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San Diego State University maintains and promotes a policy of nondiscrimination and nonharassment on the basis of race, religion, national origin, sexual orientation, gender, marital status, age, disability or veteran status, including veterans of the Vietnam era.

The policy stands as a statement of this University's moral commitment to the right of all persons to equal opportunity in a nondiscriminating, harassment-free atmosphere. The Office of Diversity and Equity oversees that commitment to equal opportunity.

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

Refer to San Diego State University Senate personnel guidelines. Part III-A-3, pertaining to nondiscrimination as well as California State University Executive Orders 340, 345, and 675.

# Annual Calendar

## CALENDAR 2004

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

## CALENDAR 2005

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

# Academic Calendar

# 2004-2005

## SUMMER TERM 2004

May 1	Graduate admissions for fall semester 2004 closed for domestic and international (foreign) students.
May 19	First day of summer term.
May 24-August 20	13 weeks with variable length sessions.
May 24	First day of classes.
May 24	First day of classes for first six-week session.
May 28	Last day to apply for August 2004 graduation with an advanced degree, Graduate Division.
May 31	Holiday – Memorial Day. Faculty/staff holiday. Campus closed.
July 4-5	Holiday – Independence Day. Faculty/staff holiday. Campus closed.
July 6	Final day for submitting theses to the Graduate Division for thesis review to ensure graduation in August 2004.
July 7-August 25	Theses may be submitted to the Graduate Division on an at-risk basis. However, August 2004 graduation is contingent upon completion of final processing by noon, August 18. Students missing this deadline will be required to reapply for graduation for the term in which they expect to graduate.
August 6	Last day for submission of Incomplete and RP grade removals (excluding thesis) for summer graduation with an advanced degree.
August 6	Last day for reporting results on comprehensive examinations to the Graduate Division by department or college.
August 18	Final day for depositing approved theses at Aztec Shops Montezuma Publishing. (Noon deadline.)
August 20	Last day of classes. (Final examinations are the last day of classes for each summer session.)
August 23	Grades due from instructors. (4:00 p.m. deadline.)
August 23	Last day of summer term.

## FALL SEMESTER 2004

August 1	Applications for admission or readmission to San Diego State University for the spring semester 2005 accepted from domestic and international (foreign) students.
August 24	First day of fall semester.
August 24	Last day of registration before classes begin.
August 25	New Graduate Student Orientation.
August 26	Convocation.
August 27	Last day to officially withdraw for fall semester 2004 and receive a full refund.
August 30	First day of classes.
Aug. 30-Sept. 11	Welcome Week.
Aug. 30-Sept. 20	Late registration.

September 6	Holiday – Labor Day. Faculty/staff holiday. Campus closed.
September 20	Last day for payment of fees for late registration.
September 20	Last day to add classes, drop classes, or change grading basis. No schedule adjustments allowed after 6:00 p.m. on this date.
September 20	Last day to withdraw officially from the University for fall semester 2004.
September 20	Last day to file petition for concurrent master's degree credit for fall semester 2004.
September 20	Last day to apply for December 2004 graduation with an advanced degree, Graduate Division.
September 27	Census.
October 1	Graduate admissions for spring semester 2005 closed to international (foreign) students.
October 1	Applications for admission or readmission to San Diego State University for the fall semester 2005 accepted from domestic and international (foreign) students.
November 1	Graduate admissions for spring semester 2005 closed for domestic students.
November 1	Final day for submitting theses to the Graduate Division for thesis review to ensure graduation in December 2004.
Nov. 2-Dec. 17	Theses may be submitted to the Graduate Division on an at-risk basis. However, December 2004 graduation is contingent upon completion of final processing by noon, December 15. Students missing this deadline will be required to reapply for graduation for the term in which they expect to graduate.
November 3	Last day to officially withdraw from all classes for fall 2004 and receive a prorated refund (withdrawal after September 20 requires special approval and a penalty fee is assessed).
November 25-28	Holiday – Thanksgiving recess. Faculty/staff holiday. Campus closed.
December 3	Last day for submission of incomplete and RP grade removals (excluding thesis) for December 2004 graduation with an advanced degree.
December 3	Last day for reporting results on comprehensive examinations to the Graduate Division by department or college.
December 10	Last day of classes before final examinations.
December 11-18	Final examinations.
December 15	Final day for depositing approved theses at Aztec Shops Montezuma Publishing. (Noon deadline.)
December 24	Winter recess begins.
December 24-30	Holiday – Winter recess. Faculty/staff holiday. Campus closed.
Dec. 31-Jan. 1	Holiday – New Year's Day observance. Faculty/staff holiday. Campus closed.

- January 3 Grades due from instructors. (4:00 p.m. deadline.)
- January 3 Last day to apply for a leave of absence for fall semester 2004.
- January 3 Last day of fall semester.

- May 6 Last day for submission of Incomplete and RP grade removals (excluding thesis) for May 2005 graduation with an advanced degree.
- May 6 Last day for reporting results on comprehensive examinations to the Graduate Division by department or college.

**SPRING SEMESTER 2005**

- January 17 Holiday – Martin Luther King, Jr. Day. Faculty/staff holiday. Campus closed.
- January 18 First day of spring semester.
- January 20 Last day of registration before classes begin.
- January 21 Last day to officially withdraw for spring semester 2005 and receive a full refund.
- January 24 First day of classes.
- Jan. 24-Feb. 11 Late registration.
- February 11 Last day for payment of fees for late registration.
- February 11 Last day to add classes, drop classes, or change grading basis. No schedule adjustments allowed after 6:00 p.m. on this date.
- February 11 Last day to withdraw officially from the University for spring semester 2005.
- February 11 Last day to file petition for concurrent master's degree credit for spring semester 2005.
- February 11 Last day to apply for May 2005 graduation with an advanced degree, Graduate Division.
- February 18 Census.
- March 26 Last day of classes before spring recess.
- March 28-April 1 Spring recess.
- March 31 Holiday – Cesar Chavez Day. Faculty/staff holiday. Campus closed.
- April 1 Final day for submitting theses to the Graduate Division for thesis review to ensure graduation in May 2005.  
  
Joint University deadlines apply when submitting approved doctoral dissertations to the Graduate Division for May commencement.
- April 4 Classes resume.
- April 4-May 19 Theses may be submitted to the Graduate Division after this date on an at-risk basis. However, May 2005 graduation is contingent upon completion of final processing by noon, May 18. Students missing this deadline will be required to reapply for graduation for the term in which they expect to graduate.
- April 5 Last day to officially withdraw from all classes for spring 2005 and receive a prorated refund (withdrawal after February 11 requires special approval and a penalty fee is assessed).
- May 1 Graduate admissions for fall semester 2005 closed for domestic and international (foreign) students.

- May 11 Last day of classes before final examinations.
- May 12 Study and consultation day until 4:00 p.m.
- May 12 (after 4:00 p.m.) thru May 19 Final examinations.
- May 18 Final day for depositing approved theses at Aztec Shops Montezuma Publishing. (Noon deadline.)
- May 20 (after 4:00 p.m.) thru May 22 Commencement days.
- May 24 Grades due from instructors. (4:00 p.m. deadline.)
- May 24 Last day to apply for a leave of absence for spring semester 2005.
- May 24 Last day of spring semester.
- May 30 Holiday – Memorial Day. Faculty/staff holiday. Campus closed.

**SUMMER TERM 2005**

- NOTE: Summer session dates to be determined. Refer to SDSU Summer Session Class Schedule.
- June 3 Last day to apply for summer 2005 graduation with an advanced degree, Graduate Division.
- July 4 Holiday – Independence Day. Faculty/staff holiday. Campus closed.
- July 5 Final day for submitting theses to the Graduate Division for thesis review to ensure graduation in August 2005.
- July 6-Aug. 24 Theses may be submitted to the Graduate Division on an at-risk basis. However, August 2005 graduation is contingent upon completion of final processing by noon, August 19. Students missing this deadline will be required to reapply for graduation for the term in which they expect to graduate.
- August 5 Last day for submission of Incomplete and RP grade removals (excluding thesis) for summer graduation with an advanced degree.
- August 5 Last day for reporting results on comprehensive examinations to the Graduate Division by department or college.
- August 19 Final day for depositing approved theses at Aztec Shops Montezuma Publishing. (Noon deadline.)

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



# PART ONE

## Administration

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# Administration

## Principal Officers of Administration

President of the University ..... Stephen L. Weber  
Provost ..... Nancy A. Marlin  
Vice President for Business and  
Financial Affairs ..... Sally F. Roush  
Vice President for Student Affairs ..... James R. Kitchen  
Vice President for University Advancement ..... Theresa M. Mendoza

## Academic Administration

### ACADEMIC AFFAIRS

Provost ..... Nancy A. Marlin  
Associate Vice President for Academic Affairs ..... Ethan A. Singer  
Associate Vice President for Faculty Affairs ..... Bonnie Zimmerman  
Assistant Vice President for Academic Services ..... Jane K. Smith  
Assistant Vice President for  
International Programs ..... Alan R. Sweedler  
Dean of the Library and Information Access ..... Connie Vinita Dowell

### ACADEMIC DEANS

College of Arts and Letters ..... Paul Wong  
College of Business Administration ..... Gail K. Naughton  
College of Education ..... Lionel R. Meno  
College of Engineering ..... David T. Hayhurst  
College of Health and Human Services ..... Dolores A. Wozniak  
College of Professional Studies and Fine Arts ..... Joyce M. Gattas  
College of Sciences ..... Thomas R. Scott  
College of Extended Studies ..... William E. Byxbee  
Division of Undergraduate Studies ..... Geoffrey W. Chase  
Imperial Valley Campus .....

### GRADUATE AND RESEARCH AFFAIRS

#### Graduate Division

Dean of the Graduate Division ..... Janis F. Andersen (Interim)  
Associate Dean for Student Services,  
Policy and Curriculum ..... Penny L. Wright  
Associate Dean ..... James R. Lackritz

#### Research Division

Associate Vice President for Research ..... Thomas R. Scott (Interim)  
Assistant Vice President for Research  
and Technology ..... Camille Nebeker (Interim)

### THE GRADUATE COUNCIL

The Graduate Council of San Diego State University consists of the Dean of the Graduate Division (chair), the Provost, Dean of the Library and Information Access, the Associate and Assistant Deans of the Graduate Division, members of the faculty from the various schools and colleges, and two classified graduate students. For the academic 2003-04 year, the membership of the Council was as follows:

Janis F. Andersen ..... Dean of the Graduate Division (Interim)  
Nancy A. Marlin (*ex officio*) ..... Provost  
Connie Vinita Dowell (*ex officio*) ..... Dean of the Library  
and Information Access  
Jon E. Cawthorne (*ex officio*) ..... Associate University Librarian  
Thomas R. Scott (*ex officio*) ..... Associate Vice President for  
Research (Interim)  
Penny L. Wright (*ex officio*) ..... Associate Dean for  
Graduate and Research Affairs  
James R. Lackritz (*ex officio*) ..... Associate Dean for  
Graduate and Research Affairs

Edward Aguado ..... Department of Geography  
Roger W. Caves ..... School of Public Administration and  
Urban Studies

José E. Castillo ..... Department of Mathematics and Statistics  
Andrew Q. Do ..... Department of Finance  
Lucinda A. Rasmussen ..... School of Social Work  
Patricia J. Geist-Martin ..... School of Communication  
Ronald A. Kline ..... Department of Mechanical Engineering  
Glen McClish ..... Department of Rhetoric and Writing Studies  
Fred R. McFarlane ..... Department of Administration, Rehabilitation  
and Postsecondary Education

Richard Neumann ..... Imperial Valley Campus  
Eugene A. Olevsky ..... Department of Mechanical Engineering  
Judy M. Price ..... Department of Psychology  
Allison Rossett ..... Department of Educational Technology  
Behzad S. Samimi ..... Graduate School of Public Health  
Lembi Saarmann ..... School of Nursing  
Bonsik Shin ..... Department of Information and Decision Systems  
Kerk Fong Kee ..... Associated Students  
Scott Murphy ..... Associated Students

(Membership for 2004-05 will be determined prior to the beginning of the academic year.)

### UNIVERSITY RESEARCH COUNCIL

The University Research Council is the faculty policy-making body responsible for promoting, encouraging, and publicizing the research activities of the faculty consistent with the educational mission of the University. The Council is composed of no fewer than 15 faculty representing the various colleges and is chaired by the Associate Vice President for Research and Dean of the Graduate Division. Much of the work of the Council is carried out in its Standing Committees which include:

- Conflict of Interest
- Institutional Animal Care and Use
- Institutional Biosafety
- Institutional Review Board
- Research Grants-Lectureships
- University Copyrights and Patents

For the academic 2003-04 year, the membership of the Council was as follows:

Thomas R. Scott, Chair ..... Associate Vice President for  
Research (Interim)

Janis F. Andersen (*ex officio*) . . . Dean of the Graduate Division (Interim)  
Frea E. Sladek (*ex officio*) . . . . . Chief Executive Officer  
SDSU Foundation  
Camille Nebeker (*ex officio*). . . Assistant Vice President for Research  
and Technology (Interim)  
Brockenbrough S. Allen . . . . . Department of Educational Technology  
Carolyn D. Baber . . . . . Library and Information Access  
Sue Blair. . . . . The Center for Human Resources  
John D. Clapp . . . . . School of Social Work  
John P. Elder . . . . . Graduate School of Public Health  
James B. Gerber . . . . . Department of Economics  
Dana Grisham . . . . . School of Teacher Education  
Gary M. Grudnitski . . . . . School of Accountancy  
Greg L. Harris . . . . . Department of Biology  
Carlos R. Herrera . . . . . Imperial Valley Campus  
Louise K. Hofherr . . . . . Graduate School of Public Health

Mark J. Kern . . . . . Department of Exercise and  
Nutritional Sciences  
Doreen J. Mattingly . . . . . Department of Women's Studies  
Jeanne F. Nichols-Bernhard . . . . . Department of Exercise and  
Nutritional Sciences  
Eugene A. Olevsky . . . . . Department of Mechanical Engineering  
Stephen B.W. Roeder . . . . . Department of Chemistry and Biochemistry  
Paul W. Sargent . . . . . Department of Sociology  
William G. Tong . . . . . Department of Chemistry and Biochemistry  
Farmarz Valafar . . . . . Department of Computer Science  
Yeongling Helio Yang . . . . . Department of Information and  
Decision Systems  
Judith W. Zyskind . . . . . Department of Biology

(Membership for 2004-05 will be determined prior to the beginning of  
the academic year.)



# PART TWO

Graduate Division

Fees

Admissions

Regulations

Requirements for Doctoral Degrees

Requirements for Master's Degrees

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# Graduate Division

**OFFICE: Centennial Hall 3320**

**TELEPHONE: (619) 594-5213**

**FAX: (619) 594-0189**

**E-MAIL: gra@mail.sdsu.edu**

As part of Graduate and Research Affairs, the Graduate Division is the administrative unit responsible for postbaccalaureate and graduate study at San Diego State University. The division is composed of the academic units that offer graduate study in the University. The faculties of these units provide programs in over 50 fields of study leading to advanced degrees in the arts and sciences and in professional areas at both the masters and doctoral levels as well as to a wide variety of programs leading to advanced certificates and basic and advanced credentials. The Graduate Council, on which sit representatives of the seven academic colleges of the University, has been delegated University-wide jurisdiction over graduate study. The council's responsibilities are broadly defined and include the development of policies on such matters as graduate programs and curricula, graduate student affairs, and graduate student scholarship.

The Dean of the Graduate Division is the chief administrative officer of the division and serves as chair of the Graduate Council. The Graduate Dean has general responsibility for implementing the policies of the Graduate Council and for the development, improvement, and administration of all postbaccalaureate study.

## Graduate Study at San Diego State University

The year 2000 marked the fiftieth anniversary of the award of the first graduate degrees at San Diego State University. Those Master of Arts degrees were limited at first to fields such as Education, English, history, and philosophy and directly supported the historical mission of the institution to train teachers to serve the regional community. Although the number of degree fields in the arts and sciences increased significantly in the 1950s, most continued to be designed for students planning to enter the "teaching service." As the decade ended, however, the establishment of what was to become the California State University (CSU) prompted a notable departure from the earlier academic traditions.

In 1960, the California State Legislature organized a number of state colleges into an integrated system and, in an educational master plan for the State, defined the relationship of the new system to the University of California and to the state's network of community colleges. Although the new system was to continue its mission of training teachers and providing a broad range of undergraduate degree opportunities, each campus was invited to develop its own institutional characteristics within that framework. At what was then San Diego State College, the faculty embraced a model that emphasized the necessarily close relationship between teaching and faculty and student research. This orientation required the broadening of the focus and purpose of advanced study, and over the following decades, scholarly research and graduate education came to be one of the distinguishing characteristics of San Diego State within the CSU. Indeed, by the time San Diego State College was designated a University in 1971, graduate study over a wide range of academic and professional disciplines had become an integral part of the institution's central mission.

A growing and increasingly diverse student population helped to stimulate the rapid growth of graduate programs in the years after 1960. The number of advanced degree programs at the master's level quickly grew to cover more than fifty fields of study in the arts and

sciences disciplines. Professional degrees appeared in areas such as business, city planning, social work, public administration and public health. The Master of Fine Arts along with the Master of Music provided a terminal degree for students interested in pursuing careers in those fields.

Equally important was the recognition that the master's degree in those years was becoming an entry-level requirement in many fields of employment. This not only stimulated the constant updating of traditional programs but also led to the design of new programs that sought to address specific professional and academic needs. A degree program in computational science emerged as a discrete field of study as did a program for students interested in the processes involved in the transfer of technology from the academy to the broader community. The development of concurrent degree programs was also a response to changing societal needs. The School of Social Work, for example, established a program that led to the award of degrees in both social work and law. The nursing program provided a Master of Science degree that also qualified the student for certification as a Nurse Practitioner. The increasingly global interest of students and faculty resulted in a program that combined a degree in Latin American Studies with the Master of Business Administration. A network of international exchange agreements provided both students and faculty with scholarly opportunities virtually around the world. Affiliation agreements gave graduate students access to some of the specialized educational resources of regional universities such as the University of California at San Diego. By 2004, the University had instituted three distance learning programs; thus ushering in the twenty-first century.

The teacher-scholar model led inevitably perhaps to a faculty initiative to establish doctoral programs, and the first program leading to the degree Doctor of Philosophy began with Chemistry in 1965. By the 1990s ten Ph.D. programs serving several hundred students were in place. The latest additions appeared in the millennial year with the inauguration of the degree Doctor of Education in three fields of study. Some of these doctoral programs served traditional academic disciplines while others had a more professional orientation such as in public health, clinical psychology, and language and communicative disorders. And some of these programs were relatively unique. True to its historical tradition of emphasizing study in the discipline of education, the University now offered the Ph.D. in Mathematics and Science Education and the Ed.D. in the rapidly changing field of Educational Technology.

By many measures, San Diego State University has become a competitive national doctoral research university. During the decade of the 1990s, the faculty generated about one billion dollars from non-university sources in support of student and faculty research and professional activity. The University ranks thirty-third in the nation in the number of advanced degrees awarded. The Carnegie Foundation has classified San Diego State as a Doctoral/Research University-Intensive, a designation that describes the top 6.7 percent of institutions of higher education in the United States. Undoubtedly, SDSU in the future will continue to address issues of societal concern as those issues arise. No doubt, too, some programs and initiatives will disappear as circumstances and intellectual questions change. The result, however, is a dynamic curricular and intellectual world and one of enormous academic and professional opportunity.

## Authorized Graduate Degrees

### DOCTOR OF PHILOSOPHY

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

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

### DOCTOR OF EDUCATION

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

Educational Technology  
Teaching and Learning

### PROFESSIONAL DOCTORATE

The professional doctorate degree is offered in the following field:

Audiology

### MASTER OF FINE ARTS

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

Art  
Creative Writing  
Theatre Arts

### MASTER OF ARTS

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

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

### MASTER OF SCIENCE

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

Accountancy	Exercise Physiology
Aerospace Engineering	Geography
Applied Mathematics	Geological Sciences
Astronomy	Gerontology
Bioengineering	Interdisciplinary Studies
Biology	Mechanical Engineering
Biomedical Quality Systems	Microbiology
Business Administration	Nursing
Chemistry	Nutritional Sciences
Child Development	Physics
Civil Engineering	Psychology
Computational Science	Public Health
Computer Science	Radiological Health Physics
Counseling	Regulatory Affairs
Criminal Justice and Criminology	Rehabilitation Counseling
Electrical Engineering	Statistics

### MASTER'S DEGREES

Master of Business Administration  
Master of City Planning  
Master of Engineering  
Master of Music  
Master of Public Administration  
Master of Public Health  
Master of Social Work

### CONCURRENT DEGREES

Concurrent degrees are offered in the following fields:  
Master of Business Administration and Juris Doctor  
Master of Business Administration and Master of Arts in Latin American Studies  
Master of Public Health and Master of Social Work  
Master of Science in Nutritional Science and Master of Science in Exercise Physiology  
Master of Social Work and Juris Doctor

## Graduate Concentrations

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

#### Applied Mathematics (MS)

**Concentrations:**  
dynamical systems  
mathematical theory of communication systems

#### Art (MA)

**Concentrations:**  
art history  
studio arts

#### Biology (MA or MS)

**Concentrations:**  
ecology  
evolutionary biology  
molecular biology  
physiology

#### Business Administration (MS)

**Concentrations:**  
entrepreneurship  
finance  
financial and tax planning  
human resource management  
information systems  
international business  
management  
marketing  
operations management  
real estate  
taxation

#### Civil Engineering (MS)

**Concentration:**  
environmental engineering

#### Communicative Disorders (MA)

**Concentrations:**  
speech-language pathology  
audiology  
education of the deaf  
communicative sciences

### **Education (MA)**

#### **Concentrations:**

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

### **Geography**

#### **Concentrations (MA):**

natural resources and environmental policy  
transportation

#### **Concentration (MS):**

geographic information science

### **Nursing (MS)**

#### **Concentrations:**

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

### **Psychology (MS)**

#### **Concentrations:**

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

### **Public Administration (MPA)**

#### **Concentrations:**

city planning  
criminal justice administration

### **Public Health**

#### **Concentrations (MPH):**

biometry  
environmental health  
epidemiology  
health promotion  
health services administration

#### **Concentrations (MS):**

industrial hygiene  
toxicology

#### **Concentrations (Ph.D.):**

epidemiology  
health behavioral sciences

### **Statistics (MS)**

#### **Concentration:**

biostatistics

### **Theatre Arts (MFA)**

#### **Concentrations:**

acting  
design and technical theatre  
musical theatre

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

Single subject

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

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

### **Specialist Credentials**

BCLAD

Education specialist for the deaf and hard of hearing, levels I and II

Reading/language arts

Resource specialist certificate of competence

Special education:

Early childhood special education, levels I and II; internship  
credential

Mild/moderate disabilities, levels I and II; internship credential

Moderate/severe disabilities, levels I and II; internship credential

Physical and health impairments, level I

### **Service Credentials**

Administrative

Child welfare and attendance

Clinical-rehabilitative

Pupil personnel:

school counseling

school psychology

school psychology (internship credential)

school social work

School nurse

## **Graduate Certificate Programs (nondegree)**

Certificate in advanced technical and scientific writing

Certificate in applied linguistics and English as a second  
language (ESL)

Certificate in bilingual cross-cultural language and academic  
development (BCLAD)

Certificate in bilingual (Spanish) special education

Certificate in bilingual speech language pathology

Certificate in communications systems

Certificate in community college teaching

Certificate in cross-cultural language and  
academic development (CLAD)

Certificate in cultural and community trauma studies

Certificate in developing gifted potential

Certificate in distance education

Certificate in early childhood special education

Certificate in instructional software design

Certificate in instructional technology

Certificate in mathematics specialist

Certificate in preventive medicine residency

Certificate in regulatory affairs

Certificate in rehabilitation administration

Certificate in rehabilitation technology

Certificate in supported employment and transition specialist

Certificate in teaching the emotionally disturbed/behaviorally  
disordered

Certificate in transborder public administration governance

Certificate in workforce education and lifelong learning

## **Credentials Offered**

### **Teaching Credentials**

Multiple subject

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

## Graduate Certificate Programs

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

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

## Graduate Study in the Summer Term

San Diego State University offers state supported as well as special session courses in the various terms that make up the summer term. Graduate students may earn residence credit that satisfies requirements for advanced degrees, credentials, or advanced certificates by successfully completing such courses during the summer. Enrollment in state supported courses requires that a student have been admitted to the University in an appropriate graduate category. Students who have not been admitted to the University may be eligible to enroll for such courses through Open University. Enrollment in special session courses does not require admission to the University. Not more than nine units combined of coursework taken in Open University or special sessions prior to admission to an advanced degree or certificate program will be acceptable subsequently on a program of study. For more information about the summer term, see the SDSU Summer Session Class Schedule.

Students taking coursework for a degree through summer programs only must apply to the University and be admitted with classified standing before completing more than 12 units. Students pursuing an advanced degree in summer only must attend for a minimum of three summers to complete a degree.

## Graduate Study for Foreign Students

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

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

## Veterans and Graduate Study

San Diego State University is approved to train veterans under the G.I. Bill. Veterans who are interested in graduate work should visit the campus Veterans Affairs Office located in Student Services, Room 1641, for information and counseling regarding veterans' benefits prior to the date of registration.

## Financial Support for Graduate Students

Like other national universities, San Diego State University makes available to students admitted to advanced degree curricula a variety of financial support programs designed to substantially reduce or eliminate economic barriers to the pursuit of graduate study. The most widely known of these are the state and federal aid programs available to degree-seeking students who are citizens or permanent residents of the United States. Equally important are the University programs that address the unique financial needs of individual students across a broad range of economic and academic circumstances.

The on-campus programs for advanced degree students at San Diego State University include appointments as graduate teaching associates, graduate assistants, research assistants, and student

assistants as well as tuition and fee payment assistance, fellowships, scholarships, grants, and forgivable loans.

Eligibility and dollar amounts often differ by discipline and experience, and some opportunities are available only to students admitted to doctoral programs. Nominations for almost all of these awards originate with the chair or director of the department or school of the degree program for Master's degree students or the coordinator of the doctoral program for students pursuing either the Ph.D. or Ed.D. degree. The Graduate Division administers most of these programs for the University. The Graduate Dean must approve most awards and appointments and determine whether the applicant is in good standing in the University. Continuing and prospective students interested in specific information about any of these on-campus programs are invited to write or visit the Graduate Division at San Diego State University, 5500 Campanile Drive, San Diego, CA 92182. The phone number is (619) 594-5213. The Graduate Division is located in Centennial Hall, Room 3320. Information is also available at <http://www.sdsu.edu>.

### Financial Aid

Information about all state, federal, and institutional aid programs is available from the Office of Financial Aid and Scholarships located in Student Services, Room 3605. The phone number is (619) 594-6323. The SDSU *Guide to Financial Aid* describes the available programs as well as the academic standards that a student must maintain in order to remain eligible for such aid. The *Guide to Financial Aid* can be accessed at <http://www.sa.sdsu.edu/fao>.

The Free Application for Federal Student Aid (FAFSA) is all you need to begin the application process. You may apply by using FAFSA on the Web site at <http://www.fafsa.ed.gov>. Paper FAFSA applications are also available and may be picked up at college financial aid offices.

Applications are reviewed and aid awarded throughout the year based on available funding. January through May, however, is considered the optimum time period to apply for aid to receive funding at the beginning of the fall semester.

### E-Mail and the Internet

The SDSU Office of Financial Aid and Scholarships uses e-mail and the Internet to communicate with aid applicants about documentation needed, disbursement holds, and awards. The Office of Financial Aid and Scholarships home page and secure Web site, *AidLink*, have been enhanced to streamline the application and award process for SDSU students. Go to SDSU's Web site at <http://www.sdsu.edu/portal>, and select E-Mail/Address Update to make sure there is a valid e-mail address on record for you with the Office of the Registrar. Use *AidLink* at <http://www.sdsu.edu/financialaid> to view your personal financial aid information, download and print documents you need to submit, activate your student loan, and more.

### Graduate Teaching Associates

Appointments as graduate teaching associates, known more familiarly as a TAs, provide students the opportunity to participate directly in the teaching activities of the university. Indeed, faculty members in many programs consider such appointments an integral part of the academic curriculum for their graduate students. Under the supervision of senior faculty, TAs provide direct instruction to undergraduate students, primarily at the lower division level.

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

Qualifications for appointment include admission to San Diego State University with classified or conditionally classified graduate standing for the purpose of obtaining an advanced degree. Appointment is for a period of either one semester or the academic year. Reappointment following an appointment of one semester or one academic year is dependent upon satisfactory performance in graduate studies, as prescribed by the Graduate Division, departmental need for the continued service in the department, and upon satisfactory teaching performance.

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

Information concerning an appointment as a graduate teaching associate may be obtained from the head of the department, school, or college in which the applicant wishes to obtain the advanced degree. The Graduate Division also publishes *A Handbook for Graduate Assistants and Graduate Teaching Associates* available at [http://gra.sdsu.edu/Graduate/gta\\_ga\\_handbook/index.htm](http://gra.sdsu.edu/Graduate/gta_ga_handbook/index.htm).

### Graduate Assistants

Graduate assistants (GA) provide instructionally related services by tutoring and conducting advising. Alternatively, GAs may be assigned duties that directly support the research activities of the faculty.

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

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

Information concerning an appointment as a graduate assistant may be obtained from the head of the department, school, or college in which the applicant wishes to obtain the advanced degree. For further information consult *A Handbook for Graduate Assistants and Graduate Teaching Associates* available at [http://gra.sdsu.edu/Graduate/gta\\_ga\\_handbook/index.htm](http://gra.sdsu.edu/Graduate/gta_ga_handbook/index.htm).

### Student Assistants

Graduate students are eligible for employment as student assistants who perform a wide variety of tasks supporting faculty and staff across the University. Assistants are paid by the hour and are restricted to assignments not to exceed 20 hours per week. Students may apply for this employment through the department chairs or program directors. In addition, the Office of Career Services located in Student Services, Room 1200, maintains a listing of the positions available.

### Research Assistants

The University offers some graduate students part-time employment as research assistants. Research assistants work directly with faculty in a laboratory or other research facility in the health, physical, and social sciences. Research assistants are employees of the SDSU Foundation, but they are generally hired through departmental faculty seeking assistance on research programs. Students may inquire about such appointments through the chair or director of the respective science department or through the Office of Human Resources of the SDSU Foundation. Those interested in adding their names to a list of candidates for current or future part-time openings may obtain application materials from the San Diego State University Foundation, Gateway Building, 5250 Campanile Drive, San Diego, CA 92182-1945. Further information is also available on the University Web site.

### Tuition Assistance Program for Out-of-State and Foreign Students

In California, all students are required to pay a registration fee based on the number of units of enrollment. In addition to this fee, non-residents of California, including international students, pay tuition that currently amounts to \$282 per unit of enrollment. For graduate students of superior scholastic achievement participating in the teaching program, however, the University may provide assistance by waiving all or part of the cost of out-of-state tuition.

To be eligible for this program, an applicant must be a permanent resident or a citizen of the United States or a nonresident who is a citizen and resident of a foreign country. Assistance is provided on a semester-by-semester basis only for students who hold appointments as teaching associates, teaching related appointments as graduate assistants, or a combination of the two that requires a workload approximating 20 hours per week.

For more information and application forms, continuing and new students should contact the chair or director of the department or school of the Master's program to which they have been admitted. Students pursuing a Ph.D. should consult the program director. Departmental nominations should be submitted to the Graduate Division by April 1 of each year.

### Fee Assistance Program

For most students pursuing the Ph.D. degree, the University has available some scholarship funds to offset in whole or in part the cost of the state-mandated registration fees. Like the tuition assistance program, awardees must be participating in the teaching program of the University. Information regarding this support is available from the directors of the doctoral programs.

### Graduate Scholarships

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

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

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

Applications for the SDSU scholarship program are available on the Office of Financial Aid and Scholarships Web site at <http://www.sdsu.edu/financialaid> and are available beginning in November.

The SDSU scholarship application must be filed or postmarked by the first Monday in February. Students need to submit only one application for the general SDSU scholarship program. Individual results will be mailed to all applicants during April for the following academic year.

In addition to SDSU scholarships, the Marshall, Fulbright, Rhodes, and Rotary scholarships are prestigious international scholarships 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.

### National Fellowships

The Scholarship Office receives annual announcements of the Fulbright, Marshall, Kent, Rotary, and other national fellowship programs. Since each campus is limited in the number of applications it may endorse, students interested in fellowships of this type are encouraged to discuss their applications with the Scholarship Director and

with members of the University faculty members who have themselves held these fellowships. Since test scores from the Graduate Record Examinations General Test are required, students should take this examination well in advance of the deadline date for the submission of applications. The GRE may be scheduled through the Office of Testing, Assessment and Research.

### **Graduate Equity Fellowship Program**

The Graduate Equity Fellowship program provides support for economically disadvantaged graduate students, especially from groups who are underrepresented within their respective disciplines. Only legal residents of California who can demonstrate significant financial need are eligible. Recipients must be classified graduate students and must enroll for a minimum of nine units of coursework each semester they hold the fellowship. Fellowships range from \$500 to \$4,000 for an academic year depending on demonstrated need. Students may receive awards for a maximum of two academic years but they must apply each year. Interested students should complete a Graduate Division application and the Free Application for Federal Student Aid (FAFSA). The Graduate Division application must be submitted by the end of May.

### **Forgivable Loan/Doctoral Incentive Program**

The California State University provides funds each year for the purpose of increasing the diversity of qualified applicants for instructional faculty positions at its various campuses. This program offers loans of up to \$10,000 per year to a total of \$30,000 while the student is enrolled full time in a doctoral program at an approved and accredited institution. Loans are subsequently forgiven at a rate of 20 percent for each year of full-time teaching in the CSU. Enrollment or employment in the CSU is not required of applicants for this program

Receipt of the award and successful completion of a doctoral program does not guarantee a faculty position in the CSU. In the event

that the student does not or cannot obtain such a faculty position, the loan must be repaid at an interest rate comparable to that of other graduate student loans.

Applications are available at all CSU campuses, and each campus has a Forgivable Loan Program Coordinator and a selection committee. Applications are due in February and the selections are announced in early May of each year. On the SDSU campus, interested students are invited to contact the Graduate Division for more detailed information and to obtain an application.

### **Graduate Assumption Program of Loans for Education (Graduate APLE)**

This is a state-funded teacher incentive program administered by the California Student Aid Commission. It is designed to encourage graduate students to complete their advanced education and then serve as faculty at an accredited college or University in California. Under the provisions of the program, the Commission may assume up to \$6,000 in student loan balances in return for the participant's service as a full-time faculty member at a college or university in California for three consecutive years after obtaining a graduate degree.

Applicants for this loan assumption program must be citizens or permanent residents of the United States as well as residents of the State of California. Participants must be nominated by the University and are selected on the basis of academic qualifications, interviews, and faculty evaluations as well as such other criteria as the nominating campus may determine. The deadline for submission to the Commission of applications of the campus nominees is normally the end of June for the following academic year. Application forms and complete information may be obtained from the Office of Advising and Recruitment, located in Business Administration, Room 259, (619) 594-6320.

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# Fees

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

**As this catalog goes to print, there have been proposed increases in the State University Fee for undergraduate and graduate students, as well as non-resident tuition, which are subject to Board of Trustees approval. Any increases would be effective fall 2004. For updated information regarding the fee structure for 2004-2005 refer to the fall Class Schedule Web site at <http://www.sdsu.edu/schedule.html> or University Cashiers at <http://www.sdsu.edu/cashiers>.**

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

In cooperation with SDSU, CASHNet™SmartPay allows students to pay their registration fees and/or out of state tuition with MasterCard, Discover Card or American Express card. The CASHNet™SmartPay URL is <http://www.CashnetSmartPay.com/SDSU>. Payments made via CASHNet™SmartPay are received by the University Cashiers Office no later than the next business day, so the registration process is not delayed. CASHNet™SmartPay assesses each customer a service charge based on the transaction amount. See the Web site for details.

**NEW:** You may now pay your fees on-line using your checking account information. There is no additional fee assessed for this service. Visit the Cashiers Office Web site at <http://www.sdsu.edu/cashiers> and see On-Line Services.

## 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 – GRADUATE STUDENTS:

(On basis of units carried.)

**Fee payment information and instructions are in the Class Schedule available at <http://www.sdsu.edu/schedule.html>.**

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

Units Attempted	Registration Fee
0 units – 6.0 units	\$875.00
6.1 or more units	\$1,349.00

The above fee includes a Student Activity Fee of \$15.00, a Student Union Fee of \$71.00, a Health Facilities Fee of \$25.00, an Instructionally Related Activities Fee of \$15.00, a Health Services Fee of \$85.00, a Library Use Fee of \$10.00, and a State University Fee of either \$654.00 or \$1,128.00, depending on unit load.

Imperial Valley Campus students pay a Student Union Fee of \$24.00, a Health Services fee of \$10.00, and a Health Facilities Fee of \$3.00. See Imperial Valley Campus Bulletin for details.

The total fee paid per term will be determined by the number of units taken.

Mandatory systemwide fees are waived for those individuals who qualify for such exemption under the provisions of the California Education Code. See "Exemptions" in this section of the catalog.

Legal residents of California are not charged tuition.

## INSTALLMENT PLAN

An installment plan is available for students who wish to pay their registration fees (and tuition, if applicable\*) in payments. There is a \$33.00 charge for this service, paid at the time the initial registration payment is made. Additional information and instructions are available in the Class Schedule or may be obtained from the University Cashiers Office.

\* Additional service charges apply to out-of-state and foreign tuition only. Service charge is equal to 15% of each installment payment of tuition.

## TUITION FOR NONRESIDENT STUDENT (Foreign and Out-of-State)

Tuition will be charged for all units attempted.  
Per unit ..... \$282.00\*

(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 ..... 600.00

\* Not to exceed \$8,460.00 for the fall/spring semesters.

## PARKING FEES

Nonreserved parking space, per semester ..... \$117.00  
Car pool—see Cashiers Office.

Less than four-wheeled, self-propelled vehicle  
(motorcycle, moped) ..... 29.00

Overnight parking surcharge, per semester ..... 78.00  
(Limited overnight parking available on a first come, first serve basis. Students living in residence halls are exempt from fees but subject to limited availability.)

Section 42201 of Title 5, California Code of Regulations, provides for the waiver of campus parking fees for students with disabilities who have been issued a DMV placard or license plate, and who meet low income requirements. For further information regarding eligibility contact the Disabled Student Services Office (Student Services, Room 1661).

## MISCELLANEOUS FEES

(Fees payable when service is rendered.)

Application for admission or readmission (nonrefundable), payable by check or money order at time application is made ..... \$55.00

Diversion Program Fee ..... 100.00

Dual Admission, Pre-Enrollment Fee ..... 30.00

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

Late course forgiveness ..... 20.00

Failure to meet administratively required appointment or time limit (late fee) ..... 20.00

Registration installment plan service charge .....	33.00
Tuition (Foreign or Out-of-State) installment plan service charge.....Equal to 15% of each installment payment	
Photo-identification card (One-time cost to both new undergraduate and graduate students at time of registration.) Non-refundable .....	5.00
Lost photo identification card	
Photo I.D. Card replacement.....	10.00
Transcript of record (official or unofficial) .....	4.00
Second through tenth transcript, prepared at the same time as the first .....	\$4.00 plus each 2.00
Additional copies over ten, prepared at the same time .....	\$22.00 plus each 1.00
AFROTC deposit (Unexpended portion is refundable.) .....	75.00
Returned check fee* .....	20.00
Loss of or damage to library materials .....	Replacement cost plus \$8.00 service charge
Graduation services fee .....	35.00
Latin diploma .....	22.00
Diploma replacement fee .....	12.00
Document copying fee .....	1.00
Application to Teacher Education Credential Program (in addition to \$55.00 application for admission).....	25.00
Credential application fee** .....	55.00
Credential evaluation fee .....	25.00
Fingerprinting fee (plus applicable DOJ and FBI fees).....	17.00
Musical instrument and audio/visual equipment fee .....	20.00
Lock and locker fee (optional) .....	1.00
Lost key fee (per key) .....	10.00
Towel fee (optional) .....	4.00
Interest inventory assessment .....	10.00
Resident Affiliate Program (RAP) .....	25.00

\* Late fee also charged when applicable.

