain associated with sensory input. The Department of Communicative Disorders is one of the few departments in a university to have such advanced clinical and research technology available for student experience. These brain maps came from a large normative study being done by Drs. Michael Seitz and Steven Kramer, faculty members in the Department of Communicative Disorders.