\*\* Established by and payable to the Commission on Teacher Credentialing.

### MISCELLANEOUS INSTRUCTIONAL COURSE CHARGES

Miscellaneous instructional course charges are payable for the following courses. See applicable *Class Schedule* or <http://www.sdsu.edu/cashiers> for fee amounts.

*Art* 325, 326, 425, 525, 526, 625, 627, 700D.

*Exercise and Nutritional Sciences* 347B.

*Nutrition* 205, 302L, 405.

### LABORATORY COURSE FEES

Mandatory laboratory fees are charged for the following courses. See applicable *Class Schedule* or <http://www.sdsu.edu/cashiers> for fee amounts.

*Astronomy* 109.

*Biology* 100, 100L, 210, 261, 350, 354L, 366L, 436, 509, 512, 515, 521L, 523, 524, 525, 526, 530, 531, 541, 556, 577.

*Chemistry* 100, 105, 200, 201, 202, 231, 232L, 251, 410A, 410B, 417, 431, 432L, 457, 467L, 537, 567.

*Computer Engineering* 470L.

*Computer Science* 370, 470, 551, 555, 556, 559, 561, 571, 572, 576, 578, 656, 657, 670, 672, 674, 696.

*Electrical Engineering* 330L, 430L.

*Exercise and Nutritional Sciences* 265L, 304L.

*Geological Sciences* 101, 105, 200, 221, 224, 306, 508, 525, 530, 532, 536, 537, 552.

*Mathematics* 122.

*Natural Science* 412A, 412D.

*Physics* 107, 182A, 182B, 195L, 196L, 197L, 311, 357, 533, 553, 561.

### CREDIT CARDS

The University Cashiers Office does not accept credit cards for payment of registration fees or tuition (foreign or out-of-state) except as applicable under the terms of the Installment Plan. American Express, MasterCard, VISA, and Discover Card charge cards are accepted for other payments, such as housing, parking, health services, continuing education, installment payments, and miscellaneous over-the-counter payments. In cooperation with SDSU, CASH-Net™SmartPay does afford students the choice to use a credit card to pay registration fees and/or tuition. Refer to fees section on previous page. Most ATM cards are also accepted for payment of miscellaneous charges. Additional information is available from the Cashier's Office.

### 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 fifteenth day** following the commencement of instruction. Foreign and out-of-state students are liable for tuition related to all units held, except as provided for by the refund policy.

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

Nonresident (foreign and out-of-state) tuition must be paid prior to the first day of classes. With the exception of doctoral students and students enrolling for 799A or 799B only, **foreign** students must pay or sign an installment agreement for a minimum of 9 units at the time of registration. **Foreign** students wishing to pay fewer than 9 units must submit written approval to do so from the International Student Center or the Graduate Division, as applicable.

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

### DISHONORED CHECK

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

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

### REFUND OF FEES INCLUDING NON-RESIDENT TUITION

Regulations governing the refund of mandatory fees, including nonresident tuition, for students enrolling at the California State University are included in Section 41802 of Title 5, California Code of Regulations. For purposes of the refund policy, mandatory fees are defined as those systemwide fees and campus fees that are required to be paid in order to enroll in state-supported academic programs at the California State University. Refunds of fees and tuition charges for self-support programs at the California State University (courses offered through extended education) are governed by a separate policy established by the University.

In order to receive a full refund of mandatory fees, including non-resident tuition, a student must cancel registration or drop all courses prior to the first day of instruction for the term. Information on procedures and deadlines for canceling registration and dropping classes is available from the Office of the Registrar and in the *Class Schedule*.

For state-supported semesters, quarters, and non-standard terms or courses of four weeks or more, a student who withdraws during the term in accordance with the University's established procedures will receive a refund of mandatory fees, including nonresident tuition, based on the portion of the term during which the student was

## Fees

enrolled. No student withdrawing after the 60 per cent point in the term will be entitled to a refund of any mandatory fees or nonresident tuition.

For state-supported semesters, quarters, and non-standard terms or courses of less than four weeks, no refunds of mandatory fees and nonresident tuition will be made unless a student cancels registration or drops all classes prior to the first day in accordance with the University's established procedures and deadlines.

Students will also receive a refund of mandatory fees, including non-resident tuition under the following circumstances:

- The tuition and mandatory fees were assessed or collected in error;
- The course for which the tuition and mandatory fees were assessed or collected was cancelled by the University;
- The University makes a delayed decision that the student was not eligible to enroll in the term for which mandatory fees were assessed and collected and the delayed decision was not due to incomplete or inaccurate information provided by the student; or
- The student was activated for compulsory military service.

Students who are not entitled to a refund as described above may petition the University for a refund demonstrating exceptional circumstances and the chief financial officer of the University or designee may authorize a refund if he or she determines that the fees and tuition were not earned by the University.

Information concerning any aspect of the refund of fees may be obtained from the University Cashiers Office or at <http://www.sdsu.edu/cashiers>.

### Return to Title IV Financial Aid Requirements

The following refund policy is required by the Higher Education Amendments of 1998 (Public Law 105-244, enacted October 7, 1998).

When a student who has received Title IV financial aid withdraws, or otherwise fails to complete a period of enrollment for which he or she was charged, the institution is required to determine if unearned aid must be returned to the federal accounts. Calculations will be based on the withdrawal date and the percentage of the period of enrollment completed. If Title IV funds have been disbursed during the enrollment period, aid will first be returned by the institution to the programs in the order listed below as required by law and determined by the University. If funds have been disbursed directly to the student, he or she may be required to repay any unearned aid. In some cases where eligibility for aid exceeds the amount disbursed, the regulations allow for a post-withdrawal disbursement. If eligible for a post-withdrawal disbursement, the University will notify you of the process required to receive the funds.

Title IV Financial Aid consists of the following programs:

- Unsubsidized William D. Ford Federal Direct Loan
- Subsidized William D. Ford Federal Direct Loan
- Federal Perkins Loan
- William D. Ford Federal Direct PLUS Loan
- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant (FSEOG)

Examples of refund calculations are available upon request at the University Cashiers Office or at <http://www.sdsu.edu/cashiers>.

### Refund of Parking Fees

**REFUNDS ARE NOT AUTOMATIC.** 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
First week of class .....	100 percent of fee
Second and third week .....	75 percent of fee
Fourth week through end of sixth week .....	50 percent of fee

Seventh week through tenth week ..... 25 percent of fee

Eleventh week through end of term ..... None

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

### LATE REGISTRATION FEE

The Late Registration fee (\$25) pertains to those students who register during Late Registration. Newly admitted students **MAY** be exempted from this fee. See registration materials provided by the Office of the Registrar for details. The registration process is not complete until all fees due are paid and you are officially enrolled in classes through the Office of the Registrar.

### CANCELLATION OF REGISTRATION OR WITHDRAWAL FROM THE UNIVERSITY

Students who find it necessary to cancel their registration or to withdraw from all classes after enrolling for any academic term are required to follow the University's official withdrawal procedures. Failure to follow formal university procedures may result in an obligation to pay fees as well as the assignment of failing grades in all courses and the need to apply for readmission before being permitted to enroll in another academic term. Information on canceling registration and withdrawal procedures is available from the Office of the Registrar.

Students who receive financial aid funds must consult with the Office of Financial Aid and Scholarships prior to withdrawing from the University regarding any required return or repayment of grant or loan assistance received for that academic term or payment period. If a recipient of student financial aid withdraws from the institution during an academic term or a payment period, the amount of grant or loan assistance may be subject to return and/or repayment provisions.

### APPEALS PROCESS – UNIVERSITY 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 University Cashiers Office. Petitions must be filed with the University Cashiers Office **prior to the end of the twelfth week of classes.**

Petitions for refunds outside the scope of published policy are approved only when applicants can demonstrate exceptional circumstances, and the chief financial officer or designee determines that the fees and tuition were not earned by the University.

### SUMMER SESSION FEES

Refer to SDSU Summer Session Class Schedule for schedule of fees.

Parking fees (nonreserved spaces) (per week) \$8.00

### EXTENSION COURSE FEES

Refer to Extended Studies Catalog for schedule of fees.

### EXEMPTIONS

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

Those students who are eligible dependents of veterans with service-connected disability or death (California Education Code, Section 32320) must apply to the Regional Office of the Department of Veterans Affairs for the fee waiver in the year they apply to SDSU and all subsequent years they attend. Fee waiver (and refund of fees paid)

will be approved for a prior academic year only if an application for certification of disabled status is pending with the United States Department of Veterans Affairs.

Further information regarding these programs is available in the Office of the Registrar.

### FEE WAIVERS

The California Education Code includes provisions for the waiver of mandatory systemwide fees as follows: 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 (referred to as Alan Pattee Scholarships);

**Section 66025.3** – Qualifying children, spouses, or unmarried surviving spouses of a war period veteran of the U.S. military who is totally service-connected disabled or who died as a result of service-related causes; children of any veteran of the U.S. military who has a service-connected disability and meets specified income provisions; qualifying dependents of a member of the California National Guard who in the line of duty and in active service of the state was killed or became permanently disabled or died of a disability as a result of an event while in active service of the state; and undergraduate students who are the recipient of or the child of a recipient of a Congressional Medal of Honor and meet age and income restrictions; and

**Section 68121** – Student enrolled in an undergraduate program who is the surviving dependent of any individual killed in the September 11, 2001, terrorist attacks on the World Trade Center in New York City, the Pentagon building in Washington, D.C., or the crash of United Airlines Flight 93 in southwestern Pennsylvania; if the student meets the financial need requirements set forth in Section 69432.7 for the Cal Grant A Program, and either the surviving dependent or the individual killed in the attacks must have been a resident of California on September 11, 2001.

Students who qualify for these benefits should contact the Office of the Registrar for further information and/or an eligibility determination.

### OVER 60 FEE WAIVER PROGRAM

San Diego State University offers a fee waiver program for California residents 60 years of age and older. Both undergraduate and postbaccalaureate students may participate in the program. The program waives the \$55 admission application fee and regular registration fees (except for a nominal \$13 fee). Participants must apply for admission during the regular application filing period and be admitted under regular admission requirements. At the graduate level, students must be admitted to a degree, credential, or certificate program to qualify for the fee waiver. For additional information, contact the Office of Admissions.

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

The law governing the California State University provides that fees defined as mandatory, such as a student activity association fee and a student activity center fee may be established. A student activity association fee must be established upon a favorable vote of two-thirds of the students voting in an election held for this purpose (*California Education Code*, Section 89300). A student activity center fee may be established only after a fee referendum is held which approves by a two-thirds favorable vote the establishment of the fee (*California Education Code*, Section 89304). The student activity fee was established at San Diego State University by student referendum in 1955. The campus President may adjust the student activity association fee only after the fee adjustment has been approved by a majority of students voting in a referendum established for that purpose (*California Education Code*, Section 89300). The required fee shall be subject to referendum at any time upon the presentation of a petition to the campus President containing the signatures of 10% of the regularly enrolled students at the University. Once bonds are

issued, authority to set and adjust student activity center fees is governed by provisions of the State University Revenue Bond Act of 1947: including, but not limited to, *California Education Code*, Sections 90012, 90027, and 90068. Student activity association fees support a variety of cultural and recreational programs, child care centers, and special student support programs.

The process to establish and adjust other campus-based mandatory fees requires consideration by the campus fee advisory committee and sometimes a student referendum. The campus President may use alternate consultation mechanisms if he determines that a referendum is not the best mechanism to achieve appropriate and meaningful consultation. Results of the referendum and the fee committee review are advisory to the campus president. The President may request the chancellor to establish the mandatory fee. Authority to adjust fees after consideration by the campus fee advisory committee and the completion of a student referendum is delegated to the president.

### Fees and Debts Owed to the Institution

Should a student or former student fail to pay a fee or a debt owed to the institution, the institution may “withhold permission to register, to use facilities for which a fee is authorized to be charged, to receive services, materials, food or merchandise, or any combination of the above from any person owing a debt” until the debt is paid (see Title 5, *California Code of Regulations*, Sections 42380 and 42381).

Prospective students who register for courses offered by the University are obligated for the payment of fees associated with registration for those courses. Failure to cancel registration in any course for an academic term prior to the first day of the academic term gives rise to an obligation to pay student fees including any tuition for the reservation of space in the course.

The institution may withhold permission to register or receive official transcripts of grades or other services offered by the institution from anyone owing fees or another debt to the institution. In addition, failure to pay debts to the University when due may result in the debt being sent to a collection agency. Should the debt be referred to a collection agency, the student will be responsible for costs incurred by the University, its Agents, Contractors and Assigns in the collection of the delinquent obligation. It may further result in notification of the delinquency to credit bureau organizations. If a person believes he or she does not owe all or part of an asserted unpaid obligation, that person may contact the University Cashiers Office. The Cashiers Office, or another office on campus to which the business office may refer the person, will review all pertinent information, including information provided by the person and available to the campus and will advise the person of its conclusions.

### Availability of Institutional and Financial Assistance Information

The following information concerning student financial assistance may be obtained from the Office of Financial Aid and Scholarships, Student Services, Room 3605, (619) 594-6323, or at <http://www.sdsu.edu/financialaid>:

1. Student financial assistance programs, including state grants, available to students who enroll at San Diego State University;
2. The procedures and forms by which application for student financial assistance is made;
3. The student eligibility requirements for financial assistance and the criteria used in determining how financial assistance is distributed among eligible applicants who enroll at San Diego State University; and
4. The rights and responsibilities of students receiving financial assistance including aid provided under federal Title IV student assistance programs.

## Fees

Information concerning the cost of attending San Diego State University is available from the Office of Financial Aid and Scholarships, Student Services, Room 3605, (619) 594-6323, or at <http://www.sdsu.edu/financialaid>, and includes fees and tuition; the estimated costs of books and supplies; estimates of typical student room and board costs and typical commuting costs; and, if requested, additional costs for specific programs.

Information concerning the refund policies of San Diego State University for the return of unearned tuition and fees or other refundable portions of institutional charges is available from the University Cashiers Office, Student Services, Room 2620, (619) 594-5253, or at <http://www.sdsu.edu/cashiers>.

Information concerning policies regarding the return of federal Title IV student assistance funds as required by regulation is available from the Office of Financial Aid and Scholarships, Student Services, Room 3605, (619) 594-6323, or at <http://www.sdsu.edu/financialaid>.

Information regarding special facilities and services available to students with disabilities may be obtained from Disabled Student Services, Student Services, Room 1661, (619) 594-1991, or at <http://www.sdsu.edu/dss>.

Information concerning San Diego State University policies, procedures, and facilities for students and others to report criminal actions or other emergencies occurring on campus may be obtained from Public Safety, Student Services, Room 1410, (619) 594-1991, or at <http://www.police.sdsu.edu>.

Information concerning San Diego State University annual campus security report may be obtained from Public Safety, Student Services, Room 1410, (619) 594-1991, or at <http://www.police.sdsu.edu>.

Information concerning the prevention of drug and alcohol abuse and rehabilitation programs may be obtained from Counseling and Psychological Services, Student Services, Room 2109, (619) 594-5220, or at <http://www.sa.sdsu.edu/cps>.

Information regarding student retention and graduation rates of students enrolled 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 may be obtained from Analytical Studies and Institutional Research, Student Services, Room 3630, (619) 594-6846, or at <http://asir.sdsu.edu>.

Information concerning athletic opportunities available to male and female students and the financial resources and personnel that San Diego State University dedicates to its men's and women's teams may be obtained from the Director of Intercollegiate Athletics, Aztec Athletics Center, Room 3015, (619) 594-6357, or at <http://www.goaztecs.com>.

Information concerning grievance procedures for students who feel aggrieved in their relationships with the university, its policies, practices and procedures, or its faculty and staff may be obtained from the Ombudsmen, Student Services, Room 1105, (619) 594-6578, or at <http://www.sa.sdsu.edu/ombuds>.

The federal Military Selective Service Act (the "Act") requires most males residing in the United States to present themselves for registration with the Selective Service System within thirty days of their eighteenth birthday. Most males between the ages of 18 and 25 must be registered. Males born after December 31, 1959, may be required to submit a statement of compliance with the Act and regulations in order to receive any grant, loan, or work assistance under specified provisions of existing federal law. In California, students subject to the Act who fail to register are also ineligible to receive any need-based student grants funded by the state or a public postsecondary institution.

Selective Service registration forms are available at any U.S. Post Office, and many high schools have a staff member or teacher appointed as a Selective Service Registrar. Applicants for financial aid can also request that information provided on the Free Application for Federal Student Aid (FAFSA) be used to register them with the Selective Service. Information on the Selective Service System is available and the registration process may be initiated online at <http://www.sss.gov>.

## Cost of Living

San Diego State University establishes standard student budgets in coordination with the California State University system that meet federal requirements. Student budgets, updated annually to account for inflation are currently:

### Costs of Attendance for the 2003-2004 Academic Year

	Living off Campus	Living on Campus	Commuting from Home
Registration fees .....	\$ 2698	\$2698	\$2698
Books and supplies .....	1260	1260	1260
Food and housing .....	8729	8787	3201
Transportation .....	974	761	784
Miscellaneous/Personal .....	2329	2282	2401
Total .....	\$15,990	\$15,788	\$10,344

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

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# Admission to Postbaccalaureate and Graduate Study

Admission to San Diego State University for postbaccalaureate and graduate study is open to those applicants judged by the University to be fully qualified. The process is competitive and the requirements listed below are only the **minimum** required for admission to the University. Many programs have established additional requirements. Prospective applicants should refer to the departmental listings in this bulletin. Students are also advised to contact the departmental offices as soon as graduate work is contemplated for advice as to how to proceed. Some departments stop reviewing applications earlier than others because space is limited.

## Importance of Filing Complete, Accurate, and Authentic Application Documents

San Diego State University advises prospective students that they must supply complete and accurate information on the application for admission, residence questionnaire, and financial aid forms. Further, applicants must submit authentic and official transcripts of all previous academic work attempted. Official transcripts are defined as transcripts sent that bear the high school or college seal and remain in their original sealed envelope. Failure to file complete, accurate, and authentic application documents by specified deadlines will result in denial of admission, and may result in cancellation of academic credit, suspension, or expulsion (Section 41301, Article 1.1, Title 5, *California Code of Regulations*). This requirement is effective from initial contact with the University and throughout the period the academic record is maintained.

## Requirement and Use of Social Security Account Number

Applicants are required to include their correct social security numbers in designated places on applications for admission pursuant to the authority contained in Section 41201, Title 5, *California Code of Regulations*, and Section 6109 of the *Internal Revenue Code* (26 U.S.C. 6109). The University uses the social security account number to identify students and their records for purposes of financial aid eligibility and disbursement and the repayment of financial aid and other debts payable to the institution. Also, the Internal Revenue Service requires the University to file information returns that include the student's social security number and other information such as the amount paid for qualified tuition, related expenses, and interest on educational loans. This information is used by the IRS to help determine whether a student, or a person claiming a student as a dependent, may take a credit or deduction to reduce federal income taxes.

Students are issued a nine-digit ID number (Red ID) for transactions that include accessing the SDSU WebPortal, registering for classes, meal plans, using library services, using Blackboard, communicating with The Center for Human Resources, accessing SIMS/R, financial transactions, and all student services.

## Schedule Adjustment Policy

All schedule adjustments (formerly called Change of Program) **MUST BE COMPLETED BY 6:00 P.M. BY THE END OF THE 15th CLASS DAY OF THE SEMESTER.** The schedule adjustment period allows you to add a course, drop a course, withdraw from the University, and change grading basis. Students will no longer be allowed to

make ANY schedule changes (*excluding total withdrawal from the University for extremely serious, documented cases involving health or accident*) after the 15th class day of the semester by 6:00 p.m.

## Instructor Initiated Drop Policy

Students who do not attend the first class session and the beginning of the second class session of a course may be dropped from that course by the instructor within the first 12 class days of the semester. Students who do not meet prerequisite requirements can also be dropped within the first 12 class days of the semester. Any student dropped by the instructor during this period will be notified of the action by e-mail. It is the student's responsibility to keep a current e-mail address on file through the SDSU WebPortal at <http://www.sdsu.edu/portal>. To reenroll, the student must receive an add code from the instructor and reenroll in the course within the first 15 class days of the semester by 6:00 p.m.

**NOT ALL INSTRUCTORS WILL DROP STUDENTS WHO MISS THE FIRST CLASS SESSION AND THE BEGINNING OF THE SECOND CLASS SESSION.** Students are responsible for all courses on their schedules. Students should check their online schedules regularly and take necessary action to add or drop during the first 15 class days of the semester by 6:00 p.m.

## Measles, Rubella, Hepatitis B, and Meningococcal Health Screening Provisions

Refer to General Information —  
Health Services section of this bulletin.

## Application Procedures

Applicants for any type of graduate or postbaccalaureate status (advanced degree applicants, those seeking credentials or advanced certificates, and those interested in taking courses for personal or professional growth) must file a CSU Graduate Admission Application with Graduate Admissions within the appropriate filing period. Applicants who graduated from San Diego State University are also required to complete and submit an application and the \$55 nonrefundable application fee. Since applicants for postbaccalaureate programs may be limited to the choice of a single campus on each application, redirection to alternative campuses or later changes of campus choice will be minimal. In the event that a postbaccalaureate applicant wishes to be assured of initial consideration by more than one campus, it will be necessary to submit separate applications (including fees) to each. All masters, doctoral, and credential students should consult the Web site for the specific department and/or program director for departmental application instructions. Applications are available online at <http://www.csumentor.edu/>.

## Application and Admission Process

Students seeking admission with classified standing to graduate programs at San Diego State University must submit required documentation in a timely manner to ensure proper processing and evaluation by the school or department and the Graduate Division. Please

## Admission to Postbaccalaureate and Graduate Study

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consult the specific departmental listing for the admission requirements. Even though a student may meet the minimal general standards for admission to the University, each department reserves the right to recommend a denial or conditional acceptance based upon the evaluation of documentation supplied by the applicant as well as the standing of the applicant relative to others who have applied to the specific graduate program.

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

### General Admission Requirements

Applicants for any type of graduate or postbaccalaureate study at San Diego State University must: (a) hold an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or have completed equivalent academic preparation as determined by the Graduate Dean; (b) have attained a grade point average of at least 2.85 (when A equals 4) in the last 60 semester (90 quarter) units attempted (this calculation may not include lower division courses taken after award of a baccalaureate degree); (c) have been in good standing at the last institution attended; and (d) satisfactory scores on GRE or GMAT for degree seeking applicants (not required for credential or certificate applicants). Applicants who do not qualify for admission under provisions (a) and (b) may be admitted by special action if the Graduate Dean determines that there is other academic or professional evidence sufficient to warrant such action. Applicants from foreign countries see International (Foreign) Student Admission Requirements.

Members of the faculty of San Diego State University holding appointments at or above the rank of instructor or lecturer may not be admitted to degree programs at this University. Faculty may register for courses in accordance with Graduate Division policies.

### Special Action Admissions

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

1. Students holding baccalaureate degrees from accredited institutions that award credit primarily on a pass-fail basis may be considered for admission providing they meet one of the following criteria:
  - a. At least 60 semester units of letter-graded coursework with a minimal grade point average of 2.85 are included on the student transcripts. Half of these must be at the upper division level.
  - b. If the student transcripts include less than 60 semester units of letter-graded coursework as described above, the applicant may be considered for admission on the basis of the following two criteria: A satisfactory score on both the verbal and quantitative sections of the GRE or GMAT with a minimum mean score of not less than the 30th percentile in each category, and determination by the appropriate faculty unit at San Diego State that any written documentation of classroom performance the student submits reflects academic achievement equivalent to at least a grade point average of 2.85. Such documentation should include written coursework evaluations by the faculty of the institution awarding the degree and may include other documentation such as baccalaureate theses, etc. A relative weakness in one of these criteria may be offset by a strong performance in the other.
2. Students holding baccalaureate degrees from accredited institutions that award credit for prior experiential learning may be admitted providing that:

- a. The student meets the 60-unit requirement as described in 1. above when general admission requirements are not met.
  - b. At least 24 semester units of credit in the major field are awarded for classroom and laboratory study during a period of matriculation at the degree-granting institution.
  - c. The student provides from the institution granting the credit full documentation showing how the experiential learning was evaluated and the basis on which such credit was awarded.
3. In some circumstances, students holding a baccalaureate degree from an institution with limited accreditation or students holding a degree that requires less than four years for completion may be admitted to postbaccalaureate standing provisionally for the purposes of validating the degree for equivalency. Students who expect to enter an advanced degree program must have completed all the prerequisites prior to admission to the program. Students in this category may not enroll in 600- or 700-numbered courses; no units completed prior to validation of the baccalaureate degree may be included subsequently on an advanced degree program.

### Examination Requirements

The University requires that applicants for admission to most advanced degree programs and to many advanced certificate programs present satisfactory scores on the Graduate Record Examination (GRE) General Test. In addition, some programs require that applicants also submit satisfactory scores on the appropriate GRE subject matter test. Applicants should consult the program listings for specific information. Applicants for admission to the College of Business Administration will take the Graduate Management Admissions Test (GMAT); students applying for admission to the concentration in Health Services Administration in the Graduate School of Public Health may submit scores from either the GRE or the GMAT. GRE, GMAT, and TOEFL scores should be sent electronically to San Diego State University (Institutional Code 4682). Most departments request that TOEFL scores also be sent directly to them. For complete information on the availability of these tests, students or applicants are invited to contact the Office of Testing, Assessment and Research on campus.

Students who hold advanced degrees from institutions that are members of the Council of Graduate Schools are exempt from the GRE requirement. Individuals applying for admission to certain graduate programs may petition to waive the GRE General Test or GMAT requirement if the applicant holds a professional doctoral degree from an institution whose professional program is accredited. The waiver must be recommended by the graduate adviser and approved by the Graduate Dean. The petitioner must demonstrate that the professional degree is integrally related to the degree program to be pursued at San Diego State University.

### TOEFL Requirement

All postbaccalaureate applicants, regardless of citizenship, whose native language is not English and whose preparatory education was principally in a language other than English must demonstrate competence in English. Those who do not possess a bachelor's degree from a postsecondary institution where English is the principal language of instruction must receive a minimum score of 550 on the Test of English as a Foreign Language (TOEFL). Individual degree programs may prescribe a higher minimum score. Applicants taking the Computer-Based Test of English as a Foreign Language must present a score of 213 or above. Applicants must also submit a score for the Test of Written English (TWE). Individual degree programs may use the score on the TWE as an admission criterion or as an advising tool to identify students who may need further training in English.

### Admission Categories

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)

Students may not be admitted as unclassified graduate students. Students must apply to a degree, credential, or certificate program to be admitted.

#### Postbaccalaureate Standing (Classified)

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

#### Graduate Standing (Classified)

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

1. Achieve a satisfactory score on the GRE General Test or GMAT as required.
2. Have completed an undergraduate major appropriate to the field in which the student desires to earn an advanced degree.
3. Satisfy the special departmental or college requirements as stated in Part Three of the Bulletin of the Graduate Division under "Courses and Curricula."
4. Meet the professional, personal, and scholastic standards for graduate study established by the department and the Graduate Council.

Students admitted with graduate standing (classified) are admitted to authorized advanced degree curricula and may enroll in 600-, 700-, and 900-numbered courses. Such admission does not imply that a student will be advanced to candidacy for an advanced degree.

#### Conditional Graduate Standing (Classified)

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

#### Conditional Graduate Standing (Classified, Credential Only)

A student wishing to be admitted to a program of study leading to a credential in professional education who meets the criteria specified under General Admission Requirements but who has deficiencies for unconditional classified admission to the department's credential program may be granted conditional graduate standing (classified, credential only), if the deficiencies can be met by specific additional preparation, including qualifying examinations. No more than 18 semester units may be assigned to satisfy deficiencies in prerequisite

education and subject matter competency coursework and all coursework must be met within one year (three academic terms: fall, spring, summer) from the time of initial enrollment unless written documentation of specific subject matter deficiency can be provided by the designated campus adviser. Once the conditions established by the department, school, or college have been met, the student should confirm that a change of status has been updated through the sponsoring departmental office for cross-campus records.

#### Continuing Students

Students enrolled in the University with postbaccalaureate standing may request acceptance into an advanced degree curriculum with graduate standing (classified or conditionally classified). Applications for such continuing students are available in the Graduate Division. Except in special circumstances, reports of the scores of the GRE General Test or the GMAT where appropriate must be on file at the University before continuing students may apply for graduate standing (classified).

#### Second Bachelor's Degree

San Diego State University is not accepting applications for second bachelor's degrees.

### Filing of Transcripts

The applicant must arrange to have two sets of official transcripts from EACH college or university attended sent to the department with the student's supporting documents. Transcripts requested include all extension, correspondence, summer session, or evening courses.

A transcript will be considered official and accepted to meet the regulations governing admission only if forwarded directly to the department by the institution attended or sent to the student in a sealed and signed envelope. All records or transcripts received by the University become the property of the University and **will not be released nor will copies be made.**

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

### Determination of Residence for Nonresident Tuition Purposes

The Office of Graduate Admissions is responsible for determining the residence status of all new and returning students for nonresident tuition purposes. Responses to the Application for Admission, Residency Questionnaire, and, as necessary, other evidence furnished by the student are used in making this determination. Nonresident students who wish to be reclassified as residents must complete the Reclassification Request Form, which is available in the Office of the Registrar. A student who fails to submit adequate information to establish eligibility for resident classification 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 for tuition purposes at the California State University is *California Education Code* sections 68000-68090, 68120-68134, and 89705-89707.5, and *California Code of Regulations*, Title 5, sections 41900-41916. This material can be viewed on the Internet by accessing the California State University's Web site at <http://www.calstate.edu>.

Generally, establishing California residence for tuition purposes requires a combination of physical presence and intent to remain indefinitely. An adult who, at least one full year prior to the residence determination date for the term in which enrollment is contemplated, has been both physically present in the state and has evidence of intent to remain in California indefinitely, may establish California residence for tuition purposes. Evidence demonstrating intent can vary from case to case and may include, but is not limited to, the absence

## Admission to Postbaccalaureate and Graduate Study

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of residential ties to any other state, California voter registration and voting in California elections, maintaining active California bank accounts, filing California income tax returns, owning residential property or occupying or renting an apartment where permanent belongings are kept, maintaining active memberships in California professional or social organizations, and maintaining a permanent military address and home of record in California.

Adult noncitizens establish residence in the same manner as citizens, unless precluded by the Immigration and Nationality Act from establishing domicile in the United States. Unmarried minor noncitizens derive their residence in the same manner as unmarried minor citizens except that both parent and minor must have an immigration status consistent with establishing domicile in the United States.

Exceptions to the general residence requirements are contained in *California Education Code* sections 68070-68084 and Title 5 of the *California Code of Regulations*, sections 41900-41916, and include, but are not limited to, members of the military and their dependents, certain credentialed employees of school districts, and students who have attended high school in California and graduated or attained the equivalent. Whether an exception applies to a particular student cannot be determined before the submission of an application for admission and, as necessary, additional supporting documentation. Because neither campus nor Chancellor's Office staff may give advice on the application of these laws, applicants are strongly urged to review the material for themselves and consult with a legal adviser.

Nonresident students seeking reclassification are required to complete a supplemental questionnaire including questions concerning their financial dependence, which will be considered along with physical presence and intent in determining reclassification.

Residence determination dates are set each term. The residence determination dates are September 20 for fall, January 25 for spring, and June 1 for summer. The residence determination dates for the four stages of CalStateTEACH are September 20 (Stage 1), January 5 (Stage 2), June 1 (Stage 3), and September 20 (Stage 4).

A campus residence classification appeal must be in writing and submitted to:

The California State University  
Office of General Counsel  
400 Golden Shore  
Long Beach, California 90802-4210

The appeal must be submitted within 120 calendar days of notification of the final campus decision. The Office of General Counsel can either decide the appeal or send the matter back to the campus for further review.

Students incorrectly classified as residents or incorrectly granted an exception from nonresident tuition are subject to reclassification as nonresidents and payment of nonresident tuition in arrears. If incorrect classification results from false or concealed facts, the student is subject to discipline pursuant to Section 41301 of Title 5 of the *California Code of Regulations*.

Resident students who become nonresidents, or who no longer meet the criteria for an exception, must immediately notify the Office of Admissions.

Changes may have been made in the rate of nonresident tuition and in the statutes and regulations governing residence for tuition purposes in California between the time this catalog is published and the relevant residence determination date. Students are urged to review the statutes and regulations stated above.

### International (Foreign) Student Admission Requirements

San Diego State University offers opportunities for advanced study to those foreign students whose academic preparation meets the standards for admission. "Foreign students" include those who hold US visas as students, exchange visitors, or are in other non-immigrant classifications. SDSU uses separate requirements in the admission of foreign students.

Applicants for any type of graduate or postbaccalaureate study at San Diego State University must: (a) hold an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or have completed equivalent academic preparation as determined by the Graduate Dean; (b) have attained a cumulative grade point average of at least 3.0; (c) have been in good standing at all universities attended; and (d) have satisfactory scores on the GRE or GMAT and the TOEFL (if required) as determined by the department. Applicants who do not qualify for admission under provisions (a) and (b) may be admitted by special action if the Graduate Dean determines that there is other academic or professional evidence sufficient to warrant such action.

Applicants for admission whose education has been in a foreign country must file an application for admission, official certificates and detailed transcripts of record from each secondary school and collegiate institution attended. All documents, transcripts, and test scores must be received by the department no later than May 1 for the fall semester or November 1 for the spring semester of each year. 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.

Applicants with three-year degrees from a foreign university can be admitted to graduate programs with department approval if they meet the following conditions:

1. The degree is from an accredited institution or one approved by the Ministry of Education in the host country;
2. The SDSU major department recommends the student and can verify the student has fulfilled preparation for the degree;
3. The student has at least one year of post-graduate work beyond the degree.

Exceptions will be reviewed on a case-by-case basis by the department adviser and the Graduate Dean.

Applicants whose major education has been in a language other than English must score 550 or higher (using the paper version) or 213 or higher (using the computer version) on the Test of English as a Foreign Language (TOEFL) consult Part III of this Bulletin for specific program requirements. This test is administered in most foreign countries. The University must receive official test scores before admission can be granted. Information as to the time and place at which this test is given may be obtained by writing to the Educational Testing Service (TOEFL), Princeton, New Jersey 08540, USA.

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

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

**American Language Institute:** If English instruction is needed prior to admission to San Diego State University, 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 enrolling in the American Language Institute, a conditional admission is available. Conditional admission 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, 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 achieving appropriate TOEFL scores and training at the American Language Institute.

**Housing and Scholarships:** 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 bulletin on Financial Aid.

Upon arrival at San Diego State University, the student should contact the International Student Center.

### Limitation of Enrollment

Admission to the University is limited to the number of students for whom an adequate education can be provided by the staff and facilities available. San Diego State University may limit graduate enrollment on the basis of field and aptitude of the applicant.

Members of the faculty of San Diego State University holding appointments at or above rank of instructor or lecturer may not be candidates for degrees on this campus. Faculty may register for courses in accordance with Graduate Division policies.

### Registration

San Diego State University students register online at <http://www.sdsu.edu/portal>. On campus registration is not conducted. The Class Schedule available at <http://www.sdsu.edu/schedule> contains specific information on registration, the courses offered for the term, and a listing of the fees required for enrollment. Students will not be permitted to register until fees are paid. Payment of fees by itself does not constitute registration. **A student is considered registered when: 1) fees have been paid, and 2) at least one course has been added prior to the first day of classes.**

**Late Registration.** Late registration is allowed during the first 15 class days of the semester. Students wishing to register late must pay registration fees plus a \$25.00 late fee before the end of the fifteenth class day of the semester. After receiving an add code from the instructor of the course the student wants to add, the course can be added at <http://www.sdsu.edu/portal>.

**Improper Registration in Graduate Courses.** Only undergraduate students who are completing their bachelor's degree and who have filed a formal request for permission to enroll for concurrent master's degree credit or for concurrent post baccalaureate credit may be authorized to enroll in 600 and higher numbered courses. Undergraduate students who have not received permission for concurrent enrollment may not enroll in 600 or higher numbered courses for any purpose without the prior permission of the Graduate Dean. Undergraduates who enroll in advanced courses without permission are subject to administrative disenrollment. The registration for graduate students who have not met the stated prerequisites for Course 799A, Thesis, at the time of registration may be canceled.

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

### Concurrent Postbaccalaureate Credit

#### Applicable to the "Fifth Year" Credential Requirement only

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

1. Have a minimum grade point average of 2.85 on the last 60 units attempted;
2. Complete coursework in excess of graduation requirements during the semester (or summer term) when graduation occurs;
3. Attempt no more than 21 units during the final undergraduate semester;
4. Request no more than a maximum of 12 units of 300-, 400-, 500, or 900-numbered courses for postbaccalaureate credit;
5. Submit a petition before the end of the first week of classes of the final undergraduate semester (or term) when graduation occurs;
6. Petition the Assistant Dean of the College of Education;
7. Graduate at the end of the semester (or summer term) the petition is made.

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

Petition forms are available in the Office of the Registrar, SS-1641.

### Second Master's or Doctoral Degree

A student desiring to work for a second master's or doctoral degree must petition the Graduate Council for permission to enter a curriculum leading to the second degree. A student may be admitted into only one advanced degree program at a time, except in those specially designed concurrent programs described in this bulletin. Students must reapply to the University if they have completed a master's or doctoral degree if they choose to pursue a second degree program.

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# Regulations of the Graduate Division

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

All students beginning graduate study at San Diego State University after August 2004 will be required to follow the procedures and regulations stated in the 2004-05 edition of the Bulletin of the Graduate Division. A student who was admitted to a graduate degree curriculum at this University prior to that date and who has been enrolled in one or more courses during each consecutive semester since first enrolling as a graduate student, or whose attendance has not been interrupted by more than two consecutive semesters, will be held responsible for the regulations in effect at the time the official master's degree program of study is approved.

## Student Responsibility for Bulletin Information

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

## Changes in Rules and Policies

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

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

## Privacy Rights of Students in Education Records

The federal Family Educational Rights and Privacy Act of 1974 (20 U.S.C. 1232g) and regulations adopted thereunder (34 C.F.R. 99) set out requirements designed to protect students' privacy in their records maintained by the campus. The statute and regulations govern access to student records maintained by the campus and the release of such records. The law provides that the campus must give students access to records directly related to the student and must also provide opportunity for a hearing to challenge such if the student claims they are inaccurate, records on the grounds that they are inaccurate, misleading or otherwise inappropriate. The right to a hearing under this law does not include any right to challenge the appropriateness of a grade determined by the instructor. The law generally requires the institution to receive a student's written consent before releasing personally identifiable data about the student. The institution has adopted a set of policies and procedures governing implementation of the statutes and the regulations. Copies of these policies and procedures may be obtained at the Office of the Provost. Among the types of information included in the campus statement of policies and procedures are: (1) the types of student records maintained and the information they contain; (2) the official responsible for maintaining each type of record; (3) the location of access lists indicating persons requesting or receiving information from the record; (4) policies for reviewing and expunging records; (5) student access rights to their records; (6) the procedures for challenging the content of student records; (7) the cost to be charged for reproducing copies of records; and (8) the right of the student to file a complaint with the Department of Education. The Department of Education has established an office and review board to investigate and adjudicate violations. The designated office is: Family Policy Compliance Office, U.S. Department of Education, Washington, D.C. 20202-4605.

The campus is authorized under the Act to release "directory information" concerning students. The Office of the Registrar releases the following: student's name, major field of study, dates of attendance, degrees, honors, and awards received. Although federal law allows for the release of address, telephone listing, electronic mail address, photograph, place and date of birth, grade level, enrollment status, honors, previous educational institution attended, and information related to participation in athletics, San Diego State University has a practice of not routinely releasing this information. 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 the student requests not be released. Students are given an opportunity to restrict the release of "directory information" about themselves by accessing <http://www.sdsu.edu/portal>.

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 have responsibilities in the campus' academic, administrative or service functions and have reason for using student records associated with their campus or other related academic responsibilities. Student records may also be disclosed to other persons or organizations under such conditions as part of accreditation or program evaluation; in response to a court order or subpoena; in connection with financial aid; or to other institutions to which the student is transferring.

## Nondiscrimination Policy

The Office of the Ombudsman, (619) 594-6578, and the Office of Diversity and Equity, (619) 594-6464, have been designated to coordinate the efforts to comply with the following acts and their implementing regulations.

### Race, Color, and National Origin

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

### Disability

San Diego State University does not discriminate on the basis of disability in admission or access to, or treatment or employment in, its programs and activities. Section 504 of the Rehabilitation Act of 1973, as amended, and the regulations adopted thereunder and the Americans with Disabilities Act prohibit such discrimination.

### Sex

San Diego State University does not discriminate on the basis of sex in the educational programs or activities it conducts. Title IX of the Education Amendments of 1972, as amended, and the administrative regulations adopted thereunder prohibit discrimination on the basis of sex in education programs and activities. Such programs and activities include admission of students and employment. Inquiries concerning the application of Title IX to programs and activities can be directed to the Director, Office of Diversity and Equity, (619) 594-6464, or to the SDSU Assistant Athletic Director of Compliance, (619) 594-0394, or to the Regional Director of the Office of Civil Rights, Region IX, 50 United Nations Plaza, Room 239, San Francisco, CA 94102.

The California State University is committed to providing equal opportunities to male and female CSU students in all campus programs, including intercollegiate athletics.

### Sexual Orientation

By CSU Board of Trustees policy, San Diego State University does not discriminate on the basis of sexual orientation.

## Immigration Requirements for Licensure

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (P.L. 104-193), also known as the Welfare Reform Act, includes provisions to eliminate eligibility for federal and state public benefits for certain categories of lawful immigrants as well as benefits for all illegal immigrants.

Students who will require a professional or commercial license provided by a local, state, or federal government agency in order to engage in an occupation for which the CSU may be training them must meet the immigration requirements of the new Personal Responsibility and Work Opportunity Reconciliation Act to achieve licensure.

## Numbering of Courses

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

Courses numbered at the 900 level, except 997, are reserved for graduate courses in certain professional curricula as part of advanced certificate, credential, and licensure programs and are specifically intended for students admitted to the University with post-baccalaureate classified standing. Courses numbered at the 900 level are not applicable to other graduate programs.

Courses numbered 397 offered in regular sessions are professional advancement/training or tutorial/discussion classes that may accompany other credit courses and are not acceptable towards an undergraduate or graduate degree.

Courses numbered X-01 through X-79 and X-397 are Extension professional development units offered only through Extension to meet specific academic needs of community groups and are not acceptable toward an undergraduate or graduate degree.

## Grading System

Grades and grade points per unit used in reporting are as follows: Grade of **A** (outstanding achievement; available for the highest accomplishment), 4 points; **B** (average; awarded for satisfactory performance), 3 points; **C** (minimally passing), 2 points; **D** (unacceptable for graduate credit, course must be repeated), 1 point; **F** (failing), 0 points; **RP** (report in 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 be changed to an **IC** (incomplete charged) and will count as an "F" for grade point average computation; **WU** (withdrawal unauthorized), will count as an "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	WU = 0
B = 3.0	D+ = 1.3	I = 0
B- = 2.7	D = 1.0	IC = 0

### Report in Progress Grade – "RP"

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

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

### Withdrawal Grade – "W"

The symbol "W" indicates that the student was permitted to drop a course after the first 15 class days of the semester because of a verified serious and compelling reason, and had 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 first 15 class days, the grade of "W" will appear on the student's permanent record for courses for which an official drop has been approved.

## Regulations of the Graduate Division

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Dropping a class is not permitted after the 15th class day of the semester by 6:00 p.m., 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.

After the last day of the semester, if the student wishes to change assigned grades to "W" grades, the student 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 may authorize the change of "WU" to "W," and (b) department chairs shall act on behalf of instructors no longer affiliated with the University.

Consult the current Class Schedule for more detailed information.

### 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. Units taken for audit are not used in the calculation of enrollment status. To enroll as an auditor, obtain the *Change to Audit Grade* form from the Office of the Registrar. Obtain instructor approval and return the completed form by 6:00 p.m. on or before the 15th class day of instruction to the Office of the Registrar. Once enrolled as an auditor, the student may not change to credit status unless such a change is requested by 6:00 p.m. prior to the end of the 15th class day of instruction. If enrolled for credit the student may not change to audit after the end of the 15th class day of instruction.

### Credit/No Credit Courses "Cr/NC"

Students may enroll for credit/no credit only in those graduate courses specifically designated as credit/no credit only.

The symbol "Cr" is used to report the satisfactory completion of Courses 797, 798, 799A, and certain 500- 600- 700- and 800-numbered courses specifically designated in this bulletin and the Class Schedule. Failure to complete satisfactorily such courses will result in the assignment of "NC." No other 600, 700-, or 800-numbered courses may be taken for credit/no credit. No 500-numbered courses graded credit/no credit, except those offered only for credit/no credit, are acceptable on an advanced degree program.

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

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

### Authorized Incomplete Grade "I"

The symbol "I" (incomplete authorized) indicates that a portion of required coursework has not been completed and evaluated in the prescribed time period due to unforeseen, but fully justified, reasons and that there is still a possibility of earning credit. It is the student's

responsibility to bring pertinent information to the instructor and to reach agreement on the means by which the remaining course requirements will be satisfied. The conditions for removal of the Incomplete shall be reduced to writing by the instructor and given to 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 converted to an "IC" symbol, which would replace the "I" in the student's record at the end of the calendar year deadline. An Incomplete may not be removed by reenrollment in the course.

Candidates for graduation whose record carries a grade of Incomplete will be graduated provided they are otherwise eligible for graduation. However, the Incomplete cannot be made up after the degree has been granted, and it will be counted as an "F" for grade point purposes at the time of graduation. If students do not wish to be graduated with the grade of Incomplete on their record, they must officially cancel their application for graduation.

### Incomplete Charged Grade "IC"

The symbol "IC" (incomplete charged) may be used when a student who received an authorized incomplete "I" has not completed the required coursework within the allowed time limit. The "IC" replaces the "I" and is counted as a failing grade for grade point average and progress point computation.

### Withdrawal Unauthorized Grade "WU"

The symbol "WU" indicates that the student enrolled in a course, did not withdraw from the course, but failed to complete course requirements. It is used when, in the opinion of the instructor, the number of completed assignments or course activities or both were insufficient to make possible a normal evaluation of academic performance. For purposes of grade point average computation this symbol is equivalent to an "F." If the student attended a portion of a course and then, after receiving failing grades, stopped attending without officially withdrawing, a final grade of "F" not "WU" should be assigned.

## Assignment of Grades and Grade Appeals

1. Faculty have the right and responsibility to provide evaluation and timely assignment of appropriate grades.
2. There is a presumption that grades assigned are correct. It is the responsibility of anyone appealing an assigned grade to demonstrate otherwise.
3. If the student believes that an appropriate grade has not been assigned, the student should first seek to resolve the matter 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.
4. It is the student's responsibility to attempt to resolve grade disputes in a timely manner, typically during the semester following the semester the questioned grade was received. If twelve or more months have elapsed since the grade was issued, or the student has graduated, no grade change will be considered.

### Computation of Grade Point Average

To compute the grade point average, divide the total number of grade points earned by the total number of units attempted in courses

in which letter grades are assigned. Units earned with a Cr (credit) are not included in the computation. A grade of "I" (authorized incomplete) is not counted in the grade point computation until one calendar year has expired, at which time it will be changed to an IC (incomplete charged) and will count as an "F". For details see the section of this bulletin under Basic Requirements for the Master's Degree.

### Uncompleted Theses

A student who registers for Course 799A, Thesis, but does not complete the thesis or project by the end of the semester or summer session in which the student registers for it, will receive an RP (report in progress) grade if the thesis committee chair so recommends. This grade symbol will remain on the student's record until the thesis is completed. **A second registration in Course 799A, Thesis, is prohibited.**

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

### Withdrawals

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

#### Official Withdrawal

Students who wish to withdraw from the University must initiate action formally through the Office of the Registrar. Failure to withdraw will result in a failing grade in all courses. A student who has not paid fees and is not enrolled in at least one class (other than for audit) at the end of the fifteenth class day of the semester is no longer considered a continuing student and may be required to reapply for admission.

Withdrawal from the University is permitted before the end of the fifteenth class day of the semester. No courses or "W" designations will appear on the permanent record.

A course will not appear on the permanent record if withdrawal occurs before the end of the fifteenth class day of the semester. After the fifteenth class day of the semester, withdrawals are not permitted except in cases where the cause of withdrawal is due to circumstances clearly beyond your control, such as accident or serious illness. All such requests must be accompanied by appropriate verification. 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, if you wish to change assigned grades to "W" grades, you 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 your control.

Students who receive financial aid funds must consult with the Office of Financial Aid and Scholarships prior to withdrawing from the University regarding any required return or repayments of grant or loan assistance received for that academic term or payment period. If a recipient of student financial aid funds withdraws from the institution during an academic term or a payment period, the amount of grant or loan assistance received may be subject to return and/or repayment provisions.

**Withdraw Retroactively.** After the last day of the semester, a graduate student who wishes to withdraw retroactively should request withdrawal from the full semester's work. Such requests may be granted only in verified cases such as accident or serious illness

where the cause for substandard performance was due to circumstances clearly beyond the student's control. Ordinarily, requests for withdrawals from individual classes will not be accepted. Retroactive withdrawals must be approved by the Graduate Dean or designee.

#### Unofficial Withdrawal

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

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

### Leaves of Absence

#### One-Semester Stop Out

With certain exceptions, matriculated graduate students may stop out of the University one semester in a calendar year and maintain continuing student status. Continuing status includes the maintenance of bulletin requirements for graduation. Disqualified students, students absent for more than one semester without an approved leave of absence, and those who attend another institution must apply for readmission should they wish to return to San Diego State University. Students who are disqualified are not eligible for a one semester stop-out.

#### Educational Leave of Absence

Students are permitted to take up to four semesters of approved leave of absence. An educational leave of absence is appropriate in those cases where students will be engaged for the majority of the leave time in an activity, other than attending an accredited college or university, that is directly related to their formal academic careers or otherwise contributes to specific academic goals. Students must apply for the particular semester they wish to be absent from school. If they wish to extend a leave for additional semesters, they must do so on a semester-by-semester basis. Students may request a leave of absence at <http://www.sdsu.edu/portal>.

The Class Schedule lists specific deadlines. For students participating in the CSU visitors' program, units completed at the visitor campus will be considered resident units; they will not, however, be calculated into the San Diego State University grade point average.

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

### Readmission

If not disqualified, an enrolled student is eligible to stay out one semester without penalty. No reapplication is necessary and registration information will automatically be mailed to the last address on file.

A student who withdraws from the University for more than one semester must file an application for readmission before the stated closing deadline with a \$55 application fee. If the student was enrolled at another institution subsequent to the last attendance at San Diego State University, an official transcript showing work completed must be sent by the transfer institution directly to Graduate Admissions before readmission can be completed. SDSU students in good academic standing will retain their original catalog status if they are absent from the University for no more than one semester.

### Repeated Courses

Ordinarily, a graduate student may not repeat courses that have been taken as part of the official master's degree program. With prior permission of the graduate adviser, however, a graduate student may repeat one course on the official program of study in which a grade of C, D, F or U has been received. When a graduate student in any category of admission repeats a course in which a C, D, or F has been earned, both grades will remain on the student's permanent record and both grades will be calculated in the grade point average. If a student repeats a course in which a U has been earned, the original U grade will remain on the permanent record, but only the second grade will be used in computation of the grade point average. A course in which a U has been earned may be repeated only once. Repeated courses may not be taken for credit/no credit. Students who have successfully repeated a "U" graded course should notify the Graduate Division if they wish immediate adjustment of their grade point average.

### Probation and Disqualification

#### Scholastic Probation

A graduate student in any admission category shall be placed on academic probation if the student fails to maintain a cumulative grade point average of at least 2.85 in all units attempted subsequent to admission to the university.

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

#### Scholastic Disqualification

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

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

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

A graduate student whose grade point average falls below 2.85 for either all graduate level college work attempted or all graduate level work attempted at San Diego State University will be placed on academic probation at the end of the semester.

If a student earns a term GPA of 2.85 or better in San Diego State University work during the first semester while on academic probation, the student will continue on academic probation for the second semester. If at the end of the second semester a student fails to earn sufficient grade points to warrant removal from probationary status, she or he will be subject to disqualification from further attendance at the University.

Academic probation will be lifted when the student has attained a 2.85 average or better on graduate level college work attempted and on all work attempted at San Diego State University.

### Reinstatement of Academically Disqualified Students

Graduate students who are disqualified from further attendance at the University may not attend SDSU for one full semester. They must file an application for readmission with a \$55.00 application fee. They will be sent a Petition for Reinstatement that they need to return as soon as possible. Readmission to the University is NOT automatic. Each applicant will be considered on an individual basis by the graduate adviser with recommendations to the Graduate Dean.

### Administrative Academic Probation and Disqualification

#### Administrative Academic Probation

The Graduate Dean may place a student on administrative academic probation 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 that is routine for all students or a defined group of students (examples: failure to list all colleges attended on the application for admission, failure to take placement tests, failure to complete a required practicum).

#### Administrative Academic Disqualification

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

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

### Student Discipline and Grievances

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

#### 41301. Expulsion, Suspension and Probation of Students.

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

- (a) Cheating or plagiarism in connection with an academic program at a campus.
- (b) Forgery, alteration or misuse of campus documents, records, or identification or knowingly furnishing false information to a campus.
- (c) Misrepresentation of oneself or of an organization to be an agent of the 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) Unauthorized recording, dissemination, and publication of academic presentations for commercial purposes. This prohibition applies to a recording made in any medium, including, but not limited to, handwritten or typewritten class notes.
  - (1) The term "academic presentation" means any lecture, speech, performance, exhibition, or other form of academic or aesthetic presentation, made by an instructor of record as part of an authorized course of instruction that is not fixed in a tangible medium of expression.
  - (2) The term "commercial purpose" means any purpose that has financial or economic gain as an objective.
  - (3) "Instructor of record" means any teacher or staff member employed to teach courses and authorize credit for the successful completion of courses.
- (o) 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.

(p) This Section is not adopted pursuant to Education Code Section 89031.

(q) 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.

Note: Authority cited: Sections 66300, 66452, and 89030, Education Code. Reference: Sections 66300, and 66450 *et seq.*, Education Code.

#### **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 section 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

## Regulations of the Graduate Division

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determinations on financial aid eligibility and termination; alternative kinds of proceedings, including proceedings conducted by a Hearing Officer; time limitations; notice; conduct of hearings, including provisions governing evidence, a record, and review; and such other related matters as may be appropriate. The Chancellor shall report to the Board actions taken under this section.

### Student Grievances

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

### Plagiarism

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

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

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

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

### Maintenance of Integrity in Research

San Diego State University expects the highest standards of ethical behavior of all members of the academic community involved in the conduct of research, including graduate students. Although instances of misconduct in research are rare, reports of possible scientific fraud concerning faculty, staff, and graduate students employed in research contracts and grants are dealt with in accordance with the university's assurance of compliance with the United

States Public Health Service scientific misconduct regulations. The administrative process for handling allegations of scientific misconduct and for protecting the **rights and reputations of all persons involved is detailed in the Policy on Maintenance of Integrity in Research** and published in the **SDSU Policy File**. Reports and/or charges of misconduct in research at SDSU should be directed to the chair of the department or dean of the college in which the alleged misconduct has occurred. Such reports may also be directed to the Associate Vice President for Research in Graduate and Research Affairs for referral to the appropriate college dean.

### Transcripts of Record

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

#### Unofficial Transcripts

Students may print an unofficial SDSU transcript by accessing the Web site at <http://www.sdsu.edu/portal>. If all SDSU coursework has been taken since fall 1987, the entire record will be available on the web. If some coursework was completed at SDSU prior to fall 1987, the student must contact the Office of the Registrar to obtain an unofficial transcript reflecting that portion of the record. Students may also obtain a complete copy of the SDSU unofficial transcript from the Office of the Registrar. There is no fee for unofficial transcripts and they are available on an immediate basis. These records do not bear the seal of the University and are not suitable for transfer purposes.

### Final Examinations

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

### Transfer, Extension, and Foreign University Credit

For most master's degree programs, the maximum transfer and San Diego State University extension course credit acceptable is 9 units. Exceptions are the Master of Business Administration degree, Master in Biomedical Quality Systems degree, and Master in Regulatory Affairs degree which permit 12 units; Master of Science degree in Nursing, which permits 12 units (including a maximum of 12 units of extension credit); the Master of Fine Arts degree in Art and the Master of Fine Arts degree in Theatre Arts, which permits 30 units (including a maximum of 9 units of extension credit); the Master of Fine Arts in Creative Writing which permits 18 units (including a maximum of 9 units of extension credit); the Master of Social Work degree which permits 30 units (including a maximum of 9 units of extension credit); Master of Science degree in Rehabilitation Counseling which permits 30 units (including a maximum of 9 units of extension credit); and the Master of Science degree in Counseling which permits 24 units (including a maximum of 9 units of extension credit). All credit earned in other colleges and universities including foreign universities or in San Diego State University extension courses is subject to approval by the appropriate graduate adviser and the Graduate Dean. Credit earned by correspondence, by examination, or by extension at other institutions is not accepted as satisfying advanced degree requirements.

## **Open University, Summer Program, and Other Special Sessions**

Open University and special session courses are available to qualified students who have completed individual course prerequisites and who meet the standards for regular enrollment in the University. These courses carry residence credit, and enrollment for students not seeking an advanced degree or certificate does not require formal admission to the University. Students enrolled in such courses, however, do not enjoy access to the full range of student services.

Open University allows students to enroll in on-campus courses offered in the regular semester on a space available basis with the approval of the course instructor and the department chair. Special session classes are offered in the summer program and at other times as authorized by the appropriate campus authority. Registration for courses in Open University or in any special session is through the College of Extended Studies (see Part Five of this Bulletin).

Not more than nine units combined of coursework in Open University and special sessions completed prior to admission to an advanced degree or an advanced certificate program will be acceptable on a program of study. Admission to an advanced program requires formal admission to the University and enrollment in at least one course offered in the regular semester or term for which the student was admitted, a recommendation of the graduate adviser of the particular program, and the approval of the Graduate Dean. Once so

matriculated, students may not take additional courses in Open University to meet degree or certificate requirements.

## **Study List Limits in the Graduate Division**

Full time enrollment for graduate students is nine units of coursework numbered 500 through 999. Enrollment in Thesis (799A) is considered full time for master's degree candidates; enrollment in Doctoral Research (897), Doctoral Dissertation (899), or Clinical Internship (Psychology 894) is also considered full time for students admitted to a doctoral program.

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

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

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# General Requirements for Doctoral Degrees

Doctoral programs at San Diego State University are offered jointly with other doctoral-granting institutions in California. In developing each program, there has been a consistent effort to provide students with a unique educational experience that is not duplicated on either campus alone. The University currently offers the degree Doctor of Philosophy (Ph.D.) in ten disciplinary areas, the degree Doctor of Education (Ed.D.) in three, and a professional doctorate degree (Au.D.) in audiology.

The following Ph.D. and Au.D. programs are offered jointly by San Diego State University and the University of California, San Diego:

- **Audiology**  
<http://chhs.sdsu.edu/slhs/audmain.php>
- **Biology**  
<http://www.bio.sdsu.edu/cmb/JointDoc.html>
- **Chemistry**  
<http://www.chemistry.sdsu.edu/chemistry/degrees.php#jd>
- **Clinical Psychology**  
<http://www.psychology.sdsu.edu/doctoral>
- **Engineering Sciences/Applied Mechanics**  
<http://www.engineering.sdsu.edu/main/info>
- **Language and Communicative Disorders**  
<http://chhs.sdsu.edu/slhs/phdmain.php>
- **Mathematics and Science Education**  
<http://public.sdsu.edu/CRMSE/>
- **Public Health Epidemiology**  
<http://www-rohan.sdsu.edu/dept/gsph/>

Joint Ph.D. programs are offered in:

- **Ecology** (San Diego State University and the University of California, Davis), <http://www.bio.sdsu.edu/ecologyjd/ecology.docprogram.html>
- **Computational Science** (San Diego State University and Claremont Graduate University), <http://www.sci.sdsu.edu/compsciphd>
- **Education** (San Diego State University and Claremont Graduate University), <http://edweb.sdsu.edu/doc>
- **Geography** (San Diego State University and University of California, Santa Barbara), <http://typhoon.sdsu.edu>.

The general requirements in these programs are identical; however, each program has some specific requirements that will be found in Part Three of this bulletin under the departmental headings.

A doctorate in **Education (Ed.D.)** is offered by San Diego State University and the University San Diego, <http://edweb.sdsu.edu/sdsu-usd>. The specific requirements for this program will be found in Part Three of this bulletin under Education.

The materials presented in the above referenced Web sites are for information only. The Bulletin of the Graduate Division embodies the official policies and curriculum pertaining to each of the doctoral programs.

## Admission to Graduate Study

An applicant for admission to a doctoral program must be admitted to regular graduate standing in the appropriate campus of the University of California, the Claremont Graduate University or the University of San Diego and to San Diego State University. Fees and regulations governing the doctoral programs are found in the Bulletin of the Graduate Division of San Diego State University and in the Graduate Studies Bulletins of each of the cooperating campuses. Formal admission to the two universities with appropriate graduate standing occurs when the student is formally accepted by each of the two universities. Applicants are advised to consult the appropriate program director at San Diego State University for specific details on application procedures.

## Residence Requirements

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

## Financial Support

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

## Procedures

Doctoral students are expected to make steady progress toward completion of requirements for the degree. The time required depends less on units of credit or semesters of attendance than it does on the mastery of the subject matter field and completion of a satisfactory dissertation. All doctoral programs are offered jointly. If the co-sponsoring institution has time limits to the degree, students must meet those time limits. Doctoral students must maintain a 3.0 grade point average in all coursework attempted to remain in good standing. Some programs may have additional GPA requirements.

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

## **Qualifying Examinations, Advancement to Candidacy, and the Dissertation**

Although the procedural details of each doctoral program vary somewhat within the different programs, the general requirements are:

1. The student is examined by a committee representing the faculty of the cooperating institutions for knowledge of the field of study. This Qualifying Examination ordinarily consists of both written and oral parts. The purpose of this examination is to satisfy the faculty of the cooperating departments that the student is adequately prepared in the discipline to warrant continuation in the program.
2. After passing the Qualifying Examination the student applies to the graduate dean at the cooperating campus with which the student is associated for advancement to candidacy. After approval by both graduate deans, the student will be notified of advancement to candidacy by the graduate dean of the University of California campus, the Claremont Graduate University, or the University of San Diego.
3. A dissertation on a subject chosen by the candidate and approved by a committee appointed by the graduate deans of the cooperating institutions is required of every candidate. Approval of the dissertation by this committee affirms that the candidate has conducted an organized, independent investigation that has added significantly to the body of knowledge in the particular field and that has been reported in a satisfactory manner. Upon completion of the dissertation, the candidate must pass an oral examination conducted by a joint committee in which the student is required to show the relationship of the dissertation to the general field in which the subject lies and to answer specific questions concerning the investigations. In addition to meeting the requirements of the cooperating campus for filing the dissertation, Ph.D. students are required to provide one bound copy of the dissertation for deposit in the San Diego State University library. Binding must meet the ALA library standard. Ed.D. students will deposit their dissertation with the Thesis and Dissertation Review Service at San Diego State University.
4. San Diego State University requires that the student be enrolled in 899 (Dissertation) in the term in which the dissertation is turned in. Students are also required to fill out the Survey of Earned Doctorates at both SDSU and the cooperating campus at the time the dissertation is submitted.

## **Subject (Thesis/Dissertation) Research Involving Human Subjects or Animal Subjects**

Committee authorization must be obtained in advance of conducting research involving humans or animals. Failure to observe this requirement could result in the refusal of the University to accept the completed thesis/dissertation.

Research in which information is obtained about an individual through the use of a survey, interview, observation or experimentation or which involves analysis of previously collected human tissues, records, samples or other existing or secondary data is subject to review and approval of the Institutional Review Board (IRB). For students enrolled in a joint doctoral program, IRB review may be required at each campus. Students are responsible for knowing and complying with IRB review requirements at the institution(s) in which they enrolled. IRB review application materials and guidance on the SDSU campus may be obtained via the Internet at <http://gra.sdsu.edu/irb> or through the Division of Research Administration of Graduate and Research Affairs in Administration, Room 222.

Students planning to conduct research that involves the use of live, vertebrate animals must be listed on a protocol approved by the Institutional Animal Care and Use Committee (IACUC) where the research will take place. If the research will occur under an SDSU approved protocol, the student must be listed on the responsible faculty's Animal Protocol Form and receive required training. Application materials used to request a review by the IACUC can be obtained via the Internet at <http://gra.sdsu.edu/iacuc> or through the Division of Research Administration of Graduate and Research Affairs in Administration, Room 222.

Upon receipt of written authorization from the relevant committee, IRB or IACUC, students may initiate their research and register for required coursework.

## **Award of Degree**

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

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# Basic Requirements for Master's Degrees

To receive the master's degree at San Diego State University, the candidate must complete the following general requirements as well as the more specific requirements listed in the appropriate sections of Part Three of this bulletin.

## Official Programs of Study

Official programs of study are to be submitted to the Graduate Division for approval after the student has been granted classified graduate standing. The program must be submitted prior to or concurrent with the time the student wishes to be considered for advancement to candidacy. The requirements governing the official program will be those specified in the bulletin in effect at the time the program is approved in the Graduate Division.

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

A student who withdraws from the University and is later readmitted with classified graduate standing may, with the recommendation of the graduate adviser and the consent of the Graduate Dean, continue with the original official program of study or may be required to submit a new program that complies with the requirements of the current *Bulletin of the Graduate Division* in effect at the time of readmission.

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

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

## Foreign Language Requirement

Some departments require students to pass a foreign language examination prior to advancement to candidacy, or in some cases, prior to graduation. See Part III of this Bulletin for details.

## Advancement to Candidacy

A student who holds classified graduate standing and who meets the scholastic, professional, and personal standards of the University may be considered for advancement to candidacy for the master's degree at the point of submission of the official program of study and has been recommended by the graduate adviser and approved by the Graduate Dean. For the Master of Arts, the Master of Science, the Master of Business Administration, the Master of Music, the Master of Public Administration, and the Master of Public Health degrees, a student may be advanced to candidacy after completing at least 12 units of coursework listed on the official program of study with a minimum grade point average of 3.0 (B); for the Master of City Planning, the

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

In addition to having classified graduate standing and the grade point averages specified above, the student must (1) have maintained the required grade point averages with no grade of less than 2.0 (C) in a program course; (2) have completed all the undergraduate deficiencies and the special requirements of the department or school concerned; (3) have passed the foreign language examination if required; (4) have been recommended for advancement to candidacy by the department or school concerned; and (5) have been approved for advancement by the Graduate Dean. The Graduate Division will send the students written notification of advancement to candidacy.

A student may not enroll in 799A or take a Plan B comprehensive examination until advanced to candidacy. Further, a student may not be advanced to candidacy and awarded an advanced degree in the same term.

## Unit Requirements

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

At least one-half of the units required for a master's degree must be courses at the 600- and 700-level. Many programs are more restrictive than this regarding courses at the 500 level. Check the specific program for any further restrictions.

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

Thirty units (36 units for the Master of Public Administration and the Master of Science degree in Psychology) of approved 500-, 600- and 700-numbered courses earned in graduate standing. At least half of the units required must be in 600- and 700-numbered courses. Not more than nine units in approved extension and transfer courses may be used to satisfy the minimum unit requirement for the degree. Courses required to remove undergraduate deficiencies are in addition to the minimum number of units required for the degree. **Not more than a total of six units in courses numbered 797 and 798 will be accepted for credit toward the degree.**

### Master of Business Administration Degree

Forty-nine units of 500-, 600-, and 700-level courses specified by the College of Business Administration. A maximum of six units of 500-level courses are acceptable. Up to 12 units of coursework may be accepted for transfer credit. **Not more than a total of six units in courses numbered 797 and 798 will be accepted for credit toward the degree.**

### Master of City Planning Degree

Forty-eight units of approved 500-, 600- and 700-numbered courses earned in graduate standing, at least 39 of which must be completed in residence. Courses required to remove undergraduate deficiencies are in addition to the minimum 48 units for the degree. **Not more than a total of nine units in courses numbered 797 and 798 will be accepted for credit toward the degree.**

### Master of Fine Arts in Art Degree

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

### Master of Fine Arts in Creative Writing Degree

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

### Master of Fine Arts in Theatre Arts Degree

Sixty units of 500-, 600- and 700-numbered courses specified by the Department of Theatre, at least 30 of which must be completed in residence. Courses required to remove undergraduate deficiencies are in addition to the minimum 60 units for the degree. **Not more than a total of six units in course 798 will be accepted for credit toward the degree.**

### Master of Public Health Degree

Forty-eight units (55 units for the health services administration concentration with a specialization in health services management; 34 units in the specialization in public health management) of approved 500- 600- and 700-numbered courses earned in graduate standing. Up to six units of coursework may be accepted for transfer credit. Courses required to remove undergraduate deficiencies are in addition to the minimum units required for the degree. Twelve additional units of field experience are required unless the student has previous equivalent experience as determined by the graduate adviser. **Not more than a total of six units in courses numbered 797 and 798 will be accepted for credit toward the degree.**

### Master of Science in Counseling Degree

Sixty to sixty-two units of 600- and 700- numbered courses specified by the Department of Counseling and School Psychology. Up to 24 units of coursework may be accepted for transfer credit. Courses required to remove undergraduate deficiencies are in addition to the minimum 60 units for the degree. **Not more than a total of six units in courses numbered 797 and 798 will be accepted for credit toward the degree.**

### Master of Science in Nursing Degree

A minimum of 39 units of 500-, 600-, and 700- numbered courses specified by the School of Nursing. Some specializations require up to 11 additional units. Courses required to remove undergraduate deficiencies are in addition to the minimum number of units required in each specialization. Up to 12 units of coursework may be accepted for transfer credit. **Not more than a total of six units in courses numbered 797 and 798 will be accepted for credit toward the degree.**

### Master of Science in Rehabilitation Counseling Degree

Sixty units of 600- and 700-numbered courses specified by the rehabilitation counseling program, at least 30 of which must be completed in residence. Courses required to remove undergraduate

deficiencies are in addition to the minimum 60 units for the degree. **Not more than a total of nine units in course 744 will be accepted; not more than a total of nine units in courses numbered 743 and 745 will be accepted.**

### Master of Social Work Degree

Fifty-eight units of 500-, 600- and 700-numbered courses specified by the School of Social Work at least 28 of which must be completed in residence. Courses required to remove undergraduate deficiencies are in addition to the minimum 58 units for the degree.

## Grade Point Averages

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

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

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

## Grade Restrictions for Master's Degree Programs

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

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

## Degree Time Limitations

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

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

## Basic Requirements for Master's Degrees

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date of validation. A course or program may be validated by examination only once.

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

### Subject (Thesis/Dissertation) Research Involving Human Subjects or Animal Subjects

Committee authorization must be obtained in advance of conducting research involving humans or animals. Failure to observe this requirement could result in the refusal of the University to accept the completed thesis/dissertation.

Research in which information is obtained about an individual through the use of a survey, interview, observation or experimentation or which involves analysis of previously collected human tissues, records, samples or other existing or secondary data is subject to review and approval of the Institutional Review Board (IRB). For students enrolled in a joint doctoral program, IRB review may be required at each campus. Students are responsible for knowing and complying with IRB review requirements at the institution(s) in which they enrolled. IRB review application materials and guidance on the SDSU campus may be obtained via the Internet at <http://gra.sdsu.edu/irb> or through the Division of Research Administration of Graduate and Research Affairs in Administration, Room 222.

Students planning to conduct research that involves the use of live, vertebrate animals must be listed on a protocol approved by the Institutional Animal Care and Use Committee (IACUC) where the research will take place. If the research will occur under an SDSU approved protocol, the student must be listed on the responsible faculty's Animal Protocol Form and receive required training. Application materials used to request a review by the IACUC can be obtained via the Internet at <http://gra.sdsu.edu/iacuc> or through the Division of Research Administration of Graduate and Research Affairs in Administration, Room 222.

Upon receipt of written authorization from the relevant committee, IRB or IACUC, students may initiate their research and register for required coursework.

### Thesis, Plan A and Non-Thesis, Plan B

Satisfactory completion of a thesis, project, or comprehensive examination, is defined as follows:

(a) A thesis is the written product of a systematic study of a significant problem. It identifies the problem, states the major assumptions, explains the significance of the undertaking, sets forth the sources for and the methods of gathering information, analyzes the data, and offers a conclusion or recommendation. The finished product evidences originality, critical and independent thinking, appropriate organization, language, and format, high level of writing competency, and thorough documentation. Normally, an oral defense of the thesis is required.

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

(c) A comprehensive examination is an assessment of the student's ability to integrate the knowledge of the area, show critical and independent thinking and demonstrate mastery of the subject matter. The results of the examination evidence independent thinking, appropriate organization, high level of writing competency, critical analysis, and accuracy of documentation. A record of the examination questions and responses shall be maintained in accordance with the records retention policy of the California State University.

**Plan A**, requiring a thesis or project, may be selected by a student seeking the master's degree provided the department or school concerned approves the listing of Course 799A, Thesis, on the official program of study. Three units of "Cr" are granted for the satisfactory completion of the thesis or project following its acceptance by the student's faculty thesis committee, the department or school concerned, and the Graduate Council. Assigning of "Cr" grade for the thesis or project is the responsibility of the Graduate Division. Registration in Course 799A, Thesis, is required; however, students will not be permitted to register for this course until they have received official notification of advancement to candidacy from the Graduate Division and have an officially approved thesis or project committee form on file in the Graduate Division. The student must obtain clearance for registration in Thesis from the Graduate Division. Failure to obtain this clearance may result in cancellation of enrollment in 799A.

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

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

### Thesis Committee

In consultation with the graduate adviser, a student will select a chair for the thesis committee. The student, the graduate adviser, and the thesis committee chair select the other faculty members who will be asked to serve on the thesis committee. The student must obtain the signature of the thesis chair, the other committee members, and the graduate adviser on the Appointment of Thesis Committee Form and submit that form to the Graduate Division. Determination of whether the research will involve human or animal subjects must be made at this point (see next section). If human or animal subjects will be used, appropriate authorization for such use must accompany the Thesis Committee Form when it is submitted to the Graduate Division. After the committee is approved, the student may enroll in Course 799A, Thesis, through the Graduate Division. Enrollment must occur during the normal registration period each semester. Dates are listed in the academic calendar each year.

Normally, the thesis committee is composed of three full-time faculty members. At least two of the members of the thesis committee, including the chair of the committee, must hold permanent faculty appointments, or be an approved emeritus faculty including faculty in the FERP program. Two of the committee members should be members of the department or of the interdisciplinary faculty group in which the thesis is written. The third committee member should be from a department other than the department in which the thesis is written. For complete information on composition of a thesis committee, students should see Appendix C of the *Master's Thesis and Project Manual*.

### Theses in Foreign Languages

As presentations of original research to the academic community, theses are ordinarily prepared for the University in the English language. In certain cases, however, a student's thesis in the history and literary analysis of non-English languages and literatures may be presented in the subject language. When the departmental graduate adviser and the prospective thesis committee deem this academically

appropriate for the specific research topic, the appointment of the student's thesis committee and authorization of the thesis research by the Graduate Dean shall be based on the provisions that (1) an abstract of the thesis shall be presented in English; (2) all members of the thesis committee shall be fluent in the subject language; and (3) student competency in standard written English shall be demonstrated through satisfactory completion of a departmental procedure that has been approved by the Graduate Dean.

### Submission of Theses

Final submittal of a thesis requires the formal approval of the officially appointed faculty thesis committee and acceptance of the thesis by the Graduate Dean for deposit in the University Library. The Dean will only accept thesis manuscripts that conform to the format and presentation requirements specified by the Graduate Council and the sponsoring department. The Council requirements are fully presented in the San Diego State University *Master's Thesis and Project Manual*.

The University requires that the student be enrolled in 799A, Thesis, or 799B, Thesis Extension, in the term in which the thesis is granted final approval by the faculty committee and submitted to the Graduate Division for format review. Unless the thesis manuscript is deemed unready for submission (see below), students will not be required to reregister for Thesis in any subsequent term if the thesis is submitted to the Thesis Review Service by the end of the last working day of the semester or summer term in which the student is enrolled in 799A or 799B. Consult the academic calendar in Part One of this bulletin for specific deadline dates. A "credit" grade will not be recorded or the degree awarded, however, unless the thesis has been approved by the Thesis Review Service and arrangements made to deposit the required copies in the University Library (this can be done most conveniently through Montezuma Publishing of the Aztec Shops. If this final process is not completed by the noon deadline date listed in the academic calendar, the student will be required to reapply for graduation in any subsequent term in which he or she expects to graduate.

Manuscripts deemed unready for submission, as determined by the Graduate Dean, will be rejected and returned to the student. Manuscripts will be rejected if there are gross deficiencies of format or presentation or if they are incomplete. Students who cannot meet the final deadline for submission because of such rejection will be required to reenroll in Thesis as well as to reapply for graduation. Students are expected to make all required changes and submit the final revised manuscript within 30 days following the date of the initial review by the Thesis Review Service. Students who fail to complete the submission process within this period may be required to repeat the process in the term in which the thesis is completed.

### Final Approval

The student's official program of study, as approved by the graduate adviser and the Graduate Dean, and all required examinations must be completed satisfactorily in order for the Graduate Council to recommend a student for an advanced degree.

### Writing Competency

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

In accordance with the Americans with Disabilities Act, individuals with a disability who are in need of an accommodation in order to fulfill this requirement should so notify their graduate adviser and appropriate accommodation(s) shall be made.

### Application for Graduation

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

There is a \$35 graduation services fee. Students who do not graduate in the semester or term for which they have applied must reapply and pay the \$35 graduation services fee in the subsequent semester or term in which they expect to be graduated.

### Award of Degrees

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

### Diploma

The Graduate Division will mail the appropriate diploma to the student approximately eight to ten weeks after the date of graduation.

# PART THREE

Courses  
and  
Curricula

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# Courses and Curricula

This section contains the specific requirements for all graduate degrees authorized at San Diego State University by the Board of Trustees of the California State University. These specific requirements of departments or schools supplement and are in addition to the basic requirements for advanced degrees as stated in Part Two of this bulletin. All official master's degree programs must be prepared in conformity with the specific requirements for the degree in question.

In addition, courses acceptable for credit toward an advanced degree are listed under major fields and areas of concentration. Each course is listed by department number, title, and units. Not all courses are offered every semester or every academic year. Ordinarily each listed course will be offered not less than once during a two-year period. Refer to the *Class Schedule* for a listing of course offerings.

San Diego State University reserves the right to withdraw any course listed in the class schedule for which the enrollment is not sufficient to warrant the organization of a class.

## Schedule Adjustment Policy

All schedule adjustments (formerly called Change of Program) MUST BE COMPLETED BY 6:00 P.M. BY THE END OF THE 15th CLASS DAY OF THE SEMESTER. The schedule adjustment period allows you to add a course, drop a course, withdraw from the University, and change grading basis. Students will no longer be allowed to make ANY schedule changes (*excluding total withdrawal from the University for extremely serious, documented cases involving health or accident*) after the 15th class day of the semester by 6:00 p.m.

## Instructor Initiated Drop Policy

Students who do not attend the first class session and the beginning of the second class session of a course may be dropped from that course by the instructor within the first 12 class days of the semester. Students who do not meet prerequisite requirements can also be dropped within the first 12 class days of the semester. Any student dropped by the instructor during this period will be notified of the action by e-mail. It is the student's responsibility to keep a current e-mail address on file through the SDSU WebPortal at <http://www.sdsu.edu/portal>. To reenroll, the student must receive an add code from the instructor and reenroll in the course within the first 15 class days of the semester by 6:00 p.m.

NOT ALL INSTRUCTORS WILL DROP STUDENTS WHO MISS THE FIRST CLASS SESSION AND THE BEGINNING OF THE SECOND CLASS SESSION. Students are responsible for all courses on their schedules. Students should check their online schedules regularly and take necessary action to add or drop during the first 15 class days of the semester by 6:00 p.m.

## Postbaccalaureate Standing (Unclassified)

Students may not be admitted as unclassified graduate students. Students must apply to a degree, credential, or certificate program to be admitted.

## Prerequisites for Graduate Courses

Students must satisfy course prerequisites (or their equivalent) prior to beginning the course requiring the prerequisite. Faculty have the authority to enforce prerequisites listed in the bulletin, to evaluate equivalent preparation, and to require proof that such prerequisites/preparation have been completed. Faculty may, during the first week of classes, request students without the prerequisites or equivalent preparation to take formal action to drop the course. Failure to comply will result in a failing grade.

## Special Prerequisites for Registration in 798 and 799A

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

Only those students who have been advanced to candidacy and who have an officially appointed thesis committee are permitted to register for course 799A, Thesis. The student must obtain clearance for registration in this course from the Graduate Division. Failure to obtain this clearance may result in cancellation of enrollment.

## Thesis Extension (799B)

This course is intended solely for those graduate students who have had prior registration in Thesis 799A with an assigned grade symbol of SP or RP. Students must be continuously enrolled until the thesis is accepted and graduation has occurred.

## Comprehensive Examination Extension (799C)

Enrollment in 799C (0 units) is intended solely for those graduate students who have completed all degree requirements except for the comprehensive examination (Plan B) option. Students must be continuously enrolled in the University until they complete the comprehensive examination and graduate. Enrollment in 799C is not necessary if a student is enrolled in other coursework during the semester they take the comprehensive examination.

## Special Prerequisite for Registration in 899

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

## Unit or Credit Hour

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

**OFFICE: Storm Hall 143B**  
**TELEPHONE: (619) 594-5527**  
**FAX: (619) 594-1150**  
**E-MAIL: anthro@mail.sdsu.edu**  
<http://www.rohan.sdsu.edu/~anthro/>

# Anthropology

In the College of Arts and Letters

## Faculty

Philip J. Greenfeld, Ph.D., Professor of Anthropology,  
Chair of Department  
Joseph W. Ball, Ph.D., Professor of Anthropology  
Philip J. Greenfeld, Ph.D., Professor of Anthropology  
Edward O. Henry, Ph.D., Professor of Anthropology  
Lynn H. Gamble, Ph.D., Associate Professor of Anthropology  
Seth W. Mallios, Ph.D., Assistant Professor of Anthropology  
Ramona L. Pérez, Ph.D., Assistant Professor of Anthropology  
(Graduate Adviser)

## Associateships

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

## General Information

The Department of Anthropology offers graduate study leading to the Master of Arts degree in anthropology. The Master of Arts degree in anthropology provides systematic training through two specializations; (1) general anthropology specialization, with a strong theoretical component, for students who anticipate additional work leading to the doctoral degree in anthropology, or direct placement in an academic setting; (2) an applied anthropology specialization primarily for those who plan to seek employment in the nonacademic sector. This specialization is concerned with the application of anthropological method and theory to practical problems in business, government, and other settings.

Research and special instructional facilities provided by the Department of Anthropology include laboratories for archaeology, ethnology, linguistics, physical anthropology, and world prehistory. Additional facilities available in the community include the Museum of Man, the San Diego Zoo, and various internship sites for applied research.

## Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. In addition, students seeking the Master of Arts degree in anthropology must have completed or complete at least 15 upper division units including Anthropology 301, 302, 303, and 304, or the equivalent to those required for an undergraduate major in anthropology at San Diego State University. Students receiving a bachelor's degree in anthropology from San Diego State University must have at least a B average (3.0 grade point average) in the four 300-level core courses (Anthropology 301, 302, 303, and 304). Applicants from other undergraduate programs must have a B average in the courses equivalent to Anthropology 301, 302, 303, and 304. The student must also have an overall 3.0 (B) grade point average in all undergraduate courses or consent of the department.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Anthropology:

- (1) Two sets of official transcripts (in sealed envelopes) from all post high school institutions;
- (2) GRE scores (official notification);
- (3) A copy of your University application;
- (4) Three letters of recommendation (in sealed and signed envelopes) from persons in a position to judge academic ability;
- (5) One typewritten example of academic writing (research term paper, etc.).

Materials should be submitted by October 1 for admission for the spring semester and March 1 for the fall semester.

Mail or deliver your complete admissions package to:

Department of Anthropology  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4443

## Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Two of this bulletin. In addition, the department requires for either the General Anthropology specialization or the Applied Anthropology specialization that the student must have found a thesis adviser, formed a thesis committee, and written a thesis proposal which has been approved by their thesis committee. The committee can be formed after (1) successful completion in the General Anthropology specialization four core seminars (601, 602, 603, and 604) with a minimum grade point average of 3.0, and no less than a B- grade in each of the four core seminars, and (2) according to the specific recommendation of the Department of Anthropology, passed either an examination demonstrating working knowledge of an appropriate foreign language, or complete a sequence of at least one lower division and one upper division course (with a grade point average of 2.0 or better) in either a foreign language or statistics. The statistics requirement may be satisfied by taking any lower division statistics course and Anthropology 580 or one of the following sequences in statistics: Biology 215 and 597A; Sociology 201 and 406 or 407; or Statistics 250 and 350A or equivalent.

Those students who choose the Applied Anthropology specialization must: (1) satisfactorily complete three core seminars (601, 602, 603, or 604) selected with the approval of the graduate coordinator with a minimum grade point average of 3.0, and no less than a B- grade in each of the three core seminars; (2) satisfactorily complete Anthropology 621; and (3) satisfactorily complete a lower division course in quantitative methods (Biology 215, Psychology 270, Sociology 201, or Statistics 250) and Anthropology 580 (Anthropological Data Analysis) with no less than a B- in each course.

## Specific Requirements for the Master of Arts Degree

**(Major Code: 22021)**

In addition to meeting the basic requirements for the Master of Arts degree as described in Part Two of this bulletin, students selecting the General Anthropology specialization must complete a graduate program of at least 30 units of which at least 21 units must be in 600- and 700-numbered courses in anthropology, to include:

1. Anthropology 601, 602, 603, and 604 (with a minimum grade point average of 3.0, and no less than a B– grade in each of these core seminars); only classified students may enroll in these courses);
2. Anthropology 797, Research (3) (to be taken after advancement to candidacy);
3. Anthropology 799A, Thesis (3).

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

1. Nine units of core seminars chosen from Anthropology 601, 602, 603, or 604 with the approval of the graduate coordinator (with a minimum grade point average of 3.0, and no less than a B– grade in each of these core seminars);
2. Anthropology 580 (3) and Anthropology 621 (3) (courses to be taken prior to advancement to candidacy and prior to internship placement);
3. Anthropology 795 (6) (to be taken after advancement to candidacy);
4. Anthropology 799A, Thesis (3).

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

## Courses Acceptable on Master's Degree Program in Anthropology (ANTH)

### UPPER DIVISION COURSES

#### **ANTH 500. Primate Social Behavior (3)**

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 101.

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

#### **ANTH 505. Human Osteology (3)**

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 101. Recommended: Anthropology 301 and/or Biology 212.

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.

#### **ANTH 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.

#### **ANTH 520. Ethnographic Field Methods (3)**

Prerequisite: Anthropology 102.

Problems and techniques of field work in ethnographic and social anthropological research; field work projects conducted using various qualitative and quantitative research techniques. Students work with informants in various settings.

#### **ANTH 522. Economic Anthropology (3)**

Prerequisite: Anthropology 102.

Integrates analyses of production, distribution, and consumption of goods and services with study of cultures. Interrelated economic, social, and cultural thought; classifications of disparate economies and reciprocity.

#### **ANTH 529. Urban Anthropology (3)**

Prerequisite: Anthropology 102.

Urban adaptations of past and present societies. Descriptive topics and applied concerns regarding urban origins, migrations, kinship, ethnicity, stratification, and change. Ethnographic examples drawn from Western and non-Western societies.

#### **ANTH 531. Applied Anthropology (3)**

Prerequisite: Anthropology 102.

Application of anthropological concepts to solve human problems in a wide range of areas including research such as social impact assessment and evaluation, and interventions such as cultural brokerage and community development. Examples of applied work used from both western and non-western societies.

#### **ANTH 535. Sex, Gender, Kinship, and Marriage (3)**

Prerequisite: Anthropology 102.

Anthropological theories and typologies relating to kinship and marriage systems, their history, their relationship to cultural practices, their implications for constraints on sexual practices, and their significance in definition of gender and gender hierarchies in world societies.

#### **ANTH 560. Advanced Archaeological Field Techniques (3)**

Six hours of activity.

Prerequisite: Anthropology 312.

Advanced projects in excavation and stabilization of ruins, archaeological surveys, laboratory analysis, preparation of reports, and act as unit supervisor. Course may be repeated with consent of instructor. Maximum credit six units.

#### **ANTH 561. Archaeological Laboratory Methods (3)**

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 560.

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

#### **ANTH 580. Anthropological Data Analysis (3)**

Two lectures and three hours of laboratory.

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

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

#### **ANTH 582. Regional Anthropology (3)**

Prerequisite: Anthropology 102.

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

#### **ANTH 583. Topical Anthropology (3)**

Prerequisite: Anthropology 102.

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

#### **ANTH 596. Topics in Anthropology (1-3)**

Prerequisite: Consent of instructor.

Advanced topics in anthropology. See Class Schedule for specific content. May be repeated with new content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

### GRADUATE COURSES

#### **ANTH 600. Seminar (3)**

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

**ANTH 601. Seminar in Physical Anthropology (3)**

Prerequisite: Classified graduate standing and 12 upper division units in anthropology.

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

**ANTH 602. Seminar in Archaeology (3)**

Prerequisite: Twelve upper division units in anthropology.

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

**ANTH 603. Seminar in Ethnology (3)**

Prerequisite: Twelve upper division units in anthropology.

History and theory in ethnology stressing the significant literature on such topics as cross-cultural comparison, structural-functional analysis and description, personality and culture, and sociocultural change.

**ANTH 604. Seminar in Linguistics (3)**

Prerequisite: Twelve upper division units in anthropology.

History and theory of linguistics stressing the significant literature on such topics as cultural cognition, descriptive linguistics, lexicostatistics, and transformational analysis.

**ANTH 621. Seminar in Topical Anthropology (3)**

Prerequisite: Twelve upper division units in anthropology.

Study of a major subdiscipline such as political anthropology, economic anthropology, social anthropology, psychological anthropology, cultural ecology, applied anthropology, race and variation, or environmental archaeology. Maximum credit six units applicable to a master's degree. May be repeated with new content. See Class Schedule for specific content.

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

Prerequisites: Classified graduate standing and consent of instructor.

Students assigned to various government and private agencies in which anthropological theory can be applied. Supervision shared by department supervisor and on-the-job supervisor. Maximum credit nine units; three units applicable to a master's degree.

**ANTH 797. Research (3) Cr/NC/RP**

Prerequisite: Advancement to candidacy.

Independent investigation in the general field of the thesis.

**ANTH 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Classified graduate standing.

Individual study directed toward the preparation of a paper on a specific problem. May be repeated with variable content, with a maximum credit of three units applicable to a master's degree.

**ANTH 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**ANTH 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis, 799A, with an assigned grade symbol of RP.

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

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# Art

In the School of Art, Design, and Art History  
In the College of Professional Studies and Fine Arts

OFFICE: Art 505  
TELEPHONE: (619) 594-6511  
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<http://www.sdsu.edu/art>

## Faculty

Ida K. Rigby, Ph.D., Professor of Art, Design, and Art History,  
Interim Director of School  
Richard J. Baker, M.F.A., Professor of Art, Design,  
and Art History  
Richard A. Burkett, M.F.A., Professor of Art, Design,  
and Art History  
Janet L. Cooling, M.F.A., Professor of Art, Design,  
and Art History  
Walter E. Cotten, M.F.A., Professor of Art, Design,  
and Art History  
Joanne Hayakawa, M.F.A., Professor of Art, Design,  
and Art History  
Wendy L. Maruyama, M.F.A., Professor of Art, Design,  
and Art History  
Susan C. Merritt, M.A., Professor of Art, Design,  
and Art History  
Allan W. Miller, M.F.A., Professor of Art, Design,  
and Art History  
Kerry Ann Nelson, M.S., Professor of Art, Design,  
and Art History  
Gail C. Roberts-Fields, M.A., Professor of Art, Design,  
and Art History  
Helen Z. Shirk, M.F.A., Professor of Art, Design,  
and Art History  
Tina Marie Yapelli, M.A., Professor of Art, Design,  
and Art History  
Jo-Anne Berelowitz, Ph.D., Associate Professor of Art, Design,  
and Art History (Graduate Adviser, Art History)  
Robert A. Mansfield, M.F.A., Associate Professor of Art, Design,  
and Art History  
Kotaro Nakamura, M.A., Associate Professor of Art, Design,  
and Art History  
Mark J. Siprut, M.F.A., Associate Professor of Art, Design,  
and Art History  
Hiroko Johnson, Ph.D., Assistant Professor of Art, Design,  
and Art History  
Richard C. Keely, M.F.A., Assistant Professor of Art, Design,  
and Art History (Graduate Coordinator, Studio Arts)  
Kim Stringfellow, M.F.A., Assistant Professor of Art, Design,  
and Art History

## Assistantships and Tuition Waivers

Graduate assistantship and teaching associate positions in art are available to a limited number of qualified students. Application forms and additional information may be secured from the director of the school. Tuition waivers for out-of-state and international students are also available on a limited basis. Applicants should contact the graduate coordinator for more information.

## General Information

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

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

The Master of Fine Arts degree requires an additional 30 units in the area of specialization and professional seminars, with the expectation that the student will achieve a higher level of excellence and distinction in the chosen area of specialization. The M.F.A. degree requires 60 units and can be completed in three years. The degree is offered in ceramics, furniture, graphic design, interior design, jewelry/metalsmithing, multimedia, painting, printmaking, and sculpture.

The Art building has expansive facilities offering the student excellent studio space and equipment. In addition, the San Diego Museum of Art, the San Diego Museum of Contemporary Art, the Putnam Foundation collection in the Timken Gallery, and the Museum of Man in Balboa Park offer valuable original materials as well as specialized libraries for research. There are also numerous community college galleries and commercial galleries with a wide variety of offerings.

## Master of Fine Arts Degree in Art

### Admission to Graduate Study

Admission to the Master of Fine Arts degree program is limited to the fall semester. Applications and portfolios for the annual graduate review must be submitted to the graduate coordinator by February 1.

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. In general, the student must have completed a bachelor's degree in studio art or the equivalent from an accredited institution, including twelve units of art history, six units of which comprise a survey of the history of Western art. A grade point average of 3.25 or better in upper division art courses is required.

Students must also be able to show that they are adequately advanced to carry out projects which measure up to graduate standards. This requirement will be measured by a formal presentation of a portfolio of work to the graduate faculty in the area of emphasis.

Students applying for admission to the M.F.A. degree should electronically submit the University application available at <http://www.csumentor.edu> by February 1.

The following materials should be submitted as a complete package directly to the Graduate Coordinator in the School of Art, Design and Art History by the February 1 deadline:

- (1) School of Art, Design and Art History application form. Contact the School of Art, Design and Art History to obtain application form and instructions or refer to <http://www.sdsu.edu/art> to download the information;
- (2) Two sets of official transcripts (in sealed envelopes) from all college/university-level institutions attended;

- (3) GRE and TOEFL scores sent directly to SDSU from the Educational Testing Service, <http://www.ets.org>, (SDSU code 4682);
- (4) Statement of purpose addressing your professional goals and reasons for selecting the School of Art, Design and Art History at SDSU for your pursuit of these goals;
- (5) Artist statement which describes the nature or content of the work shown in the portfolio;
- (6) Slide portfolio of 20 slides (unless other options are given in the instructions for a specific discipline); label all slides clearly with your name and slide number;
- (7) Typed slide information sheet with titles, dimensions, media and dates, numbered to match slides;
- (8) Two letters of recommendation from art instructors (or others) who are able to comment on your artistic potential in the area of specialization. Letters can be sent separately or included with your application in sealed and signed envelopes;
- (9) Any other materials required specifically in the instructions by your chosen discipline;
- (10) Return envelope with sufficient postage for the return of your portfolio.

Mail or deliver your complete admissions package to:

Graduate Coordinator  
 School of Art, Design and Art History  
 San Diego State University  
 5500 Campanile Drive  
 San Diego, CA 92182-4805

## Advancement to Candidacy

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

## Specific Requirements for the Master of Fine Arts Degree

(Major Code: 10022)

Candidates for the M.F.A., in addition to meeting the requirements for classified graduate standing, must complete a 60-unit graduate program which includes a minimum of 45 units at the 600- and 700-level. Art 694, 760, 791, and 792 are required. Normally, a student will focus on one of the studio art fields (applied design, painting, graphic design, interior design, multimedia, sculpture, and printmaking). With approval of the Director and graduate coordinator a student may focus on a program of study combining two studio art fields. Six units must be included in art history, art criticism, and aesthetics courses. Nine units must be included on the program from studio electives outside the area of emphasis or electives in other departments. Art 799A, Thesis must be included on the program. In addition, there will be an oral examination of each candidate by the graduate faculty of the School of Art, Design and Art History. This examination will occur at the time of the candidate's master's exhibition, and will encompass an in-depth discussion of the candidate's thesis project.

No more than 15 units of graduate work may be transferred from another institution. Requests for more than six units must be approved by a committee of representatives from the area of emphasis. Applicants holding an M.A. degree in studio art from an accredited institution may transfer up to 30 units upon review and recommendation of the faculty in the area of emphasis, and approval of the graduate coordinator of the School of Art, Design and Art History. Candidates must

be prepared to spend at least two semesters (24 units) in residence as full-time students. Coursework taken as a graduate student to fulfill undergraduate deficiencies may not be used to satisfy any unit requirement for the M.F.A. degree program. A 3.0 grade point average must be maintained at all times. Continuation in the program will be determined by a review of each candidate by the graduate faculty in the emphasis area. This review will be held upon completion of 30 units in the M.F.A. program, or at any time upon request of the graduate coordinator.

## Master of Arts Degree in Art

### Admission to Graduate Study

#### Studio Arts

Admission to the Master of Arts degree program in studio arts is limited to the fall semester. Applications and portfolios for the annual graduate review must be submitted to the graduate coordinator by February 1. (Please note: Art history applicants should check the deadline dates in the next section.)

Students applying for admission to the M.A. degree in Studio Arts should electronically submit the University application available at <http://www.csumentor.edu> by February 1.

The following materials should be submitted as a complete package directly to the Graduate Coordinator in the School of Art, Design and Art History by the February 1 deadline:

- (1) School of Art, Design and Art History application form. Refer to <http://www.sdsu.edu/art> to download application form and instructions;
- (2) Two sets of official transcripts (in sealed envelopes) from all college/university-level institutions attended;
- (3) GRE and TOEFL scores sent directly to SDSU from the Educational Testing Service, <http://www.ets.org>, (SDSU code 4682);
- (4) Statement of purpose addressing your professional goals and reasons for selecting the School of Art, Design and Art History at SDSU for your pursuit of these goals;
- (5) Artist statement which describes the nature or content of the work shown in the portfolio;
- (6) Slide portfolio of 20 slides (unless other options are given in the instructions for a specific discipline); label all slides clearly with your name and slide number;
- (7) Typed slide information sheet with titles, dimensions, media and dates, numbered to match slides;
- (8) Two letters of recommendation from art instructors (or others) who are able to comment on your artistic potential in the area of specialization. Letters can be sent separately or included with your application in sealed and signed envelopes;
- (9) Any other materials required specifically in the instructions by your chosen discipline;
- (10) Return envelope with sufficient postage for the return of your portfolio.

Mail or deliver your complete admissions package to:

Graduate Coordinator  
 School of Art, Design and Art History  
 San Diego State University  
 5500 Campanile Drive  
 San Diego, CA 92182-4805

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. In general, students must have completed an undergraduate major in art with a minimum of 24 upper division units, including two semesters of work in the general history of art, before

they will be permitted to enter the graduate program. Students must also be able to show that they are adequately advanced to carry out projects which measure up to graduate standards. In studio areas this requirement will be measured by a formal presentation (the Graduate Review) to the emphasis area faculty of a portfolio of examples of the candidate's undergraduate or postbaccalaureate work. The range should be great enough to give the committee a knowledge of the candidate's strengths and weaknesses. A statement of the candidate's objectives in the graduate program should accompany this presentation. If it is determined that the student is capable of doing graduate art work, he/she may be permitted to begin such work even though he/she has not completed an appropriate undergraduate major in art. Those students whose work is insufficiently advanced for classified graduate standing may enroll for courses through Open University, in order to meet the standard requirements.

### Art History

Art history applications, obtainable from the School of Art, Design and Art History, are due on March 1 for the fall semester or October 1 for the spring semester and should be accompanied by transcripts of all undergraduate or postbaccalaureate work.

Students applying for admission to the M.A. degree in Art History should electronically submit the University application available at <http://www.csumentor.edu> by March 1 for the fall semester or October 1 for the spring semester.

The following materials should be submitted as a complete package directly to the Art History Graduate Adviser in the School of Art, Design and Art History by the deadline:

- (1) School of Art, Design and Art History application form. Refer to <http://www.sdsu.edu/art> to download application form and instructions;
- (2) Two sets of official transcripts (in sealed envelopes) from all college/university-level institutions attended;
- (3) GRE and TOEFL scores sent directly to SDSU from the Educational Testing Service, <http://www.ets.org>, (SDSU code 4682);
- (4) Statement of purpose addressing your professional goals and reasons for selecting the School of Art, Design and Art History at SDSU for your pursuit of these goals, what you plan to accomplish at SDSU (in which areas do you plan to specialize), and what your long range career goals are;
- (5) A copy (it will not be returned) of your best term paper or seminar report, or reprint of a published article, accompanied by a statement explaining how you came to your topic, your method of research, and the facilities available;
- (6) Three letters of recommendation from instructors who can assess your academic performance (you may include one museum reference). Letters can be sent separately or included with your application in sealed and signed envelopes

Mail or deliver your complete admissions package to:

Art History Graduate Adviser  
School of Art, Design and Art History  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4805

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

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

## Advancement to Candidacy

### Studio Arts

In addition to meeting the requirements for advancement to candidacy as described in Part Two of this bulletin, all students will be required to pass a comprehensive examination covering the fields of history of art of western civilization, the principles of art appreciation, and the techniques and materials of the artist, or to have completed a year course in the history of art of Western civilization and six undergraduate units of art history.

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

### Art History

Classified graduates should contact the graduate adviser to discuss their individual graduate programs before the third week of their first semester.

Before advancement to candidacy, classified graduate students working for the Master of Arts degree with a concentration in art history must pass a qualifying examination in art history. Classified graduate students must have completed three semesters of college level French or German or, on the advice of the art history faculty, the language necessary for thesis research. Alternately, with the consent of the art history faculty, students may demonstrate a reading knowledge of the appropriate language by passing the Graduate School Foreign Language Examination (the French MLA examination is given by the Office of Testing, Research and Assessment during the beginning of each semester; contact the School of Art, Design and Art History for permission to take the examination). The language requirement must be met before the add/drop date of the student's first semester as a classified graduate student, or the student must enroll for appropriate language courses.

## Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, all students must complete a graduate program of a minimum of 30 units which includes at least 24 units in art from courses listed below as acceptable on master's degree programs in art, of which at least 16 units must be in 600- and 700-numbered courses.

### Studio Arts (Major Code: 10021)

Those electing studio arts must complete a minimum of 18 units in the area of specialization. Art 694, 760, and 799A are required. Not more than a total of six units in Art 798 will be accepted. A creative project accompanied by a written report is required as fulfillment of Art 799A. In conjunction with this project, each candidate for the degree must present an exhibition of representative graduate work.

### Art History (Major Code: 10031)

Those electing art history must complete at least 18 units from the 600- and 700-numbered courses in art history to include Art 799A, selected in consultation with the art history adviser. Students may select up to 12 units of 500-level courses in art, nine units of which must be in art history and approved by the graduate adviser. The additional three units must be selected in consultation with the graduate adviser, to include Art 593 if this course is not already completed. A written thesis is required as fulfillment of Art 799A. Master's candidates in art history will also be required to give an open lecture on their thesis subject, to be scheduled with the approval of the thesis chair.

## Thesis and Projects in Art

The thesis required for the Master of Arts degree in art history is a written document; the project required for the Master of Arts degree with a concentration in studio arts and the Master of Fine Arts degree is an original body of work of creative art accompanied by a written report. All theses and written reports accepted in satisfaction of a requirement for the master's degree are cataloged and accessioned in the library. Color slides of the project must be provided by the candidate and are retained in the slide library. One copy of art history theses must be given to the School of Art, Design and Art History.

## Courses Acceptable on Master's Degree Programs in Art (ART)

### ART 500. Advanced Drawing (3)

Six hours.

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

Drawing emphasizing qualitative aspect of visual subject matter. Maximum credit six units. Students may not re-enroll in this course after earning six units of C or higher (or Cr). Copy of transcript required.

### ART 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. M.F.A. students: Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree.

### ART 503. Life Drawing and Painting (3)

Six hours.

Prerequisites: Art 204 and 403.

Drawing and painting from nude and costumed models. Maximum credit six units. Students may not re-enroll in this course after earning six units of C or higher (or Cr). Copy of transcript required.

### ART 504. Advanced Painting (3) I, II

Six hours.

Prerequisite: Six units of Art 404.

Approaches to contemporary concepts in painting. Maximum credit six units.

### ART 506. Contemporary Issues for Studio Artists (3)

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.

### ART 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. Students may not re-enroll in this course after earning six units of C or higher (or Cr). Copy of transcript required.

### ART 516. Advanced Sculpture (3) I, II

Six hours.

Prerequisite: Art 416.

Individual investigations into sculpture ideas, methods and materials. Individual development in sculpture. Materials may include clay, metal, plastics, paper or wood. Maximum credit six units. Students may not re-enroll in this course after earning six units of C or higher (or Cr). Copy of transcript required.

### ART 517. Figurative Sculpture (3)

Six hours.

Prerequisites: Art 216 and 217.

Figurative study with emphasis on individual exploration. Maximum credit six units. Students may not re-enroll in this course after earning six units of C or higher (or Cr). Copy of transcript required.

### ART 523. Advanced Furniture Design and Woodworking (3) I, II

Six hours.

Prerequisite: Six units of Art 423.

Advanced individual design: Exploration of materials, process and function. Continued focus on development of personal design statements and specialized techniques. Maximum credit six units. Students may not re-enroll in this course after earning six units of C or higher (or Cr). Copy of transcript required.

### ART 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. Students may not re-enroll in this course after earning six units of C or higher (or Cr). Copy of transcript required.

### ART 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. Students may not re-enroll in this course after earning six units of C or higher (or Cr). Copy of transcript required.

### ART 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. Students may not re-enroll in this course after earning six units of C or higher (or Cr). Copy of transcript required.

### ART 532. Advanced Metalsmithing (3) I, II

Six hours.

Prerequisite: Art 432.

Advanced problems involving metal processes to increase technical competence while exploring personal design statements. Maximum credit six units. Students may not re-enroll in this course after earning six units of C or higher (or Cr). Copy of transcript required.

### ART 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. Students may not re-enroll in this course after earning six units of C or higher (or Cr). Copy of transcript required.

### ART 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.

### ART 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.

## **ART 540. Advanced Photographic Imagery (3) II, S**

Six hours.

Prerequisites: Grade of C (2.0) or better in Art 340, or Art 240 and 407.

Visual communication and expression using photographic media, including photomechanical and digital processes. Preparation for multimedia and digital prepress. Maximum credit six units with consent of instructor. Students may not re-enroll in this course after earning six units of C or higher (or Cr). Copy of transcript required.

## **ART 541. Advanced Graphic Design – Visual Communication Systems (3) I, II**

Six hours.

Prerequisite: Grade of C (2.0) or better in Art 441, 442, 445B, 450, 454, or 545.

Design of visual communication systems relating to visual, verbal, and corporate identification strategies. Maximum credit six units.

## **ART 543. Advanced Drawing and Illustration for Graphic Design (3)**

Six hours.

Prerequisite: Art 443.

Refinement of visual imagery and advanced illustration problems.

## **ART 544. Visual Communication: Emerging Technologies (3) II**

Six hours.

Prerequisites: Grade of C (2.0) or better in Art 444 or consent of instructor.

Advanced design studies in emerging electronic communications, including cyberstudios, Internet and multimedia. Exploration in collaborative, interdisciplinary, and international projects. Maximum credit six units with consent of instructor.

## **ART 545. Design Studio (3) I, II**

Six hours.

Prerequisites: Portfolio review and grade of C (2.0) or better in one 400 or 500-level graphic design course.

Solutions to design problems for clients in a studio environment including business procedures and production management. Development of a professional level portfolio. Maximum credit six units with consent of instructor. Students may not re-enroll in this course after earning six units of C or higher (or Cr). Copy of transcript required. (Formerly numbered Art 542.)

## **ART 547. Environmental Theory (3) II**

Prerequisite: Art 247 or 347.

Survey of alternative solutions to the problem of design of the physical environment.

## **ART 550. Environmental Prototypes (3) I**

Six hours.

Prerequisite: Grade of C (2.0) or better in Art 348 or 450.

Research and development of creative architectural concepts with emphasis on the three dimensional environment.

## **ART 552. Interior Design IV (3) I**

Six hours.

Prerequisites: Art 451, 453, and completion of portfolio requirement. **Proof of completion of prerequisites required:** Copy of transcript.

Projects in architectural interiors involving the use and perception of enclosed spaces. Space planning systems analysis. Maximum credit six units.

## **ART 553. Interior Design V (3) II**

Six hours.

Prerequisite: Art 552. **Proof of completion of prerequisite required:** Copy of transcript.

Projects in interiors involving space planning analysis, specification writing, materials selection and furnishing design appropriate to commercial needs. Maximum credit six units.

## **ART 557. Art of the Nineteenth Century (3) I, II**

Prerequisite: Art 259.

Development of painting, sculpture, and architecture from the French Revolution to 1900.

## **ART 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).

## **ART 559. Twentieth Century European and American Art Since 1945 (3) I, II**

Prerequisite: Art 259. Recommended: Art 558.

Major developments in the visual arts and art criticism since 1945.

## **ART 560. History of American Art (3)**

Prerequisite: Art 259.

Development of painting, sculpture, and architecture from the Native American art and Colonial Period to the present.

## **ART 561. Art of Pre-Hispanic America (3)**

Prerequisite: Art 259.

Art of ancient Meso-America, Central America, Caribbean, and South America from earliest times until contact with Europe.

## **ART 562. Art of Latin America (3)**

Prerequisite: Art 259.

Art and architecture of Latin America from the colonial period to the present. Field trips included.

## **ART 564. Art of China (3) II**

Prerequisite: Art 258 or 259 or 263.

History of Chinese art from prehistoric times through the Ching Dynasty.

## **ART 565. Art of Japan (3) II**

Prerequisite: Art 258 or 259 or 263.

History of Japanese art from prehistoric times to the Meiji Restoration.

## **ART 566. History of Japanese Painting Tenth to Twentieth Centuries (3) II**

Prerequisite: Art 258 or 259 or 263.

History of Japanese painting from tenth to twentieth centuries, emphasizing art from three social groups: aristocrats, warriors, and merchants. Analysis of motifs, iconography, and styles of art schools developed during these periods, reinforced by social history.

## **ART 567. Art of the Ancient Near East (3) II**

Prerequisite: Art 258.

Development of painting, sculpture, and architecture of Mesopotamia, Anatolia, the Levant, Ancient Persia, and Egypt from prehistoric times to the first century B.C.

## **ART 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.

## **ART 569. Art of Sub-Saharan Africa (3)**

Prerequisite: Art 158 or 258 or 259 or 263.

Form and content of the art of Sub-Saharan Africa viewed within its cultural context.

## **ART 570. Art of the Pacific Islands (3)**

Prerequisite: Art 158 or 258 or 259 or 263.

Visual arts of the Pacific Islands; recognition of styles and object types and their historical, social, and cultural contexts.

## **ART 573A. Italian Art of the Fourteenth and Fifteenth Centuries (3)**

Prerequisite: Art 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.

**ART 573B. Italian Art in the Sixteenth Century (3)**

Prerequisite: Art 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.

**ART 575. European Art from 1600 to 1750 (3)**

Prerequisite: Art 259.

Architecture, sculpture, and painting of the Baroque and Rococo periods.

**ART 577. History of Architecture (3)**

Prerequisites: Art 258 and 259.

Architecture from primitive times to the present.

**ART 578. Seminar in History of Museums and Exhibitions (3)**

Prerequisite: At least one course selected from Art 557, 558, 559, or 560.

Origin, history, and function of the museum. Theories of collecting, museums, and construction of knowledge. Role of elites in formation and construction of museums, controversial exhibitions, exhibitionary practices, and globalism.

**ART 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.

**ART 592. Gallery Exhibition Design (3) I, II**

Six hours.

Prerequisite: Art 591.

Advanced problems in the theories and techniques of gallery exhibition design.

**ART 593. History and Methodology of Art History (3) II**

Prerequisite: Twelve units of upper division art history.

Readings and discussions on the historiography of art and on modern methodologies for art historical research.

**ART 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****ART 600. Drawing (3)**

Six hours.

Prerequisite: Art 500.

Concepts and approaches to drawing. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

**ART 604. Painting (3)**

Six hours.

Prerequisite: Art 504.

Issues and concepts relating to contemporary painting. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

**ART 609. Printmaking (1-3)**

Two hours for each unit of credit.

Advanced creative work in selected printmaking media based upon the analysis of the history and philosophies of printmaking from its inception through contemporary concepts. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

**ART 616. Sculpture (3)**

Six hours.

Prerequisite: Art 516.

Aesthetic organization of selected subject matter in the media of sculpture. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

**ART 623. Advanced Furniture Design (3)**

Six hours.

Prerequisite: Art 523.

Problems in the design and construction of furniture. Projects determined by the individual students in conference with the instructor. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

**ART 625. Crafts (1-3)**

Two hours for each unit of credit.

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

Advanced creative work in selected craft media. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

**ART 627. Advanced Clay and Glaze Technology in Ceramic Design (3)**

Six hours.

Prerequisite: Art 525 or 526.

Experimentation with use of ceramic material and techniques as an integral part of design process. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

**ART 631. Seminar in Jewelry and Metalwork (3)**

Prerequisite: Art 531 or 532.

Problems in design and execution of works in precious metals. Projects will be determined by individual student in conference with the instructor. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

**ART 634. Seminar in Textile Design (3)**

Prerequisite: Art 534 or 536.

Problems in textile design and technology. Projects determined by individual student in consultation with instructor. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

**ART 641. Graphic Communication (1-3)**

Two hours for each unit of credit.

Prerequisite: Art 541.

Advanced individual study in graphic design. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

**ART 650. Creative Environmental Design (1-3)**

Prerequisite: Six upper division units in interior design, architecture or city planning.

Creative work in interior design, architecture and civic design. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

**ART 660. Seminar in Art History (3)**

Prerequisite: Graduate standing in art, art history, or related fields.

Selected topics in art history. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**ART 665. Seminar in Japanese Art History (3)**

Prerequisite: Art 565 or 566.

Selected topics in visual arts and criticism of various Japanese art schools from seventeenth to twentieth centuries. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**ART 694. Seminar in the Principles of Design in the Space Arts (3)**

Prerequisite: A semester course in art appreciation.

An intensive study of the activity of creative expression and aesthetic appreciation in the area of visual experience. The aesthetic analysis of original works of art. Maximum credit six units applicable to the M.A. degree.

**ART 696. Advanced Topics in Art (1-3)**

Prerequisite: Consent of instructor.

Intensive study in specific areas of art and art history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**ART 700. Studio Art Experience (3)**

Six hours.

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

Independent research in specified areas. Each letter designation may be taken for a maximum six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

- |   |   |
|---|---|
| <b>A.</b> Studio Art in Painting          | <b>G.</b> Studio Art in Environmental/<br>Interior Design |
| <b>B.</b> Studio Art in Sculpture         |   |
| <b>C.</b> Studio Art in Printmaking       | <b>I.</b> Studio Art in Jewelry/<br>Metals                |
| <b>D.</b> Studio Art in Ceramics          |   |
| <b>F.</b> Studio Art in Graphic<br>Design | <b>J.</b> Studio Art in Furniture                         |
|   | <b>K.</b> Studio Art in Multimedia                        |

**ART 716. Individual Research Problems in Sculpture (3)**

Six hours.

Prerequisite: Art 616 (six units).

Graduate research problems including independent research in sculpture. Projects will be determined by the individual student in conference with the instructor. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

**ART 760. Seminar in Twentieth Century Art (3)**

Prerequisite: Art 558 or 559.

Visual arts and art criticism since 1900.

**ART 791. Professional Practice (3) Cr/NC**

Six hours.

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

**ART 792. Research in Professional Problems (3)**

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

**ART 798. Special Study (1-3) Cr/NC/RP**

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

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

**ART 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for a master's degree.

**ART 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

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# Asian Studies

In the Department of Asia Pacific Studies  
In the College of Arts and Letters

## Faculty

Michael A. Weiner, Ph.D., Professor of Asia Pacific Studies,  
Chair of Department  
Kevin G. Cai, Ph.D., Assistant Professor of Asia Pacific Studies  
Sandra A. Wawrytko, Ph.D., Assistant Professor of Asia Pacific Studies

## Associated Faculty for Asia Pacific Studies

Soonja Choi, Ph.D., Professor of Linguistics  
Dipak K. Gupta, Ph.D., Professor of Political Science  
Yoshiko Higurashi, Ph.D., Professor of Japanese  
Lewis E. Peterman, Jr., Ph.D., Professor of Music  
Paul Wong, Ph.D., Professor of Sociology, Dean of the  
College of Arts and Letters  
Elena S.H. Yu, Ph.D., Professor of Public Health  
Ryu Kitajima, Ph.D., Associate Professor of Japanese  
Zheng-sheng Zhang, Ph.D., Associate Professor of Chinese  
Huma Ahmed Ghosh, Ph.D., Assistant Professor of Women's Studies  
Lei Guang, Ph.D., Assistant Professor of Political Science  
Hiroko Johnson, Ph.D., Assistant Professor of Art, Design,  
and Art History

## General Information

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

The program is designed to offer systematic advanced training (a) for those planning to enter educational, business, government, or community service involving Asia Pacific studies; (b) for those in a specific academic discipline who have regional interest in Asia Pacific studies and wish to promote more effective understanding of the cultures, societies, peoples, and social forces at work in the Asia Pacific world; and (c) for those who plan to pursue further graduate study in Asia Pacific studies beyond the Master of Arts degree.

## Admission to Graduate Study

In addition to meeting the requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, the student must present a Bachelor of Arts degree, as approved by the graduate committee of the Department of Asia Pacific Studies. A student whose preparation is deemed inadequate by the graduate committee will be required to complete specific courses in addition to the minimum of 30 units required for the degree.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Graduate Adviser, Department of Asia Pacific Studies:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores;
- (3) Letters of reference (minimum 3);

- (4) Personal statement;
- (5) TOEFL SCORES (as appropriate);
- (6) Writing sample of recent academic work.

Mail or deliver your complete admissions package to:

Department of Asia Pacific Studies  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-8147

## Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Two of this bulletin. In addition, all students must demonstrate a reading knowledge, at least at the intermediate level, of a relevant foreign language approved by the graduate committee of the Department of Asia Pacific Studies. If Chinese or Japanese is required, the requirement may be fulfilled by completing 16 units of coursework in the particular language, the last four units with a grade of C (2.0) or better.

## Specific Requirements for the Master of Arts Degree

(Major Code: 03011)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Two of this bulletin, the student must complete a minimum of 30 units from courses acceptable on master's degree programs, including Asian Studies 600 and 799A. The remaining 24 units to be selected, with departmental approval, from the following list of approved courses. In addition, any other Asian-content courses may be applied with approval of the graduate adviser.

The total program may not include more than 12 units in 500-level courses.

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

All programs will be approved by the graduate committee of the Department of Asia Pacific Studies.

## Courses Acceptable on Master's Degree Program in Asian Studies (ASIAN)

### UPPER DIVISION COURSES

(Also Acceptable for Advanced Degrees)

#### ASIAN 506. War and Memory in the Asia Pacific (3)

Historiography of the Pacific War and problems associated with historical evidence, memory, authentication, and political uses of history.

#### ASIAN 530. Media and Popular Culture in the Asia Pacific (3)

Media and popular culture in Asia as instruments of social control, agencies of emancipation, expressions of global western power, and a means through which local identities are revitalized.

### ASIAN 531. Spiritual and Intellectual Traditions in the Contemporary Asia Pacific (3)

Major thinkers or schools of Asian thought in modern times, reflecting East/West encounters and influences of global importance. Spiritual and intellectual aspects, cultural context, social/political/economic dimensions of the thinker or school and impact beyond the original culture.

### ASIAN 533. Minorities and Human Rights in the Asia Pacific (3)

Human rights regimes and status of minorities in parts of Asia Pacific. Examines notion of "universal rights" within and between countries of the region.

### ASIAN 570. Economic Dynamics of the Asia Pacific (3)

Sources and causes of regional economic growth. Role of the state, national growth models, enterprise forms and trade. Financial crisis of 1997-98 and subsequent developments to assess future economic prospects for the region.

### ASIAN 596. Selected Studies in Asian Cultures (3)

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

#### Anthropology Course (ANTH)

ANTH 582. Regional Anthropology (3)\*

#### Comparative Literature Course (C LT)

C LT 530. Topics in Asian Literature (3)

#### Economics Courses (ECON)

ECON 561. International Trade (3)

ECON 592. International Monetary Theory and Policy (3)

#### Geography Courses (GEOG)

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

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

#### History Courses (HIST)

HIST 563. Southeast Asia to 1800 (3)

HIST 564. Southeast Asia in the Modern World (3)

HIST 566. Chinese Civilization: The Great Traditions (3)

HIST 567. China's Century of Modernization (3)

HIST 569. Japan from Classical Age to Early Modern Era (3)

HIST 570. Japan in the Modern World (3)

HIST 596. Selected Studies in History (1-4)\*

#### Philosophy Course (PHIL)

PHIL 575. A Major Philosopher (3)\*

#### Political Science Course (POL S)

POL S 575. International Relations of the Pacific Rim (3)

#### Religious Studies Courses (REL S)

REL S 580. A Major Figure (3)\*

REL S 581. Major Theme (3)\*

REL S 583. Major Tradition (3)\*

### GRADUATE COURSES

#### Asian Studies Courses

### ASIAN 600. Seminar in Interdisciplinary Methods (3)

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

### ASIAN 690. Seminar in Asian Studies (3)

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

### ASIAN 797. Research (1-3) Cr/NC/RP

Research in one of the aspects of Asia Pacific studies. Maximum credit six units applicable to a master's degree.

### ASIAN 798. Special Study (1-3) Cr/NC/RP

Prerequisite: Consent of instructor.

Independent study. Maximum credit six units applicable to a master's degree.

### ASIAN 799A. Thesis (3) Cr/NC/RP

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

### ASIAN 799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

#### Anthropology Course (ANTH)

ANTH 600. Seminar (3)\*

#### Economics Courses (ECON)

ECON 720. Seminar in Development and Planning (3)\*

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

#### Finance Course (FIN)

FIN 654. Seminar in International Business Finance (3)\*

#### Geography Courses (GEOG)

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

GEOG 740. Seminar in Human Geography (3)\*

#### History Courses (HIST)

HIST 601. Seminar in Historical Methods (3)\*\*

HIST 650. Directed Readings in Asian History (3)

#### Linguistics Course (LING)

LING 795. Seminar in Linguistics (3)\*

#### Management Course (MGT)

MGT 723. Seminar in International Strategic Management (3)\*

#### Marketing Course (MKTG)

MKTG 769. Seminar in International Marketing (3)\*

#### Philosophy Course (PHIL)

PHIL 696. Seminar in Selected Topics (3)\*

#### Political Science Courses (POL S)

POL S 655. Seminar in General Comparative Political Systems (3)\*

POL S 658. Seminar in Post-Communist Political Systems (3)\*

POL S 661. Seminar in the Political Systems of the Developing Nations (3)\*

POL S 675. Seminar in International Relations (3)\*

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

\* Acceptable when of relevant content.

\*\* Required of all students who offer history as Department A.

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# Astronomy

In the College of Sciences

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**<http://mintaka.sdsu.edu>**

## Faculty

Paul B. Etzel, Ph.D., Professor of Astronomy, Chair of Department,  
Director of Mount Laguna Observatory  
Allen W. Shafter, Ph.D., Professor of Astronomy  
Jerome A. Orosz, Ph.D., Assistant Professor of Astronomy  
Eric L. Sandquist, Ph.D., Assistant Professor of Astronomy  
William F. Welsh, Ph.D., Assistant Professor of Astronomy  
(Graduate Adviser)  
Robert W. Leach, Ph.D., Resident Astronomer

## Adjunct Faculty

John M. Hood, Ph.D., Physics  
Fred Ringwald, Ph.D., Physics  
Scott W. Teare, Ph.D., Physics  
Jeff Veal, Ph.D., Astronomy  
Andrew T. Young, Ph.D., Astronomy

## Associateships

Graduate teaching associateships in astronomy are available to a few qualified students. A limited number of graduate research assistantships are also available from the department or through faculty with funded research projects. Application for Teaching Associate or Graduate Research positions is done as part of the student's application for Admission to Graduate Study.

## General Information

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

San Diego State University operates the Mount Laguna Observatory, which is located 45 road miles east of the campus at an elevation of 6100 feet. The research telescopes at the observatory include three reflectors with apertures of 40, 24 and 16 inches. The 40-inch telescope is operated jointly with the University of Illinois. Auxiliary equipment for the telescopes includes CCD and Near-IR cameras for direct imaging, CCD spectrographs, and photoelectric photometers. A dormitory for observers and a shop-laboratory building complete the main research facilities at the observatory. Additionally, each dome has dedicated PCs and/or UNIX workstations for telescope control, data collection, and on-line data reduction. All buildings at the observatory are connected to a fiber-optics, local area network, which in turn is connected to a high speed (45 Mbps) wireless Internet service. Associated with the observatory is the Awona Harrington Visitor Center, which provides facilities for educational programs and for visiting astronomers. The 21-inch Buller reflecting telescope is employed exclusively for education and public outreach programs.

The Department of Astronomy operates its own computer facilities for image processing of astronomical data. Twenty departmental PCs and several UNIX workstations with various magnetic tape storage units and color and monochrome laser printers are connected to the Internet. The department has access to more extensive campus computing facilities and to the San Diego Supercomputer Center.

Campus facilities include a Clark 12-inch refractor, two permanently fixed 12-inch reflecting telescopes, ten portable 8-inch Meade

LX200 reflectors, and 20 smaller assorted portable reflecting telescopes. Two CCD cameras, a CCD-equipped spectrograph, and photometer are also available. A Spitz AP3 planetarium is used for both student instruction and public outreach programs. The central campus library has a very extensive collection of astronomical texts and journals. In addition, the Special Collections section contains the world-renowned Zinner Collection of rare and historically important astronomical texts. The department also maintains a resource room of astronomical catalogs and charts, selected reference texts, and computers for access to Internet databases and bibliographic services.

A main research interest in the department is the study of the structure and evolution of stars derived from the investigation of eclipsing and interacting binary stars. These studies make use of both photometry and spectroscopy at the observatory. Stellar evolution is further studied with photometry of star clusters. The stellar content of nearby galaxies is probed through observations of novae and low-mass x-ray binaries contained within these systems. Galaxies are investigated through surface photometry using direct imaging. The department also has a strong CCD instrumentation program. Graduate students are extensively involved in many of these research programs. Students make use of observatory facilities in support of their own research.

## Admission to Graduate Study

All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. In addition, students must have an overall grade point average of at least 2.85 in the last 60 units of their undergraduate work and must have preparation in astronomy and/or related sciences substantially equivalent to that required for the bachelor's degree in astronomy at San Diego State University. Applicants transferring to San Diego State University must submit two or three letters of recommendation.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Astronomy:

- (1) Two sets of official transcripts from all postsecondary institutions attended (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) TOEFL score, if medium of instruction was in a language other than English;
- (4) Letters of reference (two or three);
- (5) Personal statement;
- (6) Application for Teaching Associate position or Graduate Assistantship (if desired).

Mail or deliver your complete admissions package to:

Department of Astronomy  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1221

### Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as specified in Part Two of this bulletin. If the student's undergraduate preparation is deficient, he/she will be required to take courses for the removal of the deficiency. These courses are in addition to the minimum of 30 units for the master's degree.

### Specific Requirements for the Master of Science Degree

#### (Major Code: 19111)

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

1. Complete the 15-unit core course curriculum (Astronomy 620, 630, 640, 660, and 680).
2. Complete at least 12 additional units of graduate level or approved 500 level courses in astronomy or related fields as approved by departmental committee.
3. Complete Astronomy 799A (Thesis, 3 units) and pass a final oral examination on the thesis.
4. Facility with a scientific computing language is required.

### Courses Acceptable on Master's Degree Program in Astronomy (ASTR)

#### UPPER DIVISION COURSE

#### ASTR 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

#### ASTR 600. Seminar (2 or 3)

Prerequisite: Consent of instructor.

An intensive study in advanced astronomy. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

#### ASTR 610. Binary Stars (3)

Prerequisite: Astronomy 450.

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

#### ASTR 620. Galactic Structure (3)

Prerequisite: Astronomy 450.

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

#### ASTR 630. Stellar Atmospheres and Interiors (3)

Prerequisites: Astronomy 440 and Mathematics 342A.

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

#### ASTR 640. Accretion Power and Radiation Processes (3)

Prerequisites: Astronomy 450 and Mathematics 342A.

Accretion processes in astrophysics; compact objects, spherical and disc accretion, interacting binary stars and active galactic nuclei. High energy radiation processes: bremsstrahlung, Compton and inverse Compton scattering and synchrotron emission.

#### ASTR 660. Galaxies and Cosmology (3)

Prerequisite: Astronomy 450.

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

#### ASTR 680. Astronomical Techniques (3) I

Prerequisites: Astronomy 350 and 450.

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

#### ASTR 797. Research (1-3) Cr/NC/RP

Prerequisite: Classified graduate standing.

Research in one of the fields of astronomy. Maximum credit six units applicable to a master's degree.

#### ASTR 798. Special Study (1-3) Cr/NC/RP

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

Individual study. Maximum credit six units applicable to a master's degree.

#### ASTR 799A. Thesis (3) Cr/NC/RP

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

#### ASTR 799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

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# Audiology

**OFFICE: Communications Clinic 118**  
**TELEPHONE: (619) 594-7746**  
**FAX: (619) 594-7109**  
<http://chhs.sdsu.edu/slhs/audmain.php>

In the School of Speech, Language, and Hearing Sciences  
In the College of Health and Human Services

**Director of School: Marilyn Newhoff, Ph.D.**

## Faculty

The following faculty members of the cooperating institutions participate in the Au.D. program. These faculty teach courses, provide clinic instruction, provide research experiences, and are available as members of joint doctoral committees and advisers for student doctoral projects.

### San Diego State University:

Steven J. Kramer, Ph.D., Professor of Speech, Language, and Hearing Sciences, Director of Program (Graduate Adviser)  
Carol L. Mackersie, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences  
Laura Dreisbach Hawe, Ph.D., Assistant Professor of Speech, Language, and Hearing Sciences  
Peter Torre, III, Ph.D., Assistant Professor of Speech, Language, and Hearing Sciences

### University of California, San Diego:

Director: Jeffrey Harris, M.D., Ph.D.  
Faculty: Benitez, Keithley, Mullen, Ryan, Virre

## Doctoral Program

## General Information

**(Major Code: 12202)**

A professional doctorate in audiology (Au.D.) is offered jointly by San Diego State University (SDSU) and the University of California, San Diego (UCSD). The Au.D. program is a four-year graduate degree program designed for individuals who intend to specialize in clinical practice and to meet professional standards requiring a clinical doctorate as the entry-level degree for a certified audiologist. Graduates of this program will have the knowledge base, research exposure, and advanced clinical skills to enter the workforce in any setting, and will be prepared to function as independent audiology professionals in the expanding health care arena. The program encompasses academic, clinic, and research experiences in audiology and otology through the combined resources from the School of Speech, Language, and Hearing Sciences at SDSU and the Division of Surgery (Otolaryngology) in the School of Medicine at UCSD.

## Admission to the Au.D. Program

Students will apply to the Au.D. joint doctoral program through SDSU. It is expected that students will come into this program from a variety of different science backgrounds, including speech, language, and hearing sciences, biological and physical sciences, engineering, psychology, nursing, or a pre-med curriculum. Applicants for admission to the Au.D. program must meet the general requirements for admission to both universities with classified graduate standing as outlined in the respective catalogs. Applicants must also meet the special requirements of this program. These include (a) overall grade point average (GPA) of 3.20 or better in undergraduate courses and in any graduate courses completed; (b) submission of scores on the

GRE with satisfactory performance on both quantitative and verbal portions of the examination; (c) prerequisite completion of at least one course in statistics, three courses in biological/physical sciences, two courses in behavioral/social sciences, and one course in American Sign Language. Deficiencies in these areas may be completed after admission to the program if approved by the admissions committee.

Applicants must submit transcripts of all post-secondary coursework, three letters of recommendation from former or current professors, supervisors, or other appropriate persons able to judge their academic potential, and an applicant essay (statement of purpose) indicating their interests and strengths relative to their career objectives. Details of these requirements are available on the school's Web site. Assuming that students meet the requirements for admission outlined above, each student admitted to the program will have a program advisor evaluate their preparation in view of their needs and career goals, as well as professional certification requirements.

Applicant files are reviewed as a group by an Admissions Committee composed of Au.D. program faculty from each campus. Other Au.D. program faculty may review files and make recommendations to the Admissions Committee. Given the limited number of spaces available (10 new admissions each year are anticipated, subject to available facilities), the Admissions Committee will select the best-qualified applicants to fill the available spaces. No minimum set of qualifications will guarantee an applicant admission to the program. The Admissions Committee will make recommendations for admission to the graduate deans from each campus.

**Application.** Students seeking admission to the Au.D. program should consult the school's Web site. All applications are done on-line. For additional information, write directly to the Au.D. Program Directors, School of Speech, Language, and Hearing Sciences (Mail Code 1518), San Diego State University, 5500 Campanile Dr., San Diego, CA 92182. A complete application requires the following:

- Appropriate applications (submitted on-line).
- Applicant Essay (details provided on the Web site).
- Transcripts of academic work completed.
- Results of Graduate Record Examination.
- Three letters of recommendation.

Students will be admitted to the Au.D. program only in the fall semester (first year is at SDSU). Complete applications must be received by January 20 to be considered for the program beginning in the following fall semester.

## Post Master's Degree Admissions

Students admitted to the Au.D. program with a master's degree in audiology will be expected to complete the four-year Au.D. curriculum. However, some students may have had a master's preparation in audiology in which some of the coursework was similar to some of the foundation courses in the Au.D. program. Upon entering the program, each individual will be assessed to determine competencies/knowledge in material that would put them on par with expectations for the Au.D. program. For some of the foundation core courses offered the first year at SDSU, e.g., Audiology 705, 710, 725, students may be given credit for the courses or be required to substitute a Doctoral Special Study (Audiology 798) course for one or more of these courses to ensure competencies or remediate deficiencies if approved by the program faculty. Credit for some of the first year clinic units may also be approved based on work experience; however, a full-complement of expected clinical skills must be demonstrated.

### Specific Requirements for the Au.D. Degree

Upon admission to the program, each student will be assigned a faculty adviser. The faculty adviser will help the student select a program of study to meet all program requirements. The Au.D. program is a four-year program, including summer semesters (summer semester between year 2 and year 3 may be optional if requirements satisfied in other ways). An exact unit minimum is not specified due to the mixing of semester units (SDSU) and quarter units (UCSD) and differences in clinical hours at different settings; however, the program is approximately 134 semester-equivalent course units. All students in the Au.D. program will fulfill the following requirements. Any alternative method of fulfilling these requirements requires advanced written permission from the program directors.

**Residency Requirements.** After formal admission to the Au.D. program, the student must complete a minimum of course hours equivalent to one year's full-time enrollment at each campus. The definition of residence must be in accord with the regulations of San Diego State University and the University of California, San Diego. The program is designed to be shared, as equally as possible, between the two campuses. The first year is entirely at SDSU, the second year is entirely at UCSD, and the third year will have options from both campuses. The fourth year of the program will be a full-time clinical externship at a program-approved clinic agency/site. Both campuses will share equally in the academic, clinic, and research components of the program.

**Course Requirements.** The program for each student will consist of 14 core courses, half of which are to be taken at each campus, and 12 elective courses, with a minimum of four to be taken at each campus. The student's faculty adviser must approve all courses.

**Clinic Requirements.** Each student will progress through a variety of clinical experiences involving patient assessment and management throughout their program of study. Clinic experiences will require concurrent enrollment in clinic courses appropriate for the campus in which they are doing the clinical work. These supervised clinical experiences are completed in the SDSU Audiology Clinic, UCSD Otolaryngology Clinics, and in community field sites. Clinic courses may be repeated as needed and require advisor approval prior to enrollment. Prior to the fourth year externship, each student will obtain approximately 500 hours of clinic experience. A minimum of 2000 clinical hours is required by the end of the program.

**Clerkship in Otolaryngology.** All students will have at least one quarter of a clinical rotation with otology staff associated with UCSD. Students will accompany one of the otology faculty during their clinics and receive training in one or more of the following areas; clinical otology, pre-and post-operative assessment of patients, pharmacology related to otology, design and implementation of clinical trials with balance disorders, and pediatric otology.

**Clinical Staffings.** In addition, all students will be required to regularly participate in formal clinical case study/staffing experiences. At SDSU, these clinical staffings include student and faculty presentations and discussions of interesting cases seen in their clinics. At UCSD, these staffings include, the Chairman's Conference, where Au.D. students/residents and medical staff discuss otological problem cases and disorders, and the Neurotology Conference, where UCSD and community physicians, and students/residents discuss cases dealing with neurological diseases and vestibular disorders.

**Fourth Year Externship.** The fourth year externship is a full time clinical experience in an approved agency/site. These externships may require a competitive interview process by the agency. Externship sites may be in other parts of the country. All students in their fourth year externship must also enroll in the on-line clinical seminar at SDSU each semester.

**Research Practicum Requirement.** Each student will spend at least two semesters or quarters participating in research being done by program faculty. Students are encouraged to spend time in two different laboratories (one on each campus) with different

methodologies. Students will not be conducting independent research, but will actively participate in data collection and analysis at the discretion of the lab director. Students must enroll in the research practicum course for the appropriate campus.

**Examinations.** All students in the program will be evaluated at the following levels:

**(1) First Year Evaluation:** Students must have achieved a 3.0 grade point average on all core and elective courses during the first year, and have appropriate clinical skills as determined by the student's clinic supervisors. The student's ability to integrate the academic material and clinic procedures appropriate for the end of the first year will be assessed through a First Year Qualifying Exam. This examination will be a written examination to be taken at the end of the spring semester. The First Year Qualifying Examination may be repeated once following additional directed study by the student's adviser. Students must pass the First Year Evaluation in order to enroll in second year courses.

**(2) Second Year Evaluation:** Students must have achieved a cumulative grade point average of 3.0 on all core and elective courses, and have appropriate clinical skills as determined by the student's clinic supervisors. The student's ability to integrate the academic and clinic procedures appropriate for the end of the second year will be assessed through a Second Year Qualifying Examination. This examination will be a written examination to be taken at the end of the spring semester. The Second Year Qualifying Examination may be repeated once following additional directed study by the student's adviser. Students must pass the Second Year Evaluation in order to enroll in third year courses.

**(3) Comprehensive Examination.** At the end of the third year, and after Advancement to Candidacy (see below), the student will take a Comprehensive Examination, which has an integrative written component and a practical component involving clinical procedures. The Comprehensive Examination must be passed before a student can register for the Externship.

**Advancement to Candidacy.** Candidates will be recommended for Advancement to Candidacy after successfully completing all course, laboratory rotation, and clinic requirements for Year 1 and Year 2 (with a minimum grade point average of 3.0), satisfactory performance on the first and second year evaluations, and approval of the doctoral project proposal. Students cannot enroll in the doctoral project course, take the comprehensive examination, or register for their externship until advanced to candidacy. The program's Executive Committee recommends students eligible for advancement to candidacy to the graduate deans of both institutions

**Doctoral Project.** Each student will complete an innovative doctoral project. The doctoral project can take the form of a number of different options, e.g., a research-based investigation, evidence-based position paper, critical literature review with applications to clinical problem solving, grant proposal, development of a clinical protocol based on published research findings, or other projects proposed by the student that are accepted by the committee. The project should be designed to allow an opportunity to demonstrate critical thinking on clinical issues. Each student will select a Doctoral Project Committee comprised of two Au.D. program faculty (one from each campus) and a faculty member external to the program. The chair of the committee can be from either campus. The Executive Committee will approve each student's Doctoral Project Committee. All doctoral projects will be written in a format approved by the student's Doctoral Project Committee. The student's final written document will be approved by the student's Doctoral Project Committee. Each student will enroll in the appropriate doctoral project course depending on the campus in which their committee chair resides.

**Award of the Degree.** The Doctor of Audiology (Au.D.) degree will be awarded jointly by the Regents of the University of California and the Trustees of The California State University in the names of both cooperating institutions.

## Financial Support

Funding for graduate students cannot be guaranteed, although every effort will be made to provide some financial support for as many students as possible, through graduate/teaching assistantships, research grants, clinical traineeships, and/or scholarships. Financial support will be awarded consistent with the policies of the two universities. Tuition and fees will be charged in accordance with the extant policies at the campus in which the student is matriculated in a given year.

## Courses Acceptable on Au.D. Degree Program in the School of Speech, Language, and Hearing Sciences (AUD)

### GRADUATE COURSES

#### AUD 696. Selected Topics in Audiology (1-3)

Prerequisite: Graduate standing.

Intensive study in specific areas of audiology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a master's degree.

#### AUD 700. Hearing Science (3)

Prerequisite: Admission to doctoral program.

Nature of sound and applications to hearing and speech, including acoustics, structure, and function of auditory system, and perception of sound.

#### AUD 701. Clinical Practice I (1-3)

One unit represents three hours per week.

Prerequisites: Credit or concurrent registration in Audiology 705 and 710.

Applications of clinical procedures to patient assessment. Includes computer-based simulated cases, clinical observations, and supervised patient care involving diagnostics and hearing aid evaluations at the on-campus audiology clinic. May be repeated. (Formerly numbered Communicative Disorders 545.)

#### AUD 705. Diagnostic Audiology I (3)

Two lectures and two hours of activity.

Prerequisite: Admission to doctoral program.

Theoretical bases and technical experience necessary to perform basic audiologic assessment, including otoscopy, pure-tone, masking, speech, and immittance measures, testing and patient counseling. Hands on experiences with different tests and equipment. Not open to students with credit in Communicative Disorders 542.

#### AUD 710. Hearing Amplification (3)

Prerequisite: Admission to doctoral program.

Hearing aid components and signal processing, electroacoustic analysis, prescriptive techniques, verification procedures, hearing aid orientation, follow-up and troubleshooting. (Formerly numbered Communicative Disorders 610.)

#### AUD 715. Diagnostic Audiology II (3)

Two lectures and two hours of activity.

Prerequisite: Audiology 705.

Advanced procedures, including video-otoscopy, cerumen management, multiple component tympanometry, tests for 8<sup>th</sup> nerve, non-organic, and central involvement, and calibration. Principles and procedures for otoacoustic emission measurements (OAEs). Pathologies as they relate to audiologic measures. (Formerly numbered Communicative Disorders 644.)

#### AUD 720. Auditory Evoked Potentials (3)

Prerequisites: Audiology 700 and 705.

Theoretical and clinical aspects of auditory evoked potentials, with particular emphasis on auditory brainstem response. Electrocochleography, middle latency responses, cortical auditory evoked potentials (N1-P2), and auditory event-related potentials (MNN, P300). (Formerly numbered Communicative Disorders 647.)

#### AUD 721. Clinical Case Studies and Staffings I (1)

Prerequisite: Concurrent registration in Audiology 701.

Presentations and discussion of clinical cases and issues relative to clinical practice. Students' clinical experiences are discussed relative to medical and audiological assessment and management.

#### AUD 725. Pediatric Audiology (3)

Prerequisites: Audiology 700 and 705.

Development of normal and abnormal auditory behavior, behavioral and physiological testing of infants and children, hearing screening for pre- and school-age children, educational audiology, auditory processing disorders, counseling of patient and family, and assistive listening devices. Not open to students with credit in Communicative Disorders 648.

#### AUD 795. Research Practicum (3) Cr/NC

Prerequisites: Admission to doctoral program and consent of instructor.

Participation in specific faculty research activities. Research methods and objectives of a specific research laboratory. Data collection and analysis.

#### AUD 798. Doctoral Special Studies (1-3) Cr/NC

Prerequisites: Admission to doctoral program and consent of instructor.

Individual study in field of specialization.

#### AUD 800. Instrumentation in Audiology/Hearing Science (3)

Two lectures and two hours of activity.

Prerequisites: Audiology 710 and 720.

Advanced concepts and hands-on experiences with different audiological instruments to improve diagnostic skills in behavioral and physiologic tests. Calibration techniques and instrumentation. Critical thinking, reasoning, and problem-solving skills pertaining to equipment use and testing parameters.

#### AUD 801. Clinical Practice II (1-3)

One unit represents three hours per week.

Prerequisites: Open to third year doctoral students and consent of instructor.

Diagnostics and hearing aid evaluations/ fittings in the on-campus audiology clinic. May be repeated. Maximum credit three units. (Formerly numbered Communicative Disorders 645.)

#### AUD 805. Seminar in Vestibular Physiology, Assessment, and Rehabilitation (3)

Prerequisite: Open to third year doctoral students.

Advanced physiology, principles, and procedures for balance system assessment. Posturography and rotation chair measures, and dynamic visual acuity testing. Discussion and integration of information from variety of tests as a basis for diagnosis, treatment, and rehabilitation. (Formerly numbered Communicative Disorders 653.)

#### AUD 810. Seminar in Amplification Research and Technology (3)

Prerequisite: Audiology 710.

Amplification, advances in hearing aid analysis, selection and verification techniques, advanced hearing aid signal processing strategies, programmable and digital technology, sensory aids for special applications. (Formerly numbered Communicative Disorders 620.)

### **AUD 815. Communication Disorders Across Lifespan and Cultures (3)**

Communication processes and disorders from infancy to elderly, including phonetics, phonology, speech, and language. Prepares audiologists to recognize a variety of communication disorders, and to learn how to apply screening instruments, in culturally sensitive ways, and to make appropriate referrals.

### **AUD 820. Aural Rehabilitation and Cochlear Implants (3)**

Prerequisite: Admission to doctoral program.

Human context of hearing impairment and management; possibilities and limitations of hearing aids, cochlear implants, speechreading and assistive devices in minimizing disability, and psychosocial factors that determine handicap and outcome of audiological intervention. (Formerly numbered Communicative Disorders 611.)

### **AUD 821. Clinical Case Studies and Staffings II (1)**

Prerequisite: Concurrent registration in Audiology 801 or 831.

Clinical cases and issues relative to clinical practice. Students' clinical experiences discussed relative to medical and audiological assessment and management.

### **AUD 825. Seminar in Professional Issues (3)**

Prerequisites: Audiology 701, 710, 715, 720, 725.

Ethical and legal issues, preferred practice standards, supervision, and private practice, employment and business consideration, including hearing aid dispensing. (Formerly numbered Communicative Disorders 670.)

### **AUD 830. Seminar in Contemporary Topics in Audiology and Hearing Science (3)**

Prerequisite: Open to third year doctoral students.

Audiology and hearing science. Reading and critiquing journal articles and data emerging from research laboratories.

### **AUD 831. Field Clinical Practice (3-6) Cr/NC**

One unit represents four hours per week.

Prerequisites: Open to third year doctoral students and consent of instructor.

Supervised practicum in one or more approved community agencies. May be repeated. (Formerly numbered Communicative Disorders 627.)

### **AUD 835. Psychoacoustics (3)**

Prerequisite: Admission to doctoral program.

Psychophysical concepts underlying clinical audiology. Psychoacoustic abilities of individuals with normal hearing and sensorineural hearing loss. Practical experience in conducting psychoacoustic tests. (Formerly numbered Communicative Disorders 640.)

### **AUD 871. Externship in Audiology (10) Cr/NC**

Prerequisites: Advancement to candidacy and concurrent registration in Audiology 891.

Full-time clinical externship at approved agency. Continuation and intensification of clinical experiences with reduced amount of direct supervision culminating in ability to work independently. May be repeated. Maximum credit 30 units.

### **AUD 891. On-Line Integrative Clinical Seminar (2) Cr/NC**

Prerequisites: Advancement to candidacy, consent of adviser, and concurrent registration in Audiology 871.

On-line discussion of clinical experiences and interesting cases. Maximum credit six units.

### **AUD 897. Independent Research (1-3) Cr/NC**

Prerequisite: Consent of adviser.

Research in audiology or hearing science. Maximum credit three units applicable to the audiology degree.

### **AUD 899. Doctoral Project (3) Cr/NC**

Prerequisite: Advancement to candidacy.

Individual investigation and preparation of the doctoral project for the audiology degree.

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# Biology

In the College of Sciences

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

## Faculty

Christopher C. Glembotski, Ph.D., Professor of Biology,  
Chair of Department  
J. David Archibald, Ph.D., Professor of Biology  
Sanford I. Bernstein, Ph.D., Professor of Biology  
(Graduate Adviser, Biology Ph.D. program)  
Annalisa Berta, Ph.D., Professor of Biology,  
Associate Chair of Department  
Richard L. Bizzoco, Ph.D., Professor of Biology  
Michael J. Buono, Ph.D., Professor of Biology  
Roger A. Davis, Ph.D., Professor of Biology  
Kathleen M. Fisher, Ph.D., Professor of Biology  
Janet Franklin, Ph.D., Professor of Biology  
Terrence G. Frey, Ph.D., Professor of Biology,  
Graduate Coordinator, Biology  
Stuart H. Hurlbert, Ph.D., Professor of Biology  
Stanley Maloy, Ph.D., Professor of Biology  
Leroy R. McClenaghan, Jr., Ph.D., Professor of Biology  
Kathleen L. McGuire, Ph.D., Professor of Biology  
Walter C. Oechel Ph.D., Professor of Biology  
(Graduate Adviser, Ecology Ph.D. program)  
Jacques Perrault, Ph.D., Professor of Biology  
Robert S. Pozos, Ph.D., Professor of Biology  
Roger A. Sabbadini, Ph.D., Professor of Biology  
Anca Mara Segall, Ph.D., Professor of Biology  
(Graduate Adviser, Microbiology)  
Michael G. Simpson, Ph.D., Professor of Biology

Mark A. Sussman, Ph.D., Professor of Biology  
Constantine Tsoukas, Ph.D., Professor of Biology  
(Graduate Adviser, Molecular Biology)  
Douglas H. Deutschman, Ph.D., Associate Professor of Biology  
Greg L. Harris, Ph.D., Associate Professor of Biology  
(Graduate Adviser, Physiology)  
Tod W. Reeder, Ph.D., Associate Professor of Biology  
Kathy S. Williams, Ph.D., Associate Professor of Biology  
Todd W. Anderson, Ph.D., Assistant Professor of Biology  
(Graduate Adviser, Ecology)  
César Arenas-Mena, Ph.D., Assistant Professor of Biology  
Andrew J. Bohonak, Ph.D., Assistant Professor of Biology  
Kevin Burns, Ph.D., Assistant Professor of Biology  
(Graduate Adviser, Evolutionary Biology)  
James Diffendorfer, Ph.D., Assistant Professor of Biology  
Matthew S. Edwards, Ph.D., Assistant Professor of Biology  
Marshal C. Hedin, Ph.D., Assistant Professor of Biology  
Brian T. Hentschel, Ph.D., Assistant Professor of Biology  
Kevin A. Hovel, Ph.D., Assistant Professor of Biology  
Scott Kelley, Ph.D., Assistant Professor of Biology  
David Lipson, Ph.D., Assistant Professor of Biology  
Helen M. Regan, Ph.D., Assistant Professor of Biology  
Forest Rohwer, Ph.D., Assistant Professor of Biology  
Elizabeth R. Waters, Ph.D., Assistant Professor of Biology  
Robert W. Zeller, Ph.D., Assistant Professor of Biology

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## Associateships and Assistantships

Graduate teaching associateships and graduate assistantships in biology are available to a limited number of qualified students. Application blanks and additional information may be secured from the graduate coordinator in biology.

## General Information

The Department of Biology offers graduate study leading to the degrees of Master of Arts and Master of Science in biology and the Master of Science degree in microbiology. In addition, the Department of Biology offers a joint program leading to the Ph.D. with the University of California, San Diego, and the ecology group offers a joint program leading to the Ph.D. with the graduate group in ecology at the University of California, Davis.

A modern life science building provides facilities for graduate study in the biological sciences. Additional facilities available in the community include the San Diego Zoo hospital, the United States Department of Agriculture, Fish and Game Commission, the Hubbs-Sea World Research Institute, the San Diego Natural History Museum, and the Naval Underseas Center. San Diego State University also operates a marine laboratory on Mission Bay and has access to research sites in the Chihuahu Valley, Fortuna Mountain, and Temecula (Riverside County).

## Section I. Master's Degree Programs

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

## Admission to Graduate Study

In addition to the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, a student must satisfy the following requirements before he/she will be considered for recommendation to enter the masters program.

1. Meet the requirements deemed equivalent to a baccalaureate degree in biology or microbiology at San Diego State University.
2. Have a grade point average of 2.85 or better on work taken for the baccalaureate degree.
3. Have a grade point average of 3.0 or better in upper division courses (at least 24 units) acceptable for the major.

4. Meet biology departmental expectations on the GRE General Test.
5. Be considered as capable of graduate work in the biological sciences by two letters of reference submitted to the biology graduate coordinator.
6. Be accepted by a research program and be sponsored by a faculty member of the area.

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

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

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Biology:

- (1) Two sets of official transcripts (in sealed envelopes) from each issuing institution;
- (2) Personal statement;
- (3) Resume or curriculum vitae;
- (4) Three letters of recommendation in sealed and signed envelopes (form available online or may be obtained from department).

Mail or deliver your complete admissions package to:

Department of Biology  
Graduate Coordinator  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4614

## Biology

### Advancement to Candidacy

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

### Specific Requirements for the Master of Arts Degree in Biology

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of 30 units of upper division and graduate courses selected, with the approval of the graduate coordinator, from the biological sciences as listed below, or from closely related fields. At least 15 of the units selected must be in 600- and 700-numbered courses, including Biology 799A, Thesis. A maximum of six units of the required 30 units may be selected from acceptable courses offered in the College of Education. A reading knowledge of scientific French, German, Russian, or Spanish, and a final oral examination in the field of the thesis and its implications in the broad fields of biology are also required.

### Specific Requirements for the Master of Science Degree in Biology

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of 30 units of upper division and graduate courses selected, with the approval of the graduate coordinator, from the biological sciences as listed below, or from closely related fields. At least 15 of the units selected must be in 600- and 700-numbered courses, including Biology 799A, Thesis. A maximum of six units of the required 30 units may be selected from acceptable courses offered in the College of Education. A final oral examination in the field of the thesis and its implication in the broad fields of biology is also required.

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

### Master's Degree Research Programs

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

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

In addition to the emphases described above, a number of faculty have active research programs in marine biology and accept graduate students in this area.

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

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

**Physiology (Major Code: 04101):** Research opportunities are offered by faculty in the cell and molecular biology, ecology, and evolutionary biology program areas. Subareas of interest include cardiovascular, cellular, molecular, physiological plant ecology, and comparative physiology. Requirements for this program vary depending on the program area of the faculty adviser and prospective applicants are encouraged to contact potential faculty advisers or the program adviser before applying. Program adviser, Harris.

## Microbiology

### Advancement to Candidacy

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

## Specific Requirements for the Master of Science Degree in Microbiology

(Major Code: 04111)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of 30 units of upper division and graduate courses selected, with the approval of the graduate adviser, from the biological sciences and closely related fields. All students entering the Master of Science program in microbiology will be required to take an advanced course in the molecular biology of microbes.

Not less than 18 units must be selected from courses in the area of microbiology. Among the 600- and 700-numbered courses selected, the student's program must include Biology 799A, Thesis. A maximum of six units of the required 30 units may be selected from acceptable courses offered in other related areas, including the College of Education and the Graduate School of Public Health.

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

### Section II. Doctoral Programs

San Diego State University is in the process of securing approval for a joint Ph.D. program in Evolutionary Biology with the University of California, Berkeley. For further information, contact the Department of Biology.

## Biology (Cell and Molecular)

(Major Code: 04111) <http://www.bio.sdsu.edu/cmb/JointDoc.html>

The cooperating faculties of the Departments of Biology at the University of California, San Diego and at San Diego State University offer a joint doctoral program in biology (cell and molecular). The research interests of the participating faculty members cover a wide range of biological problems.

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

**Biological structures:** J. Love, T. Frey.

**Cardiovascular molecular biology:** R. Davis, C. Glembotski, S. Krisans, R. Sabbadini, M. Sussman.

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

**Gene expression:** G. Harris, W. Stumph, R. Zeller, J. Zyskind.

**DNA recombination and chromosome structure:** A. Segall.

**Membrane transport and energy transduction:** T. Frey.

**Molecular biology of viruses and bacteriophage:** J. Perrault, F. Rohwer.

**Molecular evolution:** C. Arenas-Mena, S. Kelley, E. Waters.

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

## Program

### Undergraduate Preparation for Admission

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

### Application

Students applying for admission to the joint doctoral program in biology should electronically submit the University application available at <http://www.csummentor.edu>.

Applicants must have the GRE results forwarded by the Educational Testing Service (official copy requested at time of test; SDSU code 4682). The general GRE is required. The TOEFL score is required if postsecondary instruction was in a language other than English.

The following materials should be submitted as a complete package directly to the Department of Biology:

- (1) Two sets of official transcripts (in sealed envelopes) of all previous academic work;
- (2) Statement of professional goals;
- (3) Resume or curriculum vitae;
- (4) Department application and residence form ([http://www.bio.sdsu.edu/cmb/phd\\_app\\_proced.html](http://www.bio.sdsu.edu/cmb/phd_app_proced.html), or may be obtained from the department);
- (5) Three letters of recommendation in sealed and signed envelopes (form available online or may be obtained from the department).

Mail or deliver your complete admissions package to:  
Biology Joint Doctoral Program Coordinator  
Department of Biology  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4614

### Residency Requirements

After formal admission to the joint doctoral program, the student must spend at least one academic year in full-time residence at each of the two campuses. The definition of residence must be in accord with the regulations of the University of California, San Diego, and San Diego State University.

### Advising Committee

Upon admission to the program the joint doctoral graduate adviser will establish an advising committee for the student. This committee will consist of three faculty members. In consultation with the student, the committee will develop the student's course of study and will establish the student's joint qualifying committee.

### Course Requirements

There is no specific number of courses required for the doctoral program in biology, except a one-year graduate course including genetics, cellular and molecular biology. Prior to taking the qualifying

examination, every student is expected to have a firm understanding of modern biological principles. Usually students will be expected to complete a set of at least four laboratory rotations, and such rotations may be fulfilled on either campus.

Coursework may be selected from offerings at either UCSD or SDSU.

## Qualifying Examinations

### Qualifying Committee

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

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

### Qualifying Examination

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

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

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

The qualifying committee may specify a course of study to strengthen any weaknesses identified during the qualifying examination. Upon successful completion of the qualifying examination the student must make application to the office of Graduate Studies at UCSD for advancement to candidacy. Upon payment of the candidacy fee to UCSD, and after approval by the graduate deans on both campuses, the office of Graduate Studies at UCSD will notify the student of advancement to candidacy.

### Joint Dissertation Committee

After a student is admitted to candidacy, a dissertation committee consisting of at least five faculty members is nominated by the graduate advisers and appointed jointly by the Graduate Deans at SDSU and UCSD. The student's dissertation research adviser will be the chair of this committee. At least one member of this committee must be from SDSU and one member must be a full-time faculty member from UCSD.

### Dissertation

Following successful completion of the qualifying examination, the major remaining requirement for the Ph.D. degree will be satisfactory completion of a dissertation consisting of original and significant research carried out under the guidance of a faculty member. Requirements currently in force at UCSD and SDSU must be met for completing and filing the dissertation.

### Award of the Degree

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

### Financial Support

The Department of Biology at SDSU endeavors to provide adequate support for all students so that full time can be devoted to research, training, and study. During 2003-04, support package included tuition, a stipend (approximately \$17,200-\$19,000), health coverage, and funds for research supplies. All students are required to obtain teaching experience, which is normally accomplished by appointment as a graduate teaching associate.

## Faculty

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

### San Diego State University:

Graduate Adviser: S. Bernstein

Faculty: Arenas-Mena, Bernstein, Bizzoco, Davis, Frey, Glembotski, Harris, Kelly, Krisans, Love (Chemistry and Biochemistry), Maloy, McGuire, Paolini, Perrault, Rohwer, Sabbadini, Scott (Psychology), Segall, Stumph (Chemistry and Biochemistry), Sussman, Tsoukas, Waters, Zeller, Zyskind.

### University of California, San Diego:

Graduate Adviser: S. Brody

Faculty: All UCSD Biology Faculty

## Ecology

(Major Code: 04201)

<http://www.bio.sdsu.edu/ecologyjd/ecology.docprogram.html>

The cooperating faculties of the Department of Biology, San Diego State University and the Graduate Group in Ecology, University of California, Davis offer a joint program in ecology leading to the Ph.D. The research interests of the participating faculty members cover a wide range of problems and represent the interdisciplinary nature of modern biology.

At SDSU, the research projects are underway concerning:

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

**Physiological ecology:** Effects of global change (elevated CO<sub>2</sub> and climate change) on the structure and functioning of terrestrial ecosystems, including local chaparral, deserts, Alaska's North Slope, and vegetation near CO<sub>2</sub>-emitting springs. Comparative and ecological physiology of vertebrates.

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

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

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

## Program

### Undergraduate Preparation for Admission

Applicants for admission to the doctoral program must present evidence of adequate preparation and capacity for advanced work in ecology. Preparation should include a strong background in biology, physics, chemistry, and mathematics. Applicants must have a bachelor's degree from an accredited college or university. Acceptance of a student into the joint program by each institution depends on meeting the standards of admission of the respective institutions and by available facilities for research and instruction.

### Application

Application for admission must be made simultaneously to San Diego State University and the University of California, Davis. A complete application requires:

The appropriate application form.

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

Transcripts of academic work already completed.

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

### Residency Requirements

After formal admission to the joint doctoral program, the student must spend at least one academic year in full-time residence on each of the two campuses. The definition of residence must be in accord with the regulations of the University of California, Davis, and San Diego State University.

### Advising Committee

Upon admission to the program, the doctoral graduate advisers of the two institutions will establish an advising committee for the student. This committee will consist of three faculty members chosen jointly from the two cooperating institutions. In consultation with the student, the committee will develop the student's course of study and will establish the student's joint qualifying committee. At least one member of the advising committee must be from SDSU and one from UCD.

### Course Requirements

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

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

## Qualifying Examinations

### Qualifying Committee

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

The qualifying committee will conduct an oral comprehensive qualifying examination, which will evaluate the student's understanding of modern biological principles. The examination will focus on principles of ecology, research methods, and three areas related to the major research interest of the student. The purpose of this examination is to permit the student to demonstrate competence not only in the major research field but also in related areas of ecology.

The joint qualifying committee may specify a course of study to strengthen any weaknesses identified during the qualifying examination. Upon successful completion of the qualifying examination, the student must make application to the Graduate Division at UCD for advancement to candidacy. Upon payment of the candidacy fee to UCD, and after approval by the graduate deans on both campuses, the Graduate Division at UCD will notify the student of advancement to candidacy.

### Joint Dissertation Committee

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

### Dissertation

Following successful completion of the qualifying examination, the major remaining requirement for the Ph.D. degree will be satisfactory completion of a dissertation consisting of original and significant research carried out under the guidance of a faculty member. Requirements currently in force at UCD and SDSU must be met for completing and filing the dissertation.

### Award of the Degree

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

### Financial Support

The Department of Biology at SDSU endeavors to provide adequate support for all students so that full time can be devoted to research training and study. Support includes tuition, a stipend, and funds for research supplies. All students are required to obtain teaching experience, which is normally accomplished by appointment as a graduate teaching associate.

## Faculty

### Graduate Advisers:

San Diego State University: W. Oechel

University of California, Davis: E. Caswell-Chen

**SDSU Faculty:** Anderson, Deutschman, Diffendorfer, Edwards, Franklin, Hentschel, Hovel, Hurlbert, Lipson, McClenaghan, Oechel, Regan, K. Williams

## **Courses Acceptable on Master's and Doctoral Degree Programs in Biology (BIOL)**

### **UPPER DIVISION COURSES**

**Writing Requirements:** Completion of the English Placement Test and Writing Competency requirements is a prerequisite for all upper division biology courses numbered 350 and above.

#### **BIOL 508. Coevolution (3)**

Prerequisites: Biology 352 and 354.

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

#### **BIOL 509. Evolutionary Biology (3)**

Two lectures and two hours of activity.

Prerequisite: Biology 352.

Evolutionary biology including genetics of populations, speciation, systematic biology, adaptation, role of development in evolution, evolution of behavior, and comparative biology. Evolutionary biology as the central organizing principle of biology.

#### **BIOL 512. Evolution and Ecology of Marine Mammals (3)**

Two lectures and three hours of laboratory.

Prerequisites: Biology 352 and 354.

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

#### **BIOL 514. Biology of the Algae (4)**

Three lectures and three hours of laboratory.

Prerequisites: Biology 201B and six units of upper division coursework in the major.

Evolution, life histories, morphology, physiology, and ecology of micro and macro algae, with attention to both marine and freshwater taxa, and of sea-grasses.

#### **BIOL 515. Marine Invertebrate Biology (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 201B. Strongly recommended: Completion of three to six upper division units in the major.

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

#### **BIOL 517. Marine Ecology (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 354.

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

#### **BIOL 519. Aquaculture (3)**

Prerequisite: Biology 201B. Strongly recommended: Completion of three to six upper division units in the major.

Principles and practices of the farming of aquatic organisms.

#### **BIOL 520. Ichthyology (4)**

Three lectures and three hours of laboratory.

Prerequisite: Biology 201B. Strongly recommended: Completion of three to six upper division units in the major.

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

#### **BIOL 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.

#### **BIOL 521L. Advanced Microbiology Laboratory (3)**

One lecture and six hours of laboratory.

Prerequisites: Biology 350, 366, 366L, and credit or concurrent registration in Biology 521 or 584. Strongly recommended: Credit or concurrent registration in an upper division writing course.

Procedures and methods for isolation, characterization and identification of prokaryotes from soil, water and humans; includes both pathogenic and non-pathogenic prokaryotes.

#### **BIOL 523. Herpetology (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 201B. Recommended: Biology 352.

Evolution, systematics, distribution, and ecology of amphibians and reptiles of the world.

#### **BIOL 524. Ornithology (4)**

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

Prerequisite: Biology 201B. Strongly recommended: Completion of three to six upper division units in the major.

Study and identification of birds, especially those of the Pacific Coast and the San Diego region.

#### **BIOL 525. Mammalogy (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 201B. Strongly recommended: Completion of three to six upper division units in the major.

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

#### **BIOL 526. Terrestrial Arthropod Biology (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 201B. Strongly recommended: Biology 352 and completion of three to six upper division units in the major.

Structure, function, behavior, ecology, evolution, and relationships of major groups of terrestrial arthropods, including insects, arachnids, and myriapods. Identification and natural history of southern California diversity.

#### **BIOL 530. Plant Systematics (4)**

Two lectures and six hours of laboratory, field trips.

Prerequisite: Biology 201B. Strongly recommended: Completion of three to six upper division units in the major.

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

#### **BIOL 531. Taxonomy of California Plants (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 201B. Strongly recommended: Completion of three to six upper division units in the major.

Fundamentals of plant taxonomy with emphasis on identification of plants native and naturalized to California. Plant collecting techniques. Field trips are required.

#### **BIOL 533. Plant Structure and Function (3)**

Two lectures and three hours of laboratory.

Prerequisite: Biology 201B. Strongly recommended: Completion of three to six upper division units in the major.

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.

#### **BIOL 535. Plant Ecology (4)**

Three lectures and three hours of laboratory.

Prerequisite: Biology 201B. Strongly recommended: Completion of three to six upper division units in the major.

Plant adaptation and response to living and non-living environment including aspects of plant evolution, demography, ecophysiology community and ecosystem dynamics and soil-plant relationships. Terrestrial systems emphasized.

**BIOL 540. Conservation Ecology (3)**

Two lectures and three hours of laboratory.

Prerequisite: Biology 354.

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

**BIOL 541. Ecology of Fishes and Fisheries Biology (3)**

Two lectures and three hours of laboratory.

Prerequisite: Biology 354. Recommended: Biology 520.

Ecology of fishes, including environmental constraints, habitats, feeding, behavior, growth, reproduction, biotic interactions, population dynamics and assemblage structure. Fisheries biology concepts, including stock recruitment models, climates and fisheries, density dependence and population regulation, and populations dynamics theory.

**BIOL 549. Microbial Genetics and Physiology (3)**

Prerequisite: Biology 350 or 366.

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

**BIOL 551. Recombinant DNA (3)**

Prerequisites: Biology 350, 366, 366L, Chemistry 365, and credit or concurrent registration in Biology 467 or 549.

Theory and practice of recombinant DNA techniques.

**BIOL 552. Advanced Cell and Molecular Biology Laboratory (3)**

Nine hours of laboratory.

Prerequisite: Biology 366L. Credit in Chemistry 467L.

Laboratory experience for advanced undergraduates utilizing cell and molecular biological techniques. Independent research project guided by instructor.

**BIOL 554. Molecular Virology (3)**

Prerequisites: Biology 366 and Chemistry 365. Credit or concurrent registration in Biology 467 or 549.

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

**BIOL 555. Principles of Electron Microscopy (1)**

Prerequisites: Biology 201B and Physics 180B.

Principles of scanning and transmission electron microscopy including theoretical basis of sample preparation.

**BIOL 556. Scanning Electron Microscopy Laboratory (2)**

Six hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 555.

Biological specimen preparation and operation of scanning electron microscope.

**BIOL 557. Transmission Electron Microscopy Laboratory (3)**

One lecture and six hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 555.

Biological sample preparation and operation of transmission electron microscope.

**BIOL 560. Animal Physiology (3)**

Prerequisites: Biology 201A, 201B; Chemistry 365; Physics 180B, 182A, and 182B.

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

**BIOL 561. Radiation Biology (3)**

Prerequisites: Biology 100 or 201A and 201B; Physics 180B, 182A, and 182B. Recommended: Biology 366.

Principles underlying radiological reactions of ionizing radiations. Effects of ionizing radiations at the biochemical, cell, organ, and organism levels.

**BIOL 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.

**BIOL 563. Plant Physiology (3)**

Prerequisites: Biology 201B and Chemistry 365.

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

**BIOL 565. Human Genetics (3)**

Prerequisites: Biology 352 and Chemistry 365. Recommended: Credit or concurrent registration in Biology 366.

Pedigree analysis, gene mapping, cytogenetic and molecular analysis of inherited disease and genetically controlled phenomena in humans.

**BIOL 569. Molecular Pharmacology (3)**

Prerequisite: Biology 366.

Molecular mechanisms of drug action emphasizing pharmacokinetics, drug-receptor theory, signal transduction, physiological effects of drugs on nervous cardiovascular and endocrine systems. Includes discussion of molecular approaches to rational drug design, development, and testing in the pharmaceutical industry.

**BIOL 570. Neurobiology (3)**

Prerequisite: Biology 366 or 590 or Psychology 260.

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

**BIOL 575. Molecular Basis of Heart Disease (3)**

Prerequisite: Biology 366 or 590.

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

**BIOL 576. Developmental Biology (3)**

Prerequisite: Biology 366. Strongly recommended: Biology 467.

Fundamental processes of development from fertilized egg to organism. Emphasis on cellular and molecular mechanisms common to development of metazoan organisms.

**BIOL 577. Embryology (4)**

Two lectures and six hours of laboratory.

Prerequisites: Biology 201A and 201B. Strongly recommended: Completion of three to six upper division units in the major.

Studies in comparative gametogenesis, morphogenesis, and reproductive physiology.

**BIOL 584. Medical Microbiology (3)**

Prerequisites: Biology 350 and 366.

Major bacterial and viral pathogens; molecular mechanisms of pathogenesis, microbial toxins and antimicrobial agents; immune response to microbial infections; biochemical and molecular diagnostics.

**BIOL 585. Cellular and Molecular Immunology (3)**

Prerequisites: Biology 366. Recommended: Credit or concurrent registration in Biology 467 and Chemistry 467L.

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

### **BIOL 588. Parasitology (2)**

Prerequisite: Biology 201B. Strongly recommended: Completion of three to six upper division units in the major.

Study of animal parasites with special reference to those of humans.

### **BIOL 588L. Parasitology Laboratory (2)**

Six hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 588.

Examination of animal parasites including identification of important human parasites; collection and preservation of local forms. (Formerly the laboratory portion of Biology 588.)

### **BIOL 590. Physiology of Human Systems (4)**

Three lectures and one hour of discussion.

Prerequisites: Chemistry 365, Physics 180B, 182B; or for the bioengineering emphasis: Physics 195, 196, 197. Recommended: Biology 366.

Human physiology presented at both cellular and organ system levels; neurophysiology, muscle physiology, cardiovascular physiology and respiration, kidney function, hormone function and reproduction. For students majoring in a natural science or pre-professional studies.

### **BIOL 594. Biotechnology Research Rounds (2)**

Prerequisites: Biology 366 and credit or concurrent registration in Biology 467.

Latest research methods in the biotechnology community. Speakers from local biotechnology companies and research institutes will discuss the power and limitations of current research methods being applied to develop new therapeutics. Evaluation of approaches, results, and utility of these technologies.

### **BIOL 595. Computers in Biomedical Research (3)**

Prerequisite: Biology 366 or 590. Recommended: Computer Science 107.

Application of micro- and minicomputers to tasks encountered by biomedical scientists in research laboratories (data acquisition and reduction, experiment control) and by physicians in medical care delivery (noninvasive imaging, clinical laboratory automation, patient file processing).

### **BIOL 596. Special Topics in Biology (1-4)**

Prerequisite: Consent of instructor.

Advanced selected topics in modern biology. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree. Additional units acceptable with the approval of the graduate adviser.

### **BIOL 597A. Univariate Statistical Methods in Biology (3)**

Two lectures and three hours of laboratory.

Prerequisite: Biology 350 or 352 or 354 or 366.

Application of univariate statistical techniques in biological sciences.

## GRADUATE COURSES

### **BIOL 600. Seminar (2-3)**

Prerequisite: Consent of instructor.

An intensive study in advanced biology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **BIOL 602. Experimental Design (4)**

Two lectures and six hours of laboratory.

Prerequisite: One semester of statistics.

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

### **BIOL 604. Seminar in Aquatic Ecology (2)**

Prerequisite: Biology 354.

Ecological concepts as applied to the fresh water and marine environment. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

### **BIOL 624. Population Genetics (3)**

Prerequisite: Biology 352.

Theoretical and applied population genetics, including genetic diversity in natural populations, random drift, mutation, gene flow, natural selection, nucleotide variation and quantitative genetics.

### **BIOL 645. Theory and Principles of Ecology (3)**

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

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

### **BIOL 680. Seminar in Population Genetics (2)**

Prerequisite: Biology 352.

Topics in population genetics such as effective population size, population subdivision, gene flow and natural selection. Theoretical expectations, empirical data analysis and project design.

### **BIOL 688. Seminar in Terrestrial Ecology (2)**

Prerequisite: Biology 354.

Ecological concepts as applied to the terrestrial environment. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

### **BIOL 694. Advanced Topics in Virology (1-4)**

Prerequisite: Biology 554.

May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

### **BIOL 696. Advanced Topics in Biology (1-3)**

Prerequisite: Consent of instructor.

Intensive study in specific areas of biology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **BIOL 735. Seminar in Biogeography (2)**

Prerequisite: Biology 354.

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

### **BIOL 740. Phylogenetic Systematics (3)**

Two lectures and three hours of laboratory.

Prerequisite: Biology 354.

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

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

Prerequisites: Biology 354 and consent of instructor.

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

### **BIOL 770. Seminar in Systematics and Evolution (2-3)**

Prerequisite: Consent of instructor.

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

**BIOL 797. Research (1-3) Cr/NC/RP**

Research in one of the fields of biology. Maximum credit six units of 797 and 798 applicable to a master's degree.

**BIOL 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units of 797 and 798 applicable to a master's degree.

**BIOL 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**BIOL 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.

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

**BIOL 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Independent investigation in the general field of the dissertation.

**BIOL 899. Doctoral Dissertation (1-15) Cr/NC/RP**

Prerequisite: An officially constituted dissertation committee and advancement to candidacy.

Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

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# Molecular Biology

## Faculty

Greg L. Harris, Ph.D., Associate Professor of Biology  
(Molecular Biology Institute Director)

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

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

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

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

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

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

Barbara B. Hemmingsen, Ph.D., Professor of Biology

Stanley Maloy, Ph.D., Professor of Biology

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

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

Jacques Perrault, Ph.D., Professor of Biology

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

Anca Mara Segall, Ph.D., Professor of Biology

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

Mark A. Sussman, Ph.D., Professor of Biology

Constantine Tsoukas, Ph.D., Professor of Biology (Graduate Adviser)

P.J.E. (Jenny) Quintana, Ph.D., Associate Professor of Public Health

César Arenas-Mena, Ph.D., Assistant Professor of Biology

Scott Kelley, Ph.D., Assistant Professor of Biology

John J. Love, Ph.D., Assistant Professor of Chemistry

Shelli R. McAlpine, Ph.D., Assistant Professor of Chemistry

Forest Rohwer, Ph.D., Assistant Professor of Biology

Robert W. Zeller, Ph.D., Assistant Professor of Biology

## Adjunct Faculty

Ashley J. Birkett, Ph.D., Apovia Incorporated

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

Stanley G. Bower, Ph.D., Kelco Biopolymers

Stanley T. Croke, M.D., Ph.D., Isis Pharmaceuticals

Martin Gore, Ph.D., Arena Pharmaceuticals, Inc.

Nancy E. Harding, Ph.D., Kelco Biopolymers

Greg Kelner, Ph.D., Arena Pharmaceuticals

Brett P. Monia, Ph.D., Isis Pharmaceuticals

Gregor Zlokarnik, Ph.D., Aurora Biosciences

## General Information

The Molecular Biology Institute (MBI) administers the Master of Arts and Master of Science degrees in biology with an emphasis in molecular biology. The MBI is currently composed of members from the Departments of Biology, Chemistry and Biochemistry, and the Graduate School of Public Health, and is designed to serve these departments in the coordination, support, and enhancement of research and training in the molecular biological sciences.

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

## Admission to Graduate Study

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

In addition to the general requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin, a student must satisfy the following admission requirements before being recommended for admission.

1. Possess a bachelor's degree with a major in a biological or physical science equivalent to that offered at San Diego State University.
2. Have a grade point average of 2.85 or better in work taken for the baccalaureate degree.
3. Meet biology departmental expectations on the GRE General Test.
4. Supply two letters of reference that describe the applicant's potential for graduate work.

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

## Advancement to Candidacy

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

## Specific Requirements for the Master of Arts or Master of Science Degree

**(Major Code: 04161)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of 30 units of 500-level and above courses selected, with the approval of the MBI graduate adviser. A list of suggested courses is presented on the following page. All students entering the Master of Science program in molecular biology will be required to take an advanced course in molecular biology. At least 15 units of the courses selected must be in 600- and 700-numbered courses including 799A, Thesis. The student must complete at least three units of Molecular Biology 601 and six units of Molecular Biology 610. With the approval of the graduate adviser of molecular biology, a student may substitute for Molecular Biology 610 another 600 or 700 numbered course. A final oral examination on the thesis will be administered by the thesis committee.

## Courses Acceptable for the Emphasis in Molecular Biology

### UPPER DIVISION COURSES

#### Biology (BIOL)

- BIOL 549. Microbial Genetics and Physiology (3)  
 BIOL 551. Recombinant DNA (3)  
 BIOL 554. Molecular Virology (2)  
 BIOL 555. Principles of Electron Microscopy (1)  
 BIOL 556. Scanning Electron Microscopy Laboratory (2)  
 BIOL 557. Transmission Electron Microscopy Laboratory (3)  
 BIOL 561. Radiation Biology (3)  
 BIOL 563. Plant Physiology (3)  
 BIOL 569. Molecular Pharmacology (3)  
 BIOL 570. Neurobiology (3)  
 BIOL 575. Molecular Basis of Heart Disease (3)  
 BIOL 577. Embryology (4)  
 BIOL 584. Medical Microbiology (2)  
 BIOL 585. Cellular and Molecular Immunology (3)  
 BIOL 590. Physiology of Human Systems (4)  
 BIOL 595. Computers in Biomedical Research (3)  
 BIOL 596. Special Topics in Biology (1-4)  
 BIOL 597A. Univariate Statistical Methods in Biology (3)

#### Chemistry (CHEM)

- CHEM 510. Advanced Physical Chemistry (3)  
 CHEM 550. Instrumental Methods of Chemical Analysis (2)  
 CHEM 560A-560B. General Biochemistry (3-3)  
 CHEM 567. Biochemistry Laboratory (3)  
 CHEM 596. Advanced Special Topics in Chemistry (1-3)

### GRADUATE COURSES

#### Biology (BIOL)

- BIOL 600. Seminar (2-3)  
 BIOL 694. Advanced Topics in Virology (1-4)  
 BIOL 696. Advanced Topics in Biology (1-3)  
 BIOL 797. Research (1-3) Cr/NC/RP  
 BIOL 798. Special Study (1-3) Cr/NC/RP

#### Chemistry (CHEM)

- CHEM 711. Chemical Thermodynamics (3)  
 CHEM 712. Chemical Kinetics (3)  
 CHEM 751. Separations Science (3)  
 CHEM 762. Enzymology (2)  
 CHEM 763. Cellular Regulation (2)  
 CHEM 790. Seminar (1-3)  
 CHEM 791. Research Seminar (1)  
 CHEM 792. Bibliography (1)  
 CHEM 797. Research (1-3) Cr/NC/RP  
 CHEM 798. Special Study (1-3) Cr/NC/RP

### GRADUATE COURSES IN MOLECULAR BIOLOGY (M BIO)

#### M BIO 600. Seminar in Molecular Biology (1-3)

Prerequisite: Consent of instructor.

Evaluation of current literature in molecular biology. May be repeated with new content. Maximum credit six units applicable to a master's degree.

#### M BIO 601. Colloquium in Molecular Biology Research (1) Cr/NC/RP

Recent research advances in selected areas of modern molecular biology presented by faculty of the Molecular Biology Institute and established outside investigators. May be repeated with new content. Open only to students admitted to the molecular biology program or by permission of the graduate adviser for molecular biology. Maximum credit six units, three of which are applicable to a master's degree.

#### M BIO 610. Advanced Topics in Molecular and Cell Biology (1-4)

Prerequisite: Graduate standing in a life or physical science.

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

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# Biomedical Quality Systems

In the Center for Biopharmaceutical and Biodevice Development  
and the College of Sciences

OFFICE: Physical Sciences 101  
TELEPHONE: (619) 594-6030  
FAX: (619) 594-6132  
E-MAIL: [cbbd@sciences.sdsu.edu](mailto:cbbd@sciences.sdsu.edu)  
<http://www.cbbd.sdsu.edu/regaffairs>

## Faculty Members of the Center for Biopharmaceutical and Biodevice Development

\*A. Stephen Dahms, Ph.D., Professor of Chemistry, Director, Center for Biopharmaceutical and Biodevice Development

\*Larry E. Gundersen, Ph.D., Senior Staff Scientist (equivalent rank of Professor), Director, Regulatory Affairs Program, Center for Biopharmaceutical and Biodevice Development

\*Robert Wang, Ph.D., Senior Staff Scientist (equivalent rank of Professor), Director, Corporate Affairs, Associate Director, Center for Biopharmaceutical and Biodevice Development

## Faculty Members of the California State University Program for Education and Research in Biotechnology

\*E. Dale Sevier, Ph.D., Senior Staff Scientist (equivalent rank of Professor), Director, Workforce Development and Operations, California State University Program for Education and Research in Biotechnology

\*Serves on the Faculty Governing Board which makes recommendations on admissions and curriculum.

## General Information

The Center for Biopharmaceutical and Biodevice Development offers an interdisciplinary advanced degree program that focuses on training students in areas related to development, manufacturing, production, processing, and marketing of biotechnological, biopharmaceutical, pharmaceutical, in vitro diagnostic, and medical device products. The Center integrates faculty and programs from various departments. The Center addresses research and workforce needs of companies as they make the transition from research and development to manufacturing and production, including the legal, ethical, and regulatory elements that both guide and restrict the industry.

## Master of Science Degree in Biomedical Quality Systems

(Offered through the College of Extended Studies)

The coursework in this curriculum is offered only in special sessions. Students enroll through the College of Extended Studies and are subject to a fee structure that is different from that for regularly matriculated students. For more information, contact the Director of the program or call the College of Extended Studies.

This degree program provides a comprehensive background in quality systems principles and practices for the development, testing, and manufacture of pharmaceutical, biopharmaceutical, and medical device products with the additional training necessary for compliance with regulatory requirements. The degree is offered through the College of Sciences.

The degree offering focuses on principles of quality control and quality assurance that support compliance with the laws and regulations imposed by the Federal government, especially the Food and Drug Administration, related to drug discovery, development, testing,

and manufacture of products for commercial distribution. The degree program will provide students with detailed knowledge and understanding of current practices and regulations and their practical application to the development and commercialization of drug, biologics, and medical device products. Also incorporated into the degree program are business courses that provide students with communication and management skills essential for the successful quality assurance and quality control professional in an industry work environment.

## Admission to Graduate Study

All students must satisfy the general admission and examination requirements for admission to the University with classified graduate standing, as described in Part Two of the Bulletin of the Graduate Division. In addition, the applicant must satisfy the following requirements before being considered for admission to classified graduate standing by the admissions review committee of the Center:

1. Submit scores on the GRE General Test (verbal and quantitative portions only).
2. Have three letters of recommendation sent from persons who are knowledgeable about the candidate's potential for success in graduate study.
3. Submit an Applicant Essay that describes the applicant's purpose in pursuing graduate studies in quality assurance and quality control and relationship to personal and career objectives.
4. List any employment or volunteer experience relevant to the degree program.
5. Candidates for admission will typically come from one of the disciplines offered in the life and physical sciences and engineering.

## Advancement to Candidacy

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

## Specific Requirements for the Master of Science Degree

(Major Code: 09994)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program consisting of a minimum of 40 units as follows:

1. Complete 25 units of required courses.

BQS 601	Quality Systems and Management (2)
BQS 602	Quality Impact on Biomedical Research and Development (1)
BQS 621	Quality Audits: Internal, Vendors, and Contract Services (3)
BQS 730	Good Manufacturing, Laboratory, and Clinical Practices (3)
BQS 745	Quality Assurance Documentation (3)
BQS 799A	Thesis or Project (3) Cr/NC/RP
BQS 799B	Thesis or Project Extension (0) Cr/NC
RA 778	Quality Control and Quality Assurance: Pharmaceuticals, Biologics, and Medical Devices (3)

- BA 651 Organizational Behavior (2)
- BA 662 Operations Management (2)
- IDS 705 Communication Strategies (3)

2. Complete 15 units of electives.

**Category A Elective Courses**

- BQS 620 Quality Control Methods Development (3)
- BQS 696 Advanced Topics in Biomedical Quality Systems (1-4)
- BQS 740 Statistical Process Control (3)
- BQS 741 Statistical Experiment Design (3)
- BQS 746 Quality Control Laboratory Validation (3)
- BQS 797 Research (1-3) Cr/NC/RP
- BQS 798 Special Study (1-3) Cr/NC/RP
- RA 601 Pharmaceutical, Biotechnology, and Medical Device Industries (3)
- RA 780 Good Clinical Practices (2)

No more than nine elective units from Category B may be applied towards the proposed degree.

**Category B Elective Courses**

- RA 770 Current Good Manufacturing Practices – General Concepts (3)
- RA 771 Current Good Manufacturing Practices – Advanced Topics (3)
- RA 772 Post-Approval Activities, Including Advertising, Promotion, and Labeling (3)
- RA 773 Medical Device Regulations (3)
- RA 774 Investigational and Marketing Applications for Drugs, Biologics, and Medical Devices (3)
- RA 775 Clinical Trials: Issues in Design, Conduct, and Evaluation (3)
- RA 776 Validation Aspects of Drugs, Biologics, and Device Product Development and Manufacturing, Including Computer Related Systems and Software (3)

**Courses Acceptable on Master’s Degree Program in Biomedical Quality Systems (BQS)**

**GRADUATE COURSES**

**BQS 601. Quality Systems and Management (3)**

Origins, history of quality, major concepts, theories, principles, founders. Quality planning, assurance, improvement. Roles and responsibilities of quality assurance and quality control.

**BQS 602. Quality Impact on Biomedical Research and Development (1)**

Global view of biomedical and safe medical devices act. Quality assurance and quality control integration into research and development. Role of quality in good manufacturing practices (GMP), good clinical practices (GCP), and good laboratory practices (GLP), and good documentation practices (GDP).

**BQS 620. Quality Control Methods Development (3)**

One lecture and six hours of laboratory.  
Prerequisites: Biomedical Quality Systems 601 and consent of instructor.

Strategies and approaches for development of quality control methods for characterizing drugs and biologics. Development of high pressure liquid chromatography (HPLC) methods.

**BQS 621. Quality Audits: Internal, Vendors, and Contract Services (3)**

Prerequisite: Biomedical Quality Systems 601.  
Audit topics explored from viewpoint of industry professional, current industry, and regulatory information.

**BQS 696. Advanced Topics in Biomedical Quality Systems (1-4)**

Prerequisite: Consent of instructor.  
Current issues and topics in quality systems evaluated and discussed. Recent developments and changes in selected areas of quality systems presented by faculty and industry professionals. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

**BQS 730. Good Manufacturing, Laboratory, and Clinical Practices (3)**

Prerequisite: Biomedical Quality Systems 601.  
Roles and responsibilities of a Quality Assurance (QA) function in the biopharmaceutical, medical device, and pharmaceutical industries. Equip middle and upper level biomedical professionals with “real world” skills, approaches, and solutions to multifaceted quality issues.

**BQS 740. Statistical Process Control (3)**

Prerequisites: Biomedical Quality Systems 601 and basic statistics.  
Statistical methods for quality control and improvement, focusing on control charts, measurement systems analysis, process improvement, and process capability assessment.

**BQS 741. Statistical Experiment Design (3)**

Prerequisite: Biomedical Quality Systems 601.  
Effective experimental strategy, factorial and fractional factorial designs, experiments with random factors, nested effects, categorical factors, and split plots. Use of computer software for design construction and analysis.

**BQS 745. Quality Assurance Documentation (3)**

Prerequisite: Biomedical Quality Systems 601.  
Regulatory requirements for developing and manufacturing documentation, supporting the quality assurance function.

**BQS 746. Quality Control Laboratory Validation (3)**

Prerequisite: Biomedical Quality Systems 601.  
Roles and responsibilities of a typical validation department function in the biopharmaceutical, medical device, and pharmaceutical industries. Equip the middle and upper level biomedical professionals with “real world” skills, approaches, and solutions to multifaceted validation issues.

**BQS 797. Research (1-3) Cr/NC/RP**

Prerequisite: Advancement to candidacy.  
Research in the area of quality systems. Maximum credit six units applicable to a master’s degree.

**BQS 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of staff; to be arranged with department chair and instructor.  
Individual study. Maximum credit six units applicable to a master’s degree.

**BQS 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisite: An officially appointed thesis committee and advancement to candidacy.  
Preparation of thesis or project for the master’s degree.

**BQS 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade of RP.  
Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also students must be registered in the course when the completed thesis or project is granted final approval.

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# Biostatistics and Biometry

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

## Faculty Committee for Biostatistics and Biometry

Stuart H. Hurlbert, Ph.D., Professor of Biology  
Kung-Jong Lui, Ph.D., Professor of Statistics  
Donald J. Slymen, Ph.D., Professor of Public Health  
Duane L. Steffey, Ph.D., Professor of Statistics  
John E. Alcaraz, Ph.D., Associate Professor of Public Health  
Douglas H. Deutschman, Ph.D., Associate Professor of Biology  
Colleen Kelly, Ph.D., Associate Professor of Statistics  
Juanjuan Fan, Ph.D., Assistant Professor of Statistics  
Ming Ji, Ph.D., Assistant Professor of Public Health  
Richard Levine, Ph.D., Assistant Professor of Statistics  
Chii-Dean Lin, Ph.D., Assistant Professor of Statistics

## General Information

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

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

## Courses

### Biology Course (BIOL)

(Adviser: Deutschman, (619) 594-5391)

BIOL 597A. Univariate Statistical Methods in Biology (3)

### Public Health Courses (P H)

(Adviser: Slymen, (619) 594-6439)

P H 602. Biostatistics (3)  
P H 627. Advanced Statistical Methods in Public Health (3)  
P H 628. Applications of Multivariate Statistics in Public Health (3)  
P H 722. Seminar in Clinical Trials (3)

### Statistics Courses (STAT)

(Adviser: Lui, (619) 594-7239)

STAT 510. Applied Regression Analysis (3)  
STAT 520. Applied Multivariate Analysis (3)  
STAT 550. Applied Probability (3)  
STAT 551A. Probability and Mathematical Statistics (3)  
STAT 551B. Probability and Mathematical Statistics (3)  
STAT 560. Sample Surveys (3)  
STAT 570. Stochastic Processes (3)  
STAT 670A-670B. Advanced Mathematical Statistics (3-3)  
STAT 671. Statistical Computing (3)  
STAT 672. Nonparametric Statistics (3)  
STAT 676. Bayesian Statistics (3)  
STAT 677. Design of Experiments (3)  
STAT 678. Survival Analysis (3)  
STAT 679. Analysis of Discrete Data (3)  
STAT 680A-680B. Advanced Biostatistical Methods (3-3)

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# Business Administration

**OFFICE: Student Services 3428**  
**TELEPHONE: (619) 594-5217**  
**FAX: (619) 594-1863**  
**E-MAIL: [gradbus@mail.sdsu.edu](mailto:gradbus@mail.sdsu.edu)**  
**<http://www.rohan.sdsu.edu/~cba/request.html>**

Accredited by AACSB International—The Association to Advance Collegiate Schools of Business

## Associateships

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

## General Information

The College of Business Administration offers graduate study leading to the Master of Business Administration degree, Master of Science degree in Business Administration and the Master of Science degree in Accountancy. The College also offers a joint program with the College of Arts and Letters leading to both a Master of Business Administration and a Master of Arts in Latin American Studies. The College of Business Administration M.B.A. and M.S. programs are accredited by AACSB International—The Association to Advance Collegiate Schools of Business.

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

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

Close contacts with large and small firms, both local and national, enhance the business student's education. The generous cooperation of local business and government organizations provides opportunities for research and field study for graduate students. The continued professionalization of the business executives' responsibilities has created many opportunities for the student with an advanced degree in business administration.

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

## Admission to Graduate Study

Admission to the College's graduate programs is competitive, that is, a number of factors are taken into consideration in the admission decision, and only the top applicants are accepted. These factors include the applicant's previous academic performance, the quality of the previous universities attended, the field of undergraduate study, scores on the Graduate Management Admissions Test (GMAT), management experience and the written application essay. References

which validate experience may also be considered. A 570 TOEFL score is normally required when English is not the student's principal language.

Students applying for admission should electronically submit the University application available at <http://www.csummentor.edu>.

The following materials should be submitted as a complete package directly to the Graduate School of Business:

- (1) Two sets of original and official transcripts of all previous academic work (in sealed envelopes): This would include all degree transcripts and a transcript from the last institution attended. Transcripts must reflect the last 60 semester (90 quarter) units attempted;  
Students with international coursework must submit all official transcripts and proof of degree. If certificates and transcripts are not in English, they should be accompanied by certified English translations;
- (2) A copy of your GMAT score report (official copy requested at time of test; SDSU code 4682);
- (3) Personal statement;
- (4) Resume;
- (5) Letters of reference (optional; maximum of three).

Mail or deliver your complete admissions package to:  
Graduate School of Business  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-8228

## Master of Business Administration Degree

### Admission to the Degree Curriculum

Regulations governing admission to the University and to the College of Business Administration are outlined above and in Part Two of this bulletin.

### Advancement to Candidacy

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

### Specific Requirements for the Master of Business Administration Degree

**(Major Code: 05011)**

The student must complete an approved program of study including 49 units of graduate coursework with a maximum of six units of 500-level courses. Up to 12 units of coursework may be accepted for transfer credit. Transfer credit will be accepted for graduate coursework completed at an accredited AACSB institution or with the approval of the Director of Graduate Programs.

At least 37 of the total units required must be completed in residence at San Diego State University, and at least nine units of program courses must be completed after advancement to candidacy.

## Business Administration

Students entering the program should have completed coursework in basic statistics and macro- and micro-economics. They should be proficient in college-level mathematics including algebra and in the use of personal computers including spreadsheets and wordprocessing.

The requirements for the degree are as follows:

1. Complete the following core of eight courses. (19 units)
  - BA 650 Financial Reporting and Analysis I (2)
  - BA 651 Organizational Behavior (2)
  - BA 652 Statistical Analysis (3)
  - BA 653 Managerial Economics (2)
  - BA 655 Marketing (3)
  - BA 660 Managerial Accounting (2)
  - BA 662 Operations Management (2)
  - BA 665 Financial Management I (3)

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

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

### Interpersonal Skills Theme

- IDS 705 Communication Strategies (3)
- MGT 669 Human Resource Management (3)
- MGT 720 Seminar in Behavioral Sciences for Management (3)
- MGT 721 Seminar in Group Processes and Leadership (3)
- MGT 741 Seminar in Organization Power and Politics (3)
- MKTG 763 Seminar in Sales Management (3)

### Legal, Ethical, Political, and Economic Environment Theme

- ACCTG 681 Seminar in Regulatory and Management Controls (3)
- FIN 604 Legal Environment for Executives (3)
- FIN 659 Decision Making in the World Economy (3)
- MGT 626 Competitive Analysis of Industries (3)
- MGT 722 Seminar in Business Ethics and Social Institutions (3)
- MGT 740 Seminar in Business Management and the Natural Environment (3)
- MGT 742 Seminar in Business and the Good Society (3)
- MKTG 765 Seminar in Marketing and Public Policy (3)

### Management of Technology and Information Systems Theme

- IDS 680 Information Systems Hardware and Software (3)
- IDS 688 Information Systems in Organizations (3)
- IDS 691 Decision Support Systems (3)
- IDS 754 Seminar in Operations Planning and Strategy (3)
- MGT 731 Seminar in Strategic Management of Technology and Innovation (3)
- MKTG 761 Product Innovation Management (3)
- MKTG 768 Seminar in Internet Marketing and E-Business (3)
- MKTG 770 Marketing and Technology (3)

### Globalization Theme

- ACCTG 661 Seminar in International Accounting (3)
- FIN 654 Seminar in International Business Finance (3)
- IDS 744 Seminar in Quality and Productivity Management (3)
- IDS 753 Global Supply Chain Management (3)
- MGT 671 Seminar in Employee Involvement in Management (3)
- MGT 710 Seminar in World Business Environment (3)
- MGT 723 Seminar in International Strategic Management (3)
- MKTG 769 Seminar in International Marketing (3)

3. Complete 15 units of electives. Not more than 12 units outside the College of Business Administration and not more than a total of six units in courses 780, Field Studies in Business, 797, Research, and 798, Special Study, will be accepted toward the degree. Courses taken outside of the College of Business Administration should be related to the MBA program and must be approved by the Director of Graduate Programs.
4. Among themes and electives listed above, a student must complete at least one course in each of three of the departments in the College of Business Administration.
5. Complete a culminating experience course. (3 units)
  - BA 795 Integrative Business Analysis (3)
  - BA 799A Thesis (3) Cr/NC/RP

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

- Accountancy
- Athletics and Fitness Management
- Electronic Business
- Entrepreneurship
- Finance
- Health Services Administration
- Information Systems
- International Business
- Management
- Marketing
- Operations Management
- Real Estate
- Sports Business Management

Specialization courses may be either theme or elective courses.

## Full and Half-Time Programs

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

## Master of Business Administration for Executives

(Offered only through the College of Extended Studies)

## Specific Requirements for the M.B.A. Degree for Executives

(Major Code: 05011)

The Master of Business Administration for Executives is operated by the Executive Management Office in the College of Business Administration, and is an alternative path for the Master of Business Administration degree. The program is one of about 150 in the nation designed especially to meet the needs of mid-career executives, and the only one of its kind in San Diego county. Students in the program have an average of 15 years of full-time professional work experience and eight years of managerial or equivalent experience, and bring a wealth of practical knowledge to the classroom discussion.

Students accepted for the M.B.A. for Executives are fully matriculated in the University and meet all University requirements as established by the Graduate Council. For the convenience of the students, however, courses are scheduled in a modular fashion on alternate Fridays and Saturdays rather than following the traditional semester time

frame. The fee structure is also unique to the program and unrelated to the usual San Diego State University fee schedule. Students should contact the program office for a program calendar, class schedules, and fee summary.

In addition to meeting the requirements for classified graduate standing, and the basic requirements for the master's degree as described in Part Two of this bulletin, students must complete an approved program of studies containing 48 units of 600- and 700-numbered courses. These courses will be offered in a predetermined pattern over 24 consecutive months. No transfer courses and no substitute courses are accepted.

The official programs of all students in any one cycle are identical. Advancement to candidacy requires completion of at least 24 units of coursework listed on the official program of study with a minimum grade point average of 3.0 (B).

## Admission

In addition to meeting the criteria for admission to the University, as well as those listed under "Admission to the Graduate Program in the College of Business Administration," applicants must also demonstrate that they have had significant experience in management-level positions in business, government, or not-for-profit organizations.

Students applying for admission to the MBA for Executives program should submit the application, fee, and materials described below to Candace Williams, Executive Management Program:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GMAT scores;
- (3) SDSU/EMBA department application;
- (4) Three letters of reference (forms are included in the application packet);
- (5) A one-page statement of career objectives;
- (6) Resume.

Complete directions are included in the MBA for Executives program application packet. Call (619) 594-6010.

Mail or deliver your complete admissions package to:  
 Candace Williams, Director  
 MBA for Executives Program  
 San Diego State University  
 5500 Campanile Drive  
 San Diego, CA 92182-8232

## Master of Science Degree in Business Administration

### Admission to the Degree Curriculum

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

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

In addition, the student's adviser may request satisfactory completion of additional prerequisite courses in the student's proposed field of specialization.

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

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

### Advancement to Candidacy

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

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

### Specific Requirements for the Master of Science Degree

In addition to meeting the requirements for classified graduate standing as described above and the general requirements for master's degrees as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 approved units including at least 21 units in 600- and 700-numbered courses. Up to nine units of coursework may be accepted as transfer credit. This program cannot include Finance 604; Information and Decision Systems 609; and Business Administration courses numbered 650-665, without specific permission of the Director, Graduate Business Programs. At least 24 units must be in business administration and economics. Not more than a total of six units in courses 797, Research, 798, Special Study, and Business Administration 780, Field Studies in Business, may be accepted for credit toward the degree.

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

For regulations concerning grade point averages, final approval for the granting of the degree, award of the degree, and diplomas, see the section entitled "Basic Requirements for the Master's Degree," in Part Two of this Bulletin.

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

### Special Provision for Specific Concentrations

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

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

## Business Administration

ACCTG 201	Financial Accounting Fundamentals (3)
ECON 101	Principles of Economics (3)
ECON 102	Principles of Economics (3)
ECON 201	Statistical Methods (3) <b>OR</b>
STAT 119	Elementary Statistics for Business (3)
ECON 320	Intermediate Macroeconomic Theory (3) <b>OR</b>
ECON 422	Business Cycles (3)
FIN 240	Legal Environment of Business (3)
FIN 323	Fundamentals of Finance (3)

### \*\*Real Estate.

No new students are being admitted into this program.

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

ACCTG 201	Financial Accounting Fundamentals (3)
ECON 101	Principles of Economics (3)
ECON 102	Principles of Economics (3)
ECON 201	Statistical Methods (3) <b>OR</b>
STAT 119	Elementary Statistics for Business (3)
FIN 240	Legal Environment for Business (3)
FIN 323	Fundamentals of Finance (3)
MKTG 370	Marketing (3)
MATH 120	Calculus for Business Analysis (3)

## Master of Business Administration and Juris Doctor Degree

(Major Code: 05995)

### General Information

The College of Business Administration and the California Western School of Law offer a four-year concurrent program and study leading to a Master of Business Administration and Juris Doctor degree in law. The objective of the concurrent degrees program is to prepare students who are competent in both of law and business administration for advanced practice in many areas where the fields converge.

### Admission to Graduate Study

Regulations governing admission to the University and to the College of Business Administration are outlined in Part Two of this bulletin.

The concurrent degree program requires separate application to each institution and admission to each institution. Admission decisions are made independently by San Diego State University and California Western School of Law; admission to one institution does not imply admission to the other.

The coordinators for the concurrent degree program in business administration and law are the Director of the Graduate School of Business, San Diego State University, and the Associate Dean, California Western School of Law.

### Specific Requirements for the MBA/JD Concurrent Degree

#### College of Business Administration (37 Units)

BA 650	Financial Reporting and Analysis I (2)
BA 651	Organizational Behavior (2)
BA 652	Statistical Analysis (3)
BA 653	Managerial Economics (2)
BA 655	Marketing (3)
BA 660	Managerial Accounting (2)
BA 662	Operations Management (2)
BA 665	Financial Management I (3)
BA 780	Field Studies in Business (3)
BA 795	Integrative Business Analysis (3)
Electives:	Three units

### Interpersonal Skills Theme: 3 Units

IDS 705	Communication Strategies
MGT 669	Human Resource Management
MGT 720	Seminar in Behavioral Sciences for Management
MGT 721	Seminar in Group Processes and Leadership
MGT 741	Seminar in Organization Power and Politics
MKTG 769	Seminar in International Marketing

### Globalization Theme: 3 Units

ACCTG 661	Seminar in International Accounting
FIN 654	Seminar in International Business Finance
IDS 744	Seminar in Quality and Productivity Management
IDS 753	Global Supply Chain Management
MGT 671	Seminar in Employee Involvement in Management
MGT 710	Seminar in World Business Environment
MGT 723	Seminar in International Strategic Management
MKTG 769	Seminar in International Marketing

### Management of Technology Theme: 3 Units

IDS 609	Management Information Systems
IDS 680	Information Systems Hardware and Software
IDS 688	Information Systems in Organizations
MGT 731	Seminar in Strategic Management of Technology and Innovation
MKTG 761	Product Innovation Management
MKTG 768	Seminar in Internet Marketing and E-Business

### California Western School of Law (77 Units)

Civil Procedures I and II (6)
Constitutional Law I (3)
Contracts I and II (6)
Criminal Law (3)
Criminal Procedure I (3)
Evidence (4)
Legal Process (0)
Legal Skills I, II, III (6)
Professional Responsibility (2)
Property I and II (6)
Torts I and II (6)
Internship (5)
Electives: 27 units

The specific sequence of courses over the four year period is listed in the admissions material. Students attend the schools in the following pattern:

Year 1	California Western School of Law <b>only</b>
Year 2	San Diego State University College of Business Administration <b>only</b>
Year 3	Both Schools
Year 4	Both Schools

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

### General Information

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

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

**Admission to Graduate Study**

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

**Specific Requirements for the MBA/MA Degree**

**(Major Code: 49061)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete an officially approved course of study consisting of 70 units as outlined below.

1. The college expects students entering the Master of Business Administration/MA in Latin American Studies program to be proficient in several areas. These include proficiency in statistics, mathematical skills, basic economics and in the use of personal computers, including spreadsheets and word processing. The students are responsible for insuring that they possess these skills before beginning the program.
2. Complete the following core of eight courses (19 units):
  - BA 650 Financial Reporting and Analysis I (2)
  - BA 651 Organizational Behavior (2)
  - BA 652 Statistical Analysis (3)
  - BA 653 Managerial Economics (2)
  - BA 655 Marketing (3)
  - BA 660 Managerial Accounting (2)
  - BA 662 Operations Management (2)
  - BA 665 Financial Management I (3)

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

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

**Interpersonal Skills Theme**

- IDS 705 Communication Strategies (3)
- MGT 669 Human Resource Management (3)
- MGT 720 Seminar in Behavioral Sciences for Management (3)
- MGT 721 Seminar in Group Processes and Leadership (3)
- MGT 741 Seminar in Organization Power and Politics (3)
- MKTG 763 Seminar in Sales Management (3)

**Environment Theme**

- FIN 604 Legal Environment for Executives (3)
- MGT 626 Competitive Analysis of Industries (3)
- MGT 722 Seminar in Business Ethics and Social Institutions (3)
- MGT 740 Seminar in Business Management and the Natural Environment (3)
- MGT 742 Seminar in Business and the Good Society (3)
- MKTG 765 Seminar in Marketing and Public Policy (3)

4. Complete 15 units in Business Administration to include:
  - FIN 654 Seminar in International Business Finance (3)
  - MGT 710 Seminar in World Business Environment (3)
  - MGT 723 Seminar in International Strategic Management (3)
  - MGT 731 Seminar in Strategic Management of Technology and Innovation (3)
  - MKTG 769 Seminar in International Marketing (3)

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

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

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

**Latin American Studies Courses (LATAM)**

- LATAM 560. Latin America After World War II (3)
- LATAM 576. Frida Kahlo and Her Circle: Mexican Artists and the Challenge of Modernity (3)
- LATAM 798. Special Study (3) Cr/NC/RP

**Economics Course (ECON)**

- ECON 565. North American Economic Relations (3)

**History Courses (HIST)**

- HIST 550. Colonial Mexico (3)
- HIST 551. Modern Mexico (3)
- HIST 552. Brazil (3)
- HIST 558. Latin America in World Affairs (3)
- HIST 640. Directed Readings in Latin American History (3)
- HIST 795. Area Studies in History (3) Cr/NC\*\*

**Political Science Courses (POL S)**

- POL S 564. Environmental Politics in Global Perspective (3)
- POL S 566. Political Change in Latin America (3)
- POL S 567. Political Systems of Latin America (3)
- POL S 568. Mexican Politics (3)
- POL S 655. Seminar in General Comparative Political Systems (3)\*\*
- POL S 675. Seminar in International Relations (3)\*\*
- POL S 795. Problem Analysis (3)\*\*

**California Western School of Law Courses\*\*\***

- 452. International Protection of Human Rights
- 498. Mexican Law
- 610. Immigration Law
- 625. International Business Transactions
- 636. International Organizations
- 643. Private International Law
- 644. Public International Law
- 703. Latin American Law

\* Repeatable with new content and approval of advisory committee

\*\*Acceptable when of relevant content.

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

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

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

### Advancement to Candidacy

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

Upon advancement to candidacy, the student will enroll in Management 797 (Research) and BA 799A (Thesis). A thesis (Plan A) incorporating theory, method, and analytic techniques from both disciplines is the culminating experience for the concurrent program leading to the MBA and MA degrees.

### Courses Acceptable on Master's Degree Programs in Business Administration (B A)

#### GRADUATE COURSES

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

#### B A 650. Financial Reporting and Analysis I (2)

Prerequisite: Classified graduate standing.

Understanding of accounting procedures and judgments underlying corporate financial statements; ability to read and analyze these statements; make inferences from them about financial health, likelihood of success, and other important attributes of various business entities.

#### B A 651. Organizational Behavior (2)

Prerequisite: Classified graduate standing.

Human behavior at individual, interpersonal, and group levels including effect on the structure of the organization on behavior.

#### B A 652. Statistical Analysis (3)

Prerequisites: Classified graduate standing and basic statistics.

Understanding and applications of statistics for problem solving and managerial decision making.

#### B A 653. Managerial Economics (2)

Prerequisite: Classified graduate standing.

Application of microeconomic theory to business decision making; optimal resource allocation, market structure and pricing from a business viewpoint.

#### B A 655. Marketing (3)

Prerequisite: Classified graduate standing.

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

#### B A 660. Managerial Accounting (2)

Prerequisite: Classified graduate standing.

Design and use of cost systems to establish and enhance an organization's competitive advantage in a global environment. Decision making, planning, control and business ethics in managerial decision making.

#### B A 662. Operations Management (2)

Prerequisite: Classified graduate standing.

Decision making techniques for operations management in service, production, government, and non-profit organizations. Quantitative techniques for establishing the management decision criteria, constraints, and alternatives.

#### B A 665. Financial Management I (3)

Prerequisites: Business Administration 650 and 652.

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

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

Prerequisite: Completion of MBA core.

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

#### B A 795. Integrative Business Analysis (3)

Prerequisite: Advancement to candidacy.

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

#### B A 799A. Thesis (3) Cr/NC/RP

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

#### B A 799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

#### B A 799C. Comprehensive Examination Extension (0) Cr/NC

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

### Courses Acceptable on the Master of Business Administration Degree for Executives (B A)

#### Graduate Courses in Business Administration

#### B A 600. Financial and Managerial Accounting (4)

Concepts and principles of financial accounting; understanding financial statements; measurement of business income. Nature of cost accounting information and how it is used to make managerial decisions that create competitive advantage.

#### B A 601. Management of Organizations and Human Resources (3)

Role of the manager in designing organizations for effectiveness with emphasis on organization theory, organization behavior, and human resources management.

#### B A 602. Statistics for Business Decisions (3)

Statistics and production operations management. Data analysis, central tendency and variability, probability, distributions, sample inference, association analysis. Applications in engineering, manufacturing and service, and an overview of decision theory, queuing, total quality control, and project management.

#### B A 605. Managerial Marketing (2)

The marketing function in an organization. Managerial activities of marketing including market analysis, target market selection and design of the organization's marketing program.

**B A 608. Managerial Communication (2)**

Advanced communication concepts including the collection, analysis, and presentation of data. Written and oral communication strategies. (Formerly numbered Business Administration 609.)

**B A 615. Strategic Financial Management (3)**

Provides a framework for financial decision making. Covers relevant modern theory and emphasizes role of finance in corporate strategy. Topics include financial analysis and planning, investment, capital structure and dividend decisions and valuation and corporate restructuring. Not open to students with credit in Business Administration 653 or Finance 615.

**B A 616. Competitive Analysis (3)**

Competition in typical unregulated product or service markets. Competitive forces in such markets, and impact of these forces on economic profits, rates of return, and relative market-shares of competing firms. Not open to students with credit in Business Administration 665 or Finance 616.

**B A 700. Business in the Global Environment (3)**

Evolution of multinational corporations, management of organizations in global environment, and marketing and management implications of competition in international arena.

**B A 701. Entrepreneurship and New Venture Formation (2)**

Entrepreneurial approach to business. Concepts, theories and techniques for organizing and managing an entrepreneurial venture.

**B A 702. Social Responsibility: Legal and Ethical Environment of Business (3)**

Role of the manager in dealing in a socially responsible and ethical manner with internal and external constituencies.

**B A 703. Strategic Management (3)**

Corporate and business level strategic decision making. Topics include industry and environmental analysis, strategy implementation, strategic planning systems. Case descriptions of actual company situations serve as basis for analysis and recommendations.

**B A 705. Marketing Strategy (2)**

Development, implementation, and evaluation of marketing strategy and plans. Role of marketing planning, analysis and control; contributions and implications of marketing to corporate strategy. Strategies for attaining competitive advantage. Contemporary marketing planning tools and techniques.

**B A 709. Seminar in the Global Financial Environment (3)**

Develops understanding of world economy and illustrates impact of financial environment on decision making process of business managers. How corporations respond to changing economic forces and/or historical governmental policies.

**B A 710. Leadership (2)**

Theoretical and empirical literature pertaining to study and assessment of leadership skills. Process of organizational change and development.

**B A 711. Seminar in Contemporary Challenges of Leaders (4)**

Challenges facing managers of organizations in modern society: organizational, human resources, operational, economic, environmental, political, international, and technological issues. See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

**B A 790. Directed Readings in Business Administration (6) Cr/NC**

Preparation for the comprehensive examination for students in the M.B.A. for Executives program (Plan B).

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# Accountancy

In the College of Business Administration

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## Faculty

Andrew H. Barnett, Ph.D., Professor of Accountancy,  
Director of School (Graduate Adviser)  
John C. Anderson, Ph.D., Professor of Accountancy  
Allan R. Bailey, Ph.D., Professor of Accountancy  
Robert J. Capettini, Ph.D., Professor of Accountancy  
Chee W. Chow, Ph.D., Professor of Accountancy, The Vern E. Odmark  
Chair in Accountancy  
Gary M. Grudnitski, Ph.D., Professor of Accountancy  
Carol O. Houston, Ph.D., Professor of Accountancy  
Kevin M. Lightner, Ph.D., Professor of Accountancy  
Nathan A. Oestreich, Ph.D., Professor of Accountancy  
Howard R. Toole, Ph.D., Professor of Accountancy  
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Carol F. Venable, Ph.D., Professor of Accountancy  
Gerald E. Whittenburg, Ph.D., Professor of Accountancy  
(Graduate Adviser)  
Gun-Ho Joh, Ph.D., Associate Professor of Accountancy  
Sharon M. Lightner, Ph.D., Associate Professor of Accountancy  
(Graduate Adviser)  
Martha S. Doran, Ph.D., Assistant Professor of Accountancy

## The Vern E. Odmark Chair in Accountancy

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

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

## Master of Science Degree in Accountancy

### General Information

The objective of the Master of Science degree program in Accountancy is to provide students with greater breadth and depth in accounting education than is possible in the baccalaureate degree. The program allows students to focus their accounting studies in an area of specialization within the field of accounting and to gain a greater breadth in their knowledge of business and accounting. In order to provide the opportunity for specializing one's accounting knowledge, the M.S. program provides three areas of specialization: corporate accounting, professional accounting, and taxation. Each area consists of a series of selected courses which students take upon the recommendation of their adviser. Specialization within the M.S. degree is intended to give students the necessary academic background and research experience to advance their careers in public accounting, private accounting or government.

## Admission to the Degree Curriculum

In addition to meeting the requirements for classified graduate standing in the University and admission to the College of Business Administration, as described above, and in Part Two of this bulletin, the student must have satisfactorily completed courses equivalent to the core courses in the MBA curriculum as described above and any other course deficiencies as required by a graduate adviser in the School of Accountancy.

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

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

## Advancement to Candidacy

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

## Specific Requirements for the Master of Science Degree in Accountancy

(Major Code: 05021)

In addition to meeting the requirements for classified graduate standing as described above and the general requirements for master's degrees as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 approved units including at least 21 units in 600- and 700-numbered courses. Of the 30 units, at least 15 units must be in accountancy courses at San Diego State University which must include at least 12 units in accountancy courses numbered 650 and above. Under Plan A, Business Administration 799A, Thesis, is required. Under the optional Plan B, a comprehensive examination and three units of additional coursework may be substituted for the thesis requirement.

Accountancy 620, Financial Reporting and Analysis II; Accountancy 625, Managerial and Financial Reporting and Analysis; and Accountancy 626, Audit/Systems, are required unless the students have completed the equivalent course(s) as a part of their undergraduate preparation.

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

The following specializations are available for the Master of Science degree in Accountancy:

Corporate Accounting  
Professional Accounting  
Taxation

For regulations concerning grade point average, final approval for the granting of the degree, award of the degree, and diplomas, see the section entitled "Basic Requirements for the Master's Degree," in Part Two of this bulletin.

## Courses Acceptable on Master's Degree Program in Accountancy (ACCTG)

### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### ACCTG 501. Advanced Financial Accounting (3) I, II

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

Advanced financial accounting topics. Partnerships, consolidations, foreign currency transactions and financial statements, accounting for derivatives and hedging, accounting for bankruptcy and reorganizations.

#### ACCTG 502. Advanced Managerial Accounting (3)

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

Use of accounting information systems for managerial decision making. Introduction to decision-making situations which use accounting information for full or partial resolution. Consideration of uncertainty, decision theory and specific decision contexts.

#### ACCTG 503. Federal Taxation of Individuals (3) I, II, S

Prerequisites: Accountancy 201 and 202. Approved upper division business major, business minor, or other approved major. **Proof of completion of prerequisites required:** Copy of transcript.

Taxation of individuals, including income, deductions, credits, social security taxes, and property transactions.

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

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

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

#### ACCTG 596. Contemporary Topics in Accounting (1-3)

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

Contemporary topics in modern accounting. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### GRADUATE COURSES

#### ACCTG 620. Financial Reporting and Analysis II (3)

Prerequisite: Business Administration 650.

User approach to interpreting financial accounting information at an intermediate level. Pensions, cash flow, property, intangibles, notes, bonds, leases, investments, derivatives, equity, dilutive securities, compensation, earnings per share, and accounting changes.

#### ACCTG 624. Tax for Managers (3)

Prerequisite: Business Administration 650.

Application of federal income tax laws on selected management decisions (e.g., buy/lease decisions, sell/trade decisions, current and deferred compensation planning). Recognition of tax hazards and tax savings.

#### ACCTG 625. Managerial and Financial Reporting and Analysis (3)

Prerequisites: Business Administration 650 and 660.

Managerial analysis and financial reporting topics from user and preparer perspectives, including current assets and liabilities, pricing, cost management, inventory, traditional and contemporary costing systems, relevant costs, cost allocation, contingencies, deferred taxes, revenue, profit analysis, performance strategy and compensation.

#### ACCTG 626. Audit/Systems (4)

Prerequisites: Business Administration 650 and 660.

Design and internal control perspectives of accounting information systems. Systems analysis, decision support systems, and implementation are investigated. Duties, responsibilities, and ethics of the auditor; auditor's reports and procedures for verification of financial statements.

#### ACCTG 650. Tax Research and Planning (3)

Prerequisite: Accountancy 321 or 503.

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

#### ACCTG 651. Seminar in Corporate Tax (3)

Prerequisite: Credit or concurrent registration in Accountancy 650.

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

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

Prerequisite: Credit or concurrent registration in Accountancy 650.

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

#### ACCTG 655. Tax Planning for Individuals (3)

Prerequisite: Credit or concurrent registration in Accountancy 650.

Selected complex tax laws related to individuals and sole proprietorship businesses, sales and exchanges of property, tax deferred transactions in property, accounting periods and methods, and personal deductions.

#### ACCTG 656. California and Multistate Taxation (3)

Prerequisite: Credit or concurrent registration in Accountancy 650.

California taxation of individuals, corporations, and other business entities. Treatment of multistate transactions of business organizations and out-of-state transactions of California residents.

#### ACCTG 659. Seminar in Taxation Topics (3)

Prerequisite: Credit or concurrent registration in Accountancy 650.

Theoretical treatment of selected topics in taxation. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

#### ACCTG 660. Seminar in Accounting Theory (3)

Prerequisite: Accountancy 625.

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

#### ACCTG 661. Seminar in International Accounting (3)

Prerequisite: Business Administration 650.

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

#### ACCTG 663. Financial Statement Analysis (3)

Prerequisite: Business Administration 650.

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

## Accountancy

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### **ACCTG 670. Seminar in Auditing (3)**

Prerequisite: Accountancy 322 or 626.  
Selected conceptual issues in auditing.

### **ACCTG 671. Seminar in Compilation and Review Services (3)**

Prerequisite: Accountancy 322 or 626.

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

### **ACCTG 680. Seminar in Managerial Accounting (3)**

Prerequisite: Business Administration 660.

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

### **ACCTG 681. Seminar in Regulatory and Management Controls (3)**

Prerequisites: Business Administration 650 and 660.

Social and behavioral science theories influencing design and operation of management control systems with emphasis on environmental and regulatory factors that influence, affect, motivate, and control managers and employees.

### **ACCTG 696. Seminar in Selected Topics (3)**

Intensive study in specific areas of accountancy. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

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

Prerequisite: Advancement to candidacy.

Preparation for the comprehensive examination for the M.S. program.

### **ACCTG 797. Research (3) Cr/NC/RP**

Prerequisite: Advancement to candidacy.

Research in the area of accountancy. Maximum credit six units applicable to a master's degree.

### **ACCTG 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

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# Finance

In the College of Business Administration

**OFFICE: Student Services 3356**  
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## Faculty

Nikhil P. Varaiya, Ph.D., Professor of Finance,  
Chair of Department  
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Andrew Q. Do, Ph.D., Professor of Finance  
(Graduate Adviser, Real Estate)  
David P. Ely, Ph.D., Professor of Finance  
Lawrence J. Gitman, Ph.D., Professor of Finance  
Kamal M. Haddad, Ph.D., Professor of Finance  
(Graduate Adviser)  
Edward Omberg, Ph.D., Professor of Finance  
Mehdi Salehizadeh, Ph.D., Professor of Finance  
(Graduate Adviser, International Business)  
Moon H. Song, Ph.D., Professor of Finance (Graduate Adviser)  
William E. Sterk, Ph.D., Professor of Finance  
(Graduate Adviser)  
Pieter A. Vandenberg, D.B.A., Professor of Finance  
Thomas M.D. Warschauer, Ph.D., Professor of Finance (Graduate  
Adviser, Financial and Tax Planning)  
Russell L. Block, J.D., Associate Professor of Finance  
Kanwal S. Sachdeva, D.B.A., Associate Professor of Finance  
Robert W. Wilbur, Ph.D., Associate Professor of Finance, Associate  
Dean for Academic Affairs, College of Business Administration  
Jaemin Kim, Ph.D., Assistant Professor of Finance  
Kuntara Pukthuanthong, Ph.D., Assistant Professor of Finance  
Allan A. Zebedee, Ph.D., Assistant Professor of Finance

## Courses Acceptable on Master's Degree Programs in Business Administration (FIN)

### UPPER DIVISION COURSES

#### **FIN 522. Individual Insurance Management (3) II**

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

Economic, legal, social, and ethical considerations of individual, business and group insurance including life, health, property, and liability insurance. Risk exposure and policy analysis.

#### **FIN 523. Employee Benefit Planning (2) I**

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

Employee benefit and pension planning, including regulation and taxation issues.

#### **FIN 589. Personal Financial Planning (3) I**

Prerequisite: Finance 323.

Financial planning process including data gathering, cash flow and debt considerations, goal programming (including retirement and education funding), integration, plan formulation, and implementation. Practice management considerations including establishment of ethical and legal, client and professional relationships.

### GRADUATE COURSES

#### **FIN 604. Legal Environment for Executives (3)**

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

#### **FIN 617. Financial Management II (3)**

Prerequisite: Business Administration 665.

Develops topics to include asset pricing, capital budgeting techniques, dividend policy and financing decisions, applications of options and futures, term structure of interest rates, regulation of financial markets, leasing decisions, corporate control.

#### **FIN 641. Financing the Emerging Enterprise (3)**

Prerequisite: Business Administration 665.

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

#### **FIN 642. Financial Risk Management (3)**

Prerequisite: Business Administration 665.

Measurement and management of foreign exchange, interest rate, equity, and commodity risks. Risk assessment models, implementation strategies, risk management, and capital allocation. Using derivatives for risk management.

#### **FIN 651. Seminar in Investments (3)**

Prerequisite: Business Administration 665.

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

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

Prerequisite: An upper division or graduate course in investments.

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

#### **FIN 653. Case Studies in Financial Management (3)**

Prerequisite: Business Administration 665.

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

#### **FIN 654. Seminar in International Business Finance (3)**

Prerequisite: Business Administration 665.

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

#### **FIN 656. Seminar in Financial Institutions (3)**

Prerequisite: Business Administration 665.

Change in financial institution management thought. Trends in asset management theory and liability management theory. Current events in financial institutions, changes likely to occur and proposed changes in laws and regulations.

**FIN 657. Financial Counseling (3) Cr/NC**

Prerequisites: Advancement to candidacy and Finance 651.

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

**FIN 658. Seminar in Options and Futures (3)**

Prerequisite: Business Administration 665.

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

**FIN 659. Decision Making in the World Economy (3)**

Prerequisite: Classified graduate standing.

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

**FIN 696. Seminar in Selected Topics (3)**

Intensive study in specific areas of finance. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**FIN 705. Seminar in Estate Planning (3)**

Prerequisite: Business Administration 665.

The scope and nature of estate planning. Identification and analysis of the environmental factors and those aspects of federal and state law affecting estate planning and taxation. Estate taxation and social policy.

**FIN 780. Seminar in Land Markets and Urban Development Issues (3)**

Prerequisite: Graduate standing.

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

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

Prerequisite: Graduate standing.

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

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

Prerequisite: Graduate standing.

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

**FIN 797. Research (3) Cr/NC/RP**

Prerequisite: Advancement to candidacy.

Research in the area of finance. Maximum credit six units applicable to a master's degree.

**FIN 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

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# Information and Decision Systems

In the College of Business Administration

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## Faculty

John M. Penrose, Ph.D., Professor of Information and Decision Systems, Chair of Department  
James R. Beatty, Ph.D., Professor of Information and Decision Systems  
Marie E. Flatley, Ph.D., Professor of Information and Decision Systems  
Alexis Koster, Ph.D., Professor of Information and Decision Systems (Graduate Adviser)  
James R. Lackritz, Ph.D., Professor of Information and Decision Systems  
Feraidoon Raafat, Ph.D., Professor of Information and Decision Systems (Graduate Adviser)  
Gretchen N. Vik, Ph.D., Professor of Information and Decision Systems  
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Theophilus Addo, Ph.D., Associate Professor of Information and Decision Systems  
Annette C. Easton, Ph.D., Associate Professor of Information and Decision Systems  
George K. Easton, Ph.D., Associate Professor of Information and Decision Systems  
Carolena L. Lyons-Lawrence, Ph.D., Associate Professor of Information and Decision Systems  
Bruce A. Reinig, Ph.D., Associate Professor of Information and Decision Systems  
Bongsik Shin, Ph.D., Associate Professor of Information and Decision Systems (Graduate Adviser)  
Murray Jennex, Ph.D., Assistant Professor of Information and Decision Systems  
Robert Plice, Ph.D., Assistant Professor of Information and Decision Systems  
Wesley Szu-Way Shu, Ph.D., Assistant Professor of Information and Decision Systems

## Courses Acceptable on Master's Degree Programs in Business Administration (IDS)

### UPPER DIVISION COURSES

#### **IDS 515. Advanced Programming for Business (3) I,II**

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

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

#### **IDS 520. Java Programming for Business Applications (3)**

Prerequisite: A course in C/C++ programming.

Comprehensive coverage of both Java applications and applets with emphasis on business application programs using graphical user interfaces. Business applications include multimedia programs, network processing, and database connectivity.

### GRADUATE COURSES

#### **IDS 609. Information Technology for Business (3)**

Information technology to include major horizontal technologies: hardware, software, data, telecommunications, and Internet. Focus on emerging information technologies that will provide value to organizations. Technical aspects of information technologies and their impacts on organizations.

#### **IDS 610. Electronic Business Technologies (3)**

Prerequisite: Classified graduate standing.

Basic concepts of e-business technologies. Development tools, languages, processes, and methodologies for electronic business applications.

#### **IDS 620. Electronic Business Infrastructures (3)**

Prerequisite: Information and Decision Systems 610.

Advanced information technology concepts associated with e-business and e-commerce infrastructure and systems architecture.

#### **IDS 630. IT Management Strategies for E-Business (3)**

Prerequisite: Information and Decision Systems 620.

Analysis and application of strategic information technology management initiatives, designs, and architectures for attaining an organization's e-business goals.

#### **IDS 680. Information Systems Hardware and Software (3)**

Prerequisite: Information and Decision Systems 609.

Computer architecture, programming languages, programming systems, and operating systems.

#### **IDS 683. Program, Data, and File Structures With C++ (3)**

Prerequisite: Information and Decision Systems 515 or 609.

C++ implementation of program structures and data structures commonly used in business processing. File organization and processing strategies. Improving storage and processing efficiencies.

#### **IDS 686. Database Management Systems (3)**

Prerequisite: Information and Decision Systems 609.

Applications of database management systems in business. Design and administration of database processing systems applications.

#### **IDS 687. Data Communications and Distributed Data Processing (3)**

Prerequisite: Information and Decision Systems 680.

Applications of data communications hardware, software, and services in business data processing. Design and implementation of network applications and distributed processing systems.

#### **IDS 688. Information Systems in Organizations (3)**

Prerequisite: Classified graduate standing.

Evolutionary role of information systems: from support function to strategic entity, planning, organizing, and administering the information systems function. Information and its relationships to business decision making. Global and ethical aspects of information technology.

#### **IDS 691. Decision Support Systems (3)**

Prerequisite: Completion of MBA core or MS prerequisites.

Design, implementation, and integration of computerized decision support systems into business management. Problem representation, modeling, and simulation.

### **IDS 695. Information Systems Development I (3)**

Prerequisite: Information and Decision Systems 609.

System development life cycle. Life cycle methodologies with emphasis on analysis of requirements using structured methodology and automated tools. Feasibility study, developmental strategies, needs management, and prototyping.

### **IDS 696. Seminar in Selected Topics (3)**

Intensive study in specific areas of information systems. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### **IDS 697. Information Systems Development II (3)**

Prerequisite: Information and Decision Systems 695.

Business information systems design, installation, and implementation as part of the systems development life cycle. Structured design, prototyping, controls, the make vs. buy decision, selection of hardware and software.

### **IDS 705. Communication Strategies (3)**

Prerequisite: Classified graduate standing.

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

### **IDS 744. Seminar in Quality and Productivity Management (3)**

Prerequisite: Business Administration 662.

Advanced concepts, methods, and implementations of quality and productivity management in the context of global economy. Total quality management, statistical process control, quality function deployment, Taguchi approach, Baldrige process, international quality standards and reengineering.

### **IDS 748. Seminar in Advanced Data Analysis (3)**

Prerequisite: Business Administration 652.

Applications of various statistical techniques and design of experiments for business. Advanced ANOVA and Taguchi designs, multiple regression modeling methodologies, and multivariate techniques, such as factor analysis, judgement analysis, multiple discriminant analysis, multivariate analysis of variance, and canonical correlation.

### **IDS 749. Seminar in Applied Behavioral Measurement (3)**

Prerequisite: Business Administration 652.

Measurement procedures useful in analyzing such areas as teamwork, leadership, job satisfaction, attitudes, motivation, total quality management, and customer satisfaction. Development and use of technologies including Likert, Thurstone, Guttman, paired-comparison, forced-choice, semantic-differential, C-E diagrams, and review of existing instruments used in business-related settings.

### **IDS 750. Project Management (3)**

Prerequisite: Business Administration 662.

Managing projects. Includes network modeling, defining activities and events, cost estimating and reporting, single and multiple resource allocation and leveling. Computerized project management software will be used.

### **IDS 753. Global Supply Chain Management (3)**

Prerequisite: Classified graduate standing.

Advanced concepts, method, and implementation of global supply chain strategies and management; global sourcing and supplier development; global logistic network and management; information technology and e-business for supply chain; supply chain design and optimization; performance metrics and measurements.

### **IDS 754. Seminar in Operations Planning and Strategy (3)**

Prerequisite: Business Administration 662.

Strategic issues in operations and their integration with other functional areas. Includes operations strategy, product and process planning, experience curves, productivity measurements, and information technology implementation.

### **IDS 790. Directed Readings in Information and Decision Systems (3) Cr/NC**

Prerequisite: Advancement to candidacy.

Preparation for the comprehensive examination for students.

### **IDS 797. Research (3) Cr/NC/RP**

Prerequisite: Advancement to candidacy.

Research in the area of information and decision systems. Maximum credit six units applicable to a master's degree.

### **IDS 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

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# Management

In the College of Business Administration

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## Faculty

David R. Hampton, Ph.D., J.D., Professor of Management, Chair of Department  
Alex F. De Noble, Ph.D., Professor of Management  
Michael L. Hergert, Ph.D., Professor of Management  
Dong I. Jung, Ph.D., Professor of Management  
Kenneth E. Marino, Ph.D., Professor of Management, Associate Dean and Director, Graduate Program, College of Business Administration  
Beth G. Chung-Herrera, Ph.D., Associate Professor of Management  
Craig P. Dunn, Ph.D., Associate Professor of Management  
Sanford B. Ehrlich, Ph.D., Associate Professor of Management, Executive Director, Entrepreneurial Management Center  
Lawrence C. Rhyne, Ph.D., Associate Professor of Management (Graduate Adviser)  
Lori V. Ryan, Ph.D., Associate Professor of Management  
Gangaram Singh, Ph.D., Associate Professor of Management  
Chamundeswari Sundaramurthy, Ph.D., Associate Professor of Management  
Michelle A. Dean, Ph.D., Assistant Professor of Management  
Lena T. Rodriguez, Ph.D., Assistant Professor of Management  
Mindy S. West, Ph.D., Assistant Professor of Management (IVC)

## Courses Acceptable on Master's Degree Programs in Business Administration (MGT)

### UPPER DIVISION COURSE

#### **MGT 596. Advanced Topics in Management (3)**

Prerequisite: Six upper division units in management.  
Advanced special topics in management. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### GRADUATE COURSES

#### **MGT 626. Competitive Analysis of Industries (3)**

Prerequisite: Business Administration 651.  
Concepts and tools for studying structure of industries and processes of structural change in industries. Implications of public policy decisions and competitive actions on strategy formulation are explored in several industry settings.

#### **MGT 669. Human Resource Management (3)**

Prerequisites: Business Administration 651.  
Design of organizational systems for accomplishing work through individuals and groups. Strategic, legal, and ethical considerations in staffing, appraising, developing, and rewarding people at work.

#### **MGT 670. Strategic Human Resources Planning and Staffing (3)**

Prerequisite: Business Administration 651.  
Estimating demand and supply of labor. Designing staffing systems for attaining strategic objectives and developing human resources. Study of legal, global, and other environmental influences in staffing decisions. International issues and comparisons of staffing practices.

#### **MGT 671. Seminar in Employee Involvement in Management (3)**

Prerequisite: Business Administration 651.  
Patterns of employee participation in decision making. Comparative study of representative participation, gainsharing, employee ownership, empowerment, work teams, quality circles, and job enrichment in union and non-union settings in the U.S. and foreign countries.

#### **MGT 672. International Human Resource Management (3)**

Prerequisite: Business Administration 651.  
Managing human resources in a global economy: theories, implementation, and evaluation of IHRM.

#### **MGT 696. Seminar in Selected Topics (3)**

Intensive study in specific areas of management. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

#### **MGT 710. Seminar in World Business Environment (3)**

Prerequisite: Business Administration 651.  
Nature, dimensions and motives of international business. Impact of environmental factors. Nature of multinational corporation, importance of national and multilateral controls and policies for international business management.

#### **MGT 720. Seminar in Behavioral Sciences for Management (3)**

Prerequisite: Business Administration 651.  
Applications of findings from behavioral sciences to management problems and decisions. Study of organization cultures and subcultures. Impact of human behavior on the enterprise.

#### **MGT 721. Seminar in Group Processes and Leadership (3)**

Prerequisite: Business Administration 651.  
Perceptions and processes in work groups. Experience in interpersonal networks, influence and rewards, stereotypes; managing differences and conflicts.

#### **MGT 722. Seminar in Business Ethics and Social Institutions (3)**

Prerequisite: Business Administration 651.  
Ethical and social aspects of current issues in business and society. Changing role of stakeholders including consumers, shareholders, and employees. Assessment of operation, functioning and regulation of the market system.

#### **MGT 723. Seminar in International Strategic Management (3)**

Prerequisite: Completion of MBA core or MS prerequisites.  
Strategic decision making in managing international enterprises. General management problems in directing and controlling transnational companies, including entry, acquisitions and joint ventures. Cases and readings to acquaint students with worldwide business practices.

#### **MGT 724. Entrepreneurship (3)**

Prerequisite: Business Administration 651.  
Examination of the entrepreneurial approach; concepts, theory and techniques of managerial innovation and implementation; analysis of entrepreneurial skills.

#### **MGT 725. Seminar in Negotiations (3)**

Prerequisite: Business Administration 651.  
Negotiation principles with emphasis on international business contexts. Basic concepts, skills, and simulations of negotiation processes.

**MGT 729. Seminar in Organizational Issues (3)**

Prerequisite: Business Administration 651.

Issues in organizations in modern society: organization design, environmental interface, and political processes. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**MGT 731. Seminar in Strategic Management of Technology and Innovation (3)**

Prerequisite: Completion of MBA core or MS prerequisites.

Assessment of technological competencies and formulation of entry strategies for high-technology markets. Managing project teams and high-technology professionals.

**MGT 740. Seminar in Business Management and the Natural Environment (3)**

Prerequisite: Graduate standing.

Environmental issues relating to business management. Topics include social and ethical approaches to the environment, environmental crises, and environmental movement. Cases and projects help students develop a philosophy integrating business and environmental concerns.

**MGT 741. Seminar in Organization Power and Politics (3)**

Prerequisite: Business Administration 651.

Management of power and politics in organizations as they relate to resource allocation, decisions, personnel evaluation, and strategy and policy issues.

**MGT 742. Seminar in Business and the Good Society (3)**

Prerequisite: Graduate standing.

Role of the firm in creating the "good society" through in-depth study of social and philosophical principles underlying business enterprise. Assumptions underlying capitalist economic thought are surfaced, and relationship between "market failure" and "government regulation" examined.

**MGT 743. Seminar in Business Plan Development (3)**

Prerequisite: Management 724.

Principles and techniques for developing a business plan.

**MGT 744. Seminar in Managing the Growing Firm (3)**

Prerequisite: MBA core or admission to degree curriculum for M.S. degree business administration.

Problems and issues confronting entrepreneurs beyond start-up of a new venture. Focus on issues from both entrepreneur and investor perspectives.

**MGT 745. Seminar in Corporate Entrepreneurship (3)**

Prerequisite: MBA core.

Challenges and issues confronting organizations seeking to pursue new business opportunities. Senior management charged with the mandate of pursuing new business opportunities and employees desiring to champion new ventures under corporate umbrella.

**MGT 746. Seminar in Corporate Governance (3)**

Prerequisite: Classified graduate standing.

Roles and interrelationships among members of corporate governance triad: managers, directors, and shareholders. History and theories of corporate governance, ethical obligations underlying the three roles, and case studies.

**MGT 790. Directed Readings in Management (3) Cr/NC**

Prerequisite: Advancement to candidacy.

Preparation for the comprehensive examination for those students in the MSBA program under Plan B.

**MGT 797. Research (3) Cr/NC/RP**

Prerequisite: Advancement to candidacy.

Research in the area of management. Maximum credit six units applicable to a master's degree.

**MGT 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

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# Marketing

In the College of Business Administration

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## Faculty

George E. Belch, Ph.D., Professor of Marketing,  
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Michael A. Kartalija, Ph.D., Professor of Marketing  
Kathleen A. Krentler, D.B.A., Professor of Marketing  
Massoud M. Saghafi, Ph.D., Professor of Marketing  
(Graduate Adviser, International Business)  
Donald Sciglimpaglia, D.B.A., Professor of Marketing  
Ronald W. Stampfl, Ph.D., Professor of Marketing  
Pradeep K. Tyagi, Ph.D., Professor of Marketing  
(Graduate Adviser-MBA)  
William E. Baker, Ph.D., Associate Professor of Marketing  
Matti Aistrich, D.B.A., Assistant Professor of Marketing  
Sara L. Appleton-Knapp, Ph.D., Assistant Professor of Marketing  
Heather L. Honea, Ph.D., Assistant Professor of Marketing  
Cristel A. Russell, Ph.D., Assistant Professor of Marketing

## Courses Acceptable on Master's Degree Programs in Business Administration (MKTG)

### GRADUATE COURSES

#### **MKTG 696. Seminar in Selected Topics (3)**

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

#### **MKTG 701. Seminar in Marketing Planning and Programs (3)**

Prerequisite: Business Administration 655.

Analysis and planning of marketing programs. Emphasis on quantitative assessment, market measurement and forecasting, budgeting, organization and development of marketing strategy. Integration of marketing programs concerning product plans, pricing, promotion and distribution.

#### **MKTG 760. Seminar in Consumer Behavior (3)**

Prerequisite: Business Administration 655.

The study of consumer behavior in relation to marketing strategy and the changing environment of business.

#### **MKTG 761. Product Innovation Management (3)**

Prerequisite: Business Administration 655.

New product development and issues related to overall management of product innovation in context of entrepreneurial opportunity, start-up ventures and existing organizations. Focus on planning, design, and implementation of marketing strategy.

#### **MKTG 762. Seminar in Integrated Marketing Communication (3)**

Prerequisite: Business Administration 655.

Theory and application of integrated marketing communication to advertising, promotions, public relations/publicity, personal selling and direct marketing (including Internet).

#### **MKTG 763. Seminar in Sales Management (3)**

Prerequisite: Business Administration 655.

Sales management and personal selling decisions and strategies in business organizations.

#### **MKTG 765. Seminar in Marketing and Public Policy (3)**

Prerequisite: Business Administration 655.

Relationship between marketing activities of business organizations and concerns or problems these activities generate from standpoint of public policy and public interest.

#### **MKTG 766. Seminar in Marketing Research (3)**

Prerequisite: Business Administration 655.

Application of statistical and mathematical methods to market problems, consumer research, and product analysis.

#### **MKTG 767. Seminar in Business Marketing Management (3)**

Prerequisite: Business Administration 655.

Management of marketing decisions particular to organizational customers and prospects. Emphasizes marketing to private, commercial, institutional, and governmental customers in both domestic and global markets.

#### **MKTG 768. Seminar in Internet Marketing and E-Business (3)**

Prerequisite: Business Administration 655.

Theory and application of marketing utilizing the Internet and associated issues of electronic commerce.

#### **MKTG 769. Seminar in International Marketing (3)**

Prerequisite: Business Administration 655.

The impact of cultural, social, political, economic, and other environmental variables on international marketing systems and the decision-making process of multinational marketing operations.

#### **MKTG 770. Marketing of Technology (3)**

Prerequisite: Business Administration 655.

Marketing of high-technology products in fast-paced business environments. Concepts and practices related to development of marketing strategies and programs for technology including product, pricing, channel, and communications strategies. Technological innovations and marketing implications.

#### **MKTG 779. Advanced Marketing Strategy (3)**

Prerequisites: Business Administration 655 and advancement to candidacy.

Development, implementation and evaluation of marketing strategy and planning. Role of marketing planning in overall corporate strategic planning process. Use of contemporary techniques and models in strategic planning process.

#### **MKTG 790. Directed Readings in Marketing (3) Cr/NC**

Prerequisite: Advancement to candidacy.

Preparation for the comprehensive examination for those students in the MSBA program under Plan B.

#### **MKTG 797. Research (3) Cr/NC/RP**

Prerequisite: Advancement to candidacy.

Research in the area of marketing. Maximum credit six units applicable to a master's degree.

#### **MKTG 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

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# Chemistry

In the Department of Chemistry and Biochemistry  
In the College of Sciences

OFFICE: Geology/Mathematics/Computer Science 209  
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<http://www.sci.sdsu.edu/chemistry>

## Faculty

Carl J. Carrano, Ph.D., Professor of Chemistry,  
Chair of Department  
A. Stephen Dahms, Ph.D., Professor of Chemistry  
Douglas B. Grotjahn, Ph.D., Professor of Chemistry (Graduate  
Admissions Adviser)  
Robert P. Metzger, Ph.D., Professor of Chemistry  
Stephen B. W. Roeder, Ph.D., Professor of Chemistry and Physics  
William E. Stumph, Ph.D. Professor of Chemistry  
William G. Tong, Ph.D., Professor of Chemistry  
Dale A. Chatfield, Ph.D., Associate Professor of Chemistry  
Thomas E. Cole, Ph.D., Associate Professor of Chemistry  
Andrew L. Cooksy, Ph.D., Associate Professor of Chemistry  
David P. Pullman, Ph.D., Associate Professor of Chemistry  
(Graduate Adviser)  
Diane K. Smith, Ph.D., Associate Professor of Chemistry  
B. Mikael Bergdahl, Ph.D., Assistant Professor of Chemistry  
David J. Burkey, Ph.D., Assistant Professor of Chemistry  
Hong-Chang Liang, Ph.D., Assistant Professor of Chemistry  
John J. Love, Ph.D., Assistant Professor of Chemistry  
Shelli R. McAlpine, Ph.D., Assistant Professor of Chemistry  
Gillian H. Roehrig, Ph.D., Assistant Professor of Chemistry  
Lifang Sun, Ph.D., Assistant Professor of Chemistry

## Associateships

Graduate teaching associateships and graduate nonteaching associateships in chemistry are available to a limited number of qualified students. Application blanks and additional information may be secured from the graduate adviser in the Department of Chemistry and Biochemistry.

## General Information

The Department of Chemistry and Biochemistry offers graduate study leading to the Master of Arts, the Master of Science and the Doctor of Philosophy degrees in chemistry. The Ph.D. degree is offered jointly with the Department of Chemistry at the University of California, San Diego. Thesis research in all graduate programs is offered in the five traditional areas of chemistry, i.e., analytical chemistry, biochemistry, inorganic chemistry, organic chemistry, and physical chemistry.

The Department of Chemistry and Biochemistry at SDSU provides a substantial inventory of modern chemical instrumentation in support of teaching and research. Included are systems for the performance of nearly all major types of chemical separations; several GC- and two HPLC-mass spectrometric systems; 200, 300, and 500 MHz nuclear magnetic resonance (NMR) spectrometers; two FT infrared spectrometers; ultraviolet-visible spectrometric instruments for both atomic and molecular emission and absorption studies; electrochemical instrumentation for potentiometric, voltammetric and coulometric measurements; radiochemical instrumentation; and laser systems for spectroscopy. Several groups have inert-atmosphere gloveboxes for conducting research on air- and moisture-sensitive compounds. The University of California, San Diego and the Instituto Tecnológico de Tijuana provide access to X-ray crystallography. The departmental computer lab has 25 personal computers (Mac and PC) for general use, and numerous research-grade computers are housed in individual

laboratories. Access is also available to accounts at the San Diego Supercomputer Center. In-house support staff includes NMR, analytical instrument, and electronics technicians as well as a full-time shop technician for machining, plastic working, welding, and other fabrications needs.

## Admission to Graduate Study

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Chemistry and Biochemistry:

- (1) Two sets of official transcripts (in sealed envelopes) from each institution attended;
- (2) GRE General Test scores (for the Ph.D. program, also the chemistry test scores);
- (3) Three letters of reference from people who can comment on your academic and research abilities;
- (4) Personal statement, including your goals and motivation for graduate study;
- (5) Application for Teaching Associate position (if desired);
- (6) TOEFL examination report for international student applicants.

Mail or deliver your complete admissions package to:  
Department of Chemistry and Biochemistry  
(Attention: Graduate Admissions Director)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1030

## Section I. Master's Degree Programs

## Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as stated in Part Two of this bulletin. In addition, the student must pass orientation examinations in chemistry. These examinations should be taken during the first year in residence.

## Specific Requirements for the Master of Arts Degree

(Major Code: 19051)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of 30 units which includes a major consisting of at least 24 units in chemistry from courses listed below as acceptable on master's degree programs. At least 15 of these units must be in 600- and 700-numbered courses. Chemistry 711 and 791 are required. This degree is offered under the non-thesis, Plan B option, as described in Part Two of this bulletin. A written comprehensive examination is required.

## Specific Requirements for the Master of Science Degree

(Major Code: 19051)

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Two of this bulletin. The student must also complete a graduate program of 30 units which includes a major consisting of at least 24 units in chemistry from courses listed below as acceptable on master's degree programs. At least 15 of these units must be in 600- and 700-numbered courses. Chemistry 791, 792, and 799A are required. Also, at least one 700 level chemistry course of at least two units below 790 is required. A student must pass a final oral examination on the thesis.

### Section II. Doctoral Program

<http://www.chemistry.sdsu.edu/chemistry/degrees.php#jdp>

## General Information

(Major Code: 19051)

The cooperating faculties of the Department of Chemistry and Biochemistry at San Diego State University and the Department of Chemistry at the University of California, San Diego possess complementary specialties that enable the doctoral student to gain familiarity with most areas in chemistry and to find research activity and direction in a great variety of specific problems.

The entering student will be required to have a mastery of the subjects usually presented in the undergraduate curriculum: physical, organic, analytical, and inorganic chemistry. All applicants will be expected to have taken the equivalent of one year of physics and of mathematics at least through integral calculus. Students should be prepared to take placement examinations which will be administered by a joint committee and will cover the fields of inorganic, organic and physical chemistry.

On admission to the program, the student is guided by Requirements for the Doctoral Degree Program given in Part Two of this bulletin. Students will normally spend their first year in the program completing their year of residency at the University of California, San Diego. It is desirable for the student to complete the qualifying examination by the end of the fifth semester and to be advanced to candidacy.

### Faculty

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

#### San Diego State University:

Graduate Advisers: Karen Peterson and David Pullman

Graduate Admissions: Douglas Grotjahn

Committee Members: Bergdahl, Burkey, Carrano, Chatfield, Cobble, Cole, Cooksy, Dahms, Grotjahn, Liang, Love, McAlpine, Metzger, Pullman, Roeder, Smith, Stumph, Sun, Tong

#### University of California, San Diego:

Graduate Adviser: Charles Perrin

Committee Members: Allison, Magde, Oesterreicher, Perrin, Sawrey

## Courses Acceptable on Master's and Doctoral Degree Programs in Chemistry (CHEM)

### UPPER DIVISION COURSES

#### CHEM 510. Advanced Physical Chemistry (3)

Prerequisite: Chemistry 410B.

Problems in chemical thermodynamics, statistical mechanics, chemical kinetics, quantum chemistry and molecular structure and spectroscopy, with applications.

#### CHEM 515. Computational Chemistry (3)

Prerequisites: Chemistry 410A and 410B.

Overview of modern computational chemistry. Use of computational chemistry tools and their application to problems of chemical interest.

#### CHEM 520A-520B. Inorganic Chemistry (3-3) I, II

Prerequisite: Credit or concurrent registration in Chemistry 410A. Chemistry 520A is prerequisite to 520B.

Nature of chemical bond and an advanced systematic study of representative and transition elements and their compounds.

#### CHEM 530. Physical 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.

#### CHEM 531. Synthetic Organic Chemistry (3)

Prerequisite: Chemistry 431.

Modern methods, strategies, and mechanisms in advanced organic synthesis. Retrosynthetic analysis of and synthetic routes towards biologically important compounds.

#### CHEM 537. Organic Qualitative Analysis (4)

Two lectures and six hours of laboratory.

Prerequisites: Chemistry 431 and credit or concurrent registration in Chemistry 410A. Recommended: Chemistry 417 and 457.

Chemical, physical, and spectral methods discussed and employed to determine structure of organic compounds. Purification and separation techniques stressed.

#### CHEM 538. Polymer Science (3)

(Same course as Physics 538.)

Prerequisites: Chemistry 200 or 202; Physics 197; and Chemistry 410B or Physics 360 or Mechanical Engineering 350 or 352.

Structure, synthesis, physical properties, and utilities of polymers.

#### CHEM 550. Instrumental Methods of Chemical Analysis (2) I

Prerequisites: Chemistry 231 and credit or concurrent registration in Chemistry 410A; concurrent registration in Chemistry 457 for undergraduate students only. Chemical Physics majors can replace the Chemistry 457 corequisite with credit or concurrent registration in Physics 311.

Theory and application of those instrumental methods of chemical separation and analysis most frequently used in all subdisciplines of chemistry.

#### CHEM 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.

### **CHEM 560A-560B. General Biochemistry (3-3) I, II**

Prerequisites: Chemistry 431 and credit or concurrent registration in Chemistry 410A.

The structure, function, metabolism, and thermodynamic relationships of chemical entities in living systems. Chemistry 560A is not open to students with credit in Chemistry 365. Chemistry 560B is not open to students with credit in Chemistry 361, 562 or 563.

### **CHEM 562. Intermediary Metabolism (2)**

Prerequisites: Chemistry 560A or Chemistry 365 and 368.

Catabolic and biosynthetic pathways of carbohydrate, lipid, amino acid, and nucleotide metabolism; TCA cycle, mitochondrial and chloroplast electron transport chains, ATP generation and their interactions and control. Not open to students with credit in Chemistry 361 or 560B.

### **CHEM 563. Nucleic Acid Function and Protein Synthesis (2)**

Prerequisites: Chemistry 560A or Chemistry 365 and 368.

DNA replication, RNA transcription, RNA processing, and protein translation, including chemical mechanisms of synthesis and cellular mechanisms of regulating gene expression; genomics, recombinant DNA, and DNA topology. Not open to students with credit in Chemistry 361 or 560B.

### **CHEM 564. Receptor Biochemistry and Protein Modification (2)**

Prerequisites: Chemistry 560A or Chemistry 365 and 368.

Biochemical study of receptors, second messengers, and cellular proteins that participate in extracellular and intracellular communication, with focus on protein structures, post-translational modifications, and biochemical mechanisms that regulate receptors and effector enzymes.

### **CHEM 567. Biochemistry Laboratory (3) II**

One lecture and six hours of laboratory.

Prerequisite: Chemistry 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.

### **CHEM 571. Environmental Chemistry (3)**

Prerequisites: Chemistry 231 and 251; consent of instructor for all other majors.

Fundamentals of chemistry applied to environmental problems. Chemistry of ecosystems; analysis of natural constituents and pollutants; sampling methods; transport of contaminants; regulations and public policy.

### **CHEM 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

### **CHEM 711. Chemical Thermodynamics (3)**

Prerequisite: Chemistry 410B.

Chemical thermodynamics and an introduction to statistical thermodynamics.

### **CHEM 712. Chemical Kinetics (3)**

Prerequisite: Chemistry 410B.

Theory of rate processes; applications of kinetics to the study of reaction mechanisms.

### **CHEM 713. Quantum Chemistry (3)**

Prerequisite: Chemistry 410B.

Quantum mechanics of atomic and molecular systems; applications to chemical bonding theory.

### **CHEM 722. Structural Methods in Inorganic Chemistry (3)**

Prerequisite: Chemistry 520A.

Spectroscopic and analytical techniques used in structural elucidation of inorganic and organometallic compounds, with emphasis on interpretation of spectral data.

### **CHEM 730. Advanced Topics in Organic Chemistry (1-3)**

Prerequisite: Chemistry 431.

Selected topics in organic chemistry. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **CHEM 731. Mechanisms of Organic Reaction (3)**

Prerequisites: Chemistry 410B and 431.

Reactivity and mechanism in organic reactions.

### **CHEM 732. Advanced Organic Chemistry (3)**

Prerequisite: Chemistry 431.

Applications and limitations of organic reactions from the viewpoint of synthesis.

### **CHEM 750. Advanced Topics in Analytical Chemistry (1-3)**

Prerequisite: Chemistry 550.

Selected topics from the field of analytical chemistry. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **CHEM 751. Separations Science (3)**

Prerequisites: Chemistry 550 and 711.

Theoretical bases for separation techniques important in analytical chemistry. Chemical and physical interactions between components of different classes of separation systems, including selection and optimization of operational parameters.

### **CHEM 752. Mass Spectrometry (3)**

Prerequisites: Chemistry 410B and 550.

Theory and practice in analysis of volatile and involatile organic and inorganic compounds, basic design principles, theory of ionization processes; interpretation of mass spectra.

### **CHEM 753. Analytical Spectroscopy (3)**

Prerequisite: Chemistry 550.

Theory and application of atomic and molecular absorption, emission and fluorescence methods. Modern optical instrumentation and methods of analysis. Nonlinear laser spectroscopic methods in chemical analysis.

### **CHEM 754. Electroanalytical Chemistry (3)**

Prerequisite: Chemistry 550.

Principles of electrochemistry. Theory and practice in use of electrochemical techniques to understand electrode reactions and for quantitative analysis. Other important applications of electrochemistry.

### **CHEM 762. Enzymology (2)**

Prerequisite: Credit or concurrent registration in Chemistry 410B.

Theory and techniques used in the study of the mechanism of action of enzymes.

### **CHEM 763. Cellular Regulation (2)**

Prerequisite: Chemistry 560B.

The biochemistry of cellular regulatory mechanisms in eucaryotic cells. The regulation of gene transcription, in mRNA translation and post-translational processes, including the mechanism and regulation of intracellular protein turnover.

### **CHEM 764. Membrane Biochemistry (1-3)**

Prerequisite: Chemistry 560B.

Membrane structure and function. Biophysical and biochemical properties of membranes from prokaryotic and eucaryotic cells and animal cell viruses; biosynthesis and assembly of membrane components; molecular basis of solute transport, energy coupling, cell surface transformation, and cellular recognition, adhesion and fusion.

**CHEM 790. Seminar (1-3)**

An intensive study in advanced chemistry. May not be substituted for Chemistry 791. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**CHEM 791. Research Seminar (1)**

Prerequisite: Consent of department chair.

Discussions on current research by students, faculty, and visiting scientists. Each student will make a presentation based on the current literature.

**CHEM 792. Bibliography (1)**

Exercise in the use of basic reference books, journals, and specialized bibliographies, preparatory to the writing of a master's project or thesis.

**CHEM 797. Research (1-3) Cr/NC/RP**

Prerequisite: Consent of instructor.

Research in one of the fields of chemistry. Maximum credit six units applicable to a master's degree.

**CHEM 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

**CHEM 799A. Thesis (3) Cr/NC/RP**

Prerequisite: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**CHEM 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

**CHEM 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Independent investigation in the general field of the dissertation.

**CHEM 899. Doctoral Dissertation (1-15) Cr/NC/RP**

Prerequisites: An officially constituted dissertation committee and advancement to candidacy.

Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

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# Child and Family Development

In the College of Professional Studies and Fine Arts

OFFICE: Professional Studies and Fine Arts 413

TELEPHONE: (619) 594-5380

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E-MAIL: troberts@mail.sdsu.edu

## Faculty

\*Thomas W. Roberts, Ph.D., Professor of Child and Family Development, Chair of Department (Graduate Adviser)

\*Carolyn K. Balkwell, Ph.D., Professor of Child and Family Development

\*Shulamit N. Ritblatt, Ph.D., Associate Professor of Child and Family Development

\*Audrey Hokoda, Ph.D., Assistant Professor of Child and Family Development

## Faculty Committee for Child and Family Development

Stuart C. Aitken, Ph.D., Professor of Geography

James R. Beatty, Ph.D., Professor of Information and Decision Systems

Thereasa A. Cronan, Ph.D., Professor of Psychology

Shoshana A. Grossbard-Shechtman, Ph.D., Professor of Economics

Melbourne F. Hovell, Ph.D., Professor of Public Health

Margie K. Kitano, Ph.D., Professor of Special Education

John A. Landsverk, Ph.D., Professor of Social Work

Alberto M. Ochoa, Ed.D., Professor and Department Chair of Policy Studies in Language and Cross-Cultural Education

Joseph M. Price, Ph.D., Professor of Psychology

Judy S. Reilly, Ph.D., Professor of Psychology

Brian H. Spitzberg, Ph.D., Professor of Communication

David W. Strom, Ed.D., Professor of Teacher Education

Carolyn L. Walker, Ph.D., Professor of Nursing

Adelaida R. del Castillo, Ph.D., Associate Professor of Chicana and Chicano Studies

Margaret Field, Ph.D., Associate Professor of American Indian Studies

Vanessa L. Malcarne, Ph.D., Associate Professor of Psychology

Gerald Monk, Ph.D., Associate Professor of Counseling and School Psychology

Linda L. Terry-Guyer, Ed.D., Associate Professor of Counseling and School Psychology

Charlotte Webb, Ph.D., Associate Professor of Linguistics

André J. Branch, Ph.D., Assistant Professor of Teacher Education

\*Serves on the Faculty Governing Board which makes recommendations on admissions, curriculum, and thesis committee membership.

For information regarding graduate teaching associateships, coursework, and research experience leading to a Master of Science degree in child development, contact the adviser, Dr. Thomas W. Roberts.

## General Information

The Department of Child and Family Development offers interdisciplinary graduate study leading to the Master of Science degree in child development. Graduate teaching associateships and graduate assistantships in child development may be available to a limited number of qualified students.

## Master of Science Degree in Child Development

No new students are being admitted to this program during the 2004-2005 academic year. Contact Department of Child and Family Development.

The Master of Science degree in child development is one of only two child development programs available in the CSU. With 106 community college child development programs, following the mandate of the Ryan Act, in California and 13 undergraduate programs within the CSU system, the M.S. program in child development plays a major role in training professionals for the State and region.<sup>1</sup> The Department of Child and Family Development plays a leadership role in integration of curricula for community colleges and the CSU.<sup>2</sup>

Child development is an interdisciplinary area of study. The Master of Science degree, administered by the Department of Child and Family Development, draws on the expertise of a multidisciplinary faculty who are committed to the study of children within the context of diverse families and communities and who are from the following areas: Chicana and Chicano Studies, Economics, Geography, Gerontology, Psychology, Public Administration and Urban Studies, Public Health, Special Education, Social Work, Sociology, and Women's Studies. Emphasis in the program is placed on the central issue of "Child and Family Development Interventions" and offered through 13 courses from eight different departments.

Research interests and areas of expertise of the faculty include: abuse prevention, child and family advocacy, AIDS, attachment/bonding, children's literature, cross-cultural studies, curriculum development and evaluation, demography, economic development, families of divorce, full-inclusion programs for early interventions, intergenerational relationships, marital adjustment, multiethnic families, parent-child relationships, parent training programs, peer relationships, political interventions, public policy, cross-cultural studies, stress management and coping strategies, and train the trainers models for service delivery to children and families.

Opportunities exist to participate in an ongoing multicultural project studying images of grandparents and the elderly in children's books from different cultures. To date languages include Arabic, French, Hebrew, English, Russian, and Spanish. If you are interested in this project please contact Dr. Shulamit Ritblatt.

In addition, the Interdisciplinary Training Program on Early Intervention offers students field practice with transdisciplinary teams in hospitals, schools, and agency settings. Other field experience programs offer students supervised work in community agencies and children's programs. The Child Study Center focuses on undergraduate and graduate training and research by operating a Campus Children's Center in collaboration with SDSU's Associated Students and San Diego City Schools. All children's programs are mainstreamed and a wide range of special needs and at-risk populations are served by a full inclusion program.

<sup>1</sup> Legislative linkages include Social Security Title IVA (Title XX) Title 5 and Title 22.

<sup>2</sup> In collaboration with the Grossmont-Cuyamaca District strategies for competency-based curricula across all levels of child development programs throughout the State are being designed.

Graduates qualify for administrator, coordinator, or service provider positions in preschools, day care centers, schools, hospitals, hospice centers, clinics, residential institutions, counseling centers, mental health centers, public welfare agencies, family service agencies, family planning clinics, community programs, business and industry, and government agencies. Graduates also qualify as community college instructors and can continue their education for the doctoral degree in human development or a related field

### Admission to Graduate Study

Students will be admitted to the graduate program in child development only after careful consideration of their qualification by the Child Development Faculty Governing Board. All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin. In addition, a student applying for admission to the graduate program in child development must meet the following requirements:

1. A bachelor's degree in child development or related fields or consent of the Child Development Faculty Governing Board.
2. Satisfy the prerequisites of courses in the program of study. If students' undergraduate preparation is deemed insufficient, students will be required to complete specified courses in addition to the minimum of 30 units required for the master's degree in child development.
3. A grade point average of 3.0 in the last 60 semester units attempted.
4. Completion of the GRE General Test.

To be considered for admission to the graduate program in child development, an applicant must submit the following for review by the Child Development Faculty Governing Board which is in addition to the common admissions form:

1. Applicant's letter of intent which includes reason for seeking the degree and career goals.
2. Three letters of recommendation, one of which must be from an academic reference and another from an occupational reference.
3. A written personal statement by the applicant discussing background, interests, experiences, abilities, and career goals as they apply to the applicant's desire for a graduate degree in child development.
4. Completion of a telephone or in person interview conducted by one or more members of the Child Development Faculty Governing Board.
5. Two sets of official transcripts.

### Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Two of this bulletin, have identified a thesis research adviser, taken CFD 790 with a grade of B or better, and have had their research topic approved by their thesis advisers.

### Specific Requirements for the Master of Science Degree in Child Development

(Major Code: 08231)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, students must complete a graduate program of at least 30 units including at least 18 units of 600- and 700-numbered courses.

All students must complete:

1. A core sequence of four courses to include Child and Family Development 634, 670, 790, and Psychology 670A or Public Health 602.
2. A 15-unit specialization, chosen in conjunction with the program adviser, six units of which must be from a department other than Child and Family Development.
3. Child and Family Development 799A, Thesis.

### Courses Acceptable on Master's Degree Program in Child Development (CFD)

#### UPPER DIVISION COURSES

#### CFD 536. Divorce and Remarriage (3) II

Prerequisites: Child and Family Development 335 and Sociology 101. **Proof of completion of prerequisites required:** Copy of transcript.

Integration of family theories and research findings. Emphasis on adjustment to divorce and remarriage throughout life cycles, across cultures, social classes, and ethnicities.

#### CFD 537. Child Abuse and Family Violence (3) I, II

Prerequisites: Child and Family Development 270 and 371; consent of instructor for graduate students. **Proof of completion of prerequisites required:** Copy of transcript.

Multidisciplinary approach to child abuse and family violence including maltreatment, mistreatment, neglect, sexual abuse.

#### CFD 570. Infant/Toddler Development (3) I

Prerequisite: Child and Family Development 275 or Psychology 230 with grade of C (2.0) or better. **Proof of completion of prerequisite required:** Copy of transcript.

Physiological, psychological, cognitive, social, and cultural development of the human organism from conception through three years of age.

#### CFD 575. Public Policy and Professional Ethics in Child and Family Development (3)

Prerequisites: Child and Family Development 375; 376A, 376B, or 376C; and 536 or 537 or 590. **Proof of completion of prerequisites required:** Copy of transcript.

Public policy and professional ethics as applied to child and family development, programs, and research.

#### CFD 577. Advanced Administration of Child Development Programs (3) II

Prerequisite: Child and Family Development 477. **Proof of completion of prerequisite required:** Copy of transcript.

Problem analysis and development of successful organizational strategies for child development program delivery. Leadership, effective communication, social and ethical issues from a multicultural perspective.

#### CFD 578. Parent-Child Relationships Across the Life Span (3) I

Prerequisites: Child and Family Development 335 and 370. **Proof of completion of prerequisites required:** Copy of transcript.

Multidisciplinary approach to the parent-child relationship as it continues and changes throughout the life of the dyad, including study of normative and nonnormative life events.

#### CFD 590. Developmental Dysfunctions (4) I, II

Three lectures and three hours of laboratory.  
Prerequisite: Child and Family Development 270 or Psychology 230, and completion of 12 upper division units in child and family development with a grade of C (2.0) or better for majors; consent of instructor for graduate students. **Proof of completion of prerequisites required:** Copy of transcript.

Adaptive and maladaptive processes throughout life span with emphasis on emotional, psychological, and physical disorders. Etiology, development, and adjustment. Directed experience with special needs individuals and their families.

## Child and Family Development

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### **CFD 596. Advanced Studies in Child and Family Development (1-6)**

Prerequisite: Nine upper division units in child and family development.

Advanced study of selected topics. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of nine units of 596. No more than six units of 596 may be applied to either the bachelor's or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### **CFD 597. Child and Family Development Field Experiences (1) I, II**

Prerequisites: Fifteen upper division units in child and family development with a grade of B (3.0) or better in courses selected from Child and Family Development major. Concurrent registration in Child and Family Development 597L. **Proof of completion of prerequisites required:** Copy of transcript.

Current issues and career preparation in the field of child and family development.

### **CFD 597L. Child and Family Development Field Experiences Laboratory (2) Cr/NC I, II**

Prerequisites: Fifteen upper division units in child and family development with a grade of B (3.0) or better in courses selected from Child and Family Development major. Concurrent registration in Child and Family Development 597. **Proof of completion of prerequisites required:** Copy of transcript.

Supervised work experiences under joint supervision of agency heads and course instructor.

## GRADUATE COURSES

### **CFD 634. Seminar in Family Processes (3)**

Prerequisite: Child and Family Development 335.

Analysis of selected research in family structure, development, and crisis.

### **CFD 670. Seminar: Child Development and Guidance (3)**

Prerequisite: Six upper division units in child and family development.

Emphasis on personality theories and on research and clinical findings relevant to systematic study of human development and the guidance of children.

### **CFD 671. Seminar in Human Development (3)**

Prerequisite: Six upper division units in child and family development.

Analysis of selected research in human development. May be repeated with new content for maximum credit six units.

### **CFD 697. Advanced Field Experiences (3) Cr/NC**

Prerequisite: Child and Family Development 670 or 671.

Advanced application of human developmental theories and techniques in various community settings.

### **CFD 790. Research Methods (3)**

Prerequisite: Approval of graduate program adviser.

Analysis of research in the area of child and family development; criteria and procedures for conducting research.

### **CFD 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of staff; to be arranged with the chair and instructor and approval of graduate program adviser.

Individual study. Maximum credit six units applicable to a master's degree.

### **CFD 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a thesis for the master's degree.

### **CFD 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

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# City Planning

In the School of Public Administration and Urban Studies  
In the College of Professional Studies and Fine Arts

**OFFICE: Professional Studies and Fine Arts 100**  
**TELEPHONE: (619) 594-6224**  
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## Faculty

Louis M. Rea, Ph.D., Professor of Public Administration and Urban Studies, Director of School of Public Administration and Urban Studies  
Roger W. Caves, Ph.D., Program Director, Professor of Public Administration and Urban Studies (Graduate Coordinator)  
Lawrence A. Herzog, Ph.D., Professor of Public Administration and Urban Studies  
Sherry Ryan, Ph.D., Assistant Professor of Public Administration and Urban Studies

## General Information

Public Administration and Urban Studies offers graduate study leading to the Master of City Planning degree. Research facilities provided include the Institute of Public and Urban Affairs and the Public Administration Center.

The San Diego metropolitan community affords significant internship opportunities for the graduate student in federal, state, and local government agencies.

## Master of City Planning Degree

### Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. The student must possess a bachelor's or higher degree in sociology, geography, political science, economics, architecture, or landscape architecture, or any fields related to planning (students with degrees other than those listed may be allowed to enter the program under appropriate conditions). In the event that deficiencies occur in a student's background and training, the graduate committee will examine the student's past record and recommend a program to make up the deficiencies.

Students seeking admission to the graduate program in urban planning which leads to the Master of City Planning degree should address their inquiries to the director of the program. Detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms. As there are specific requirements for the program it is not sufficient merely to file the general university admission forms. Students are admitted to the program in the fall and spring semesters of each year.

Upon admission to the program, the student must meet with the graduate adviser to determine the number of units of internship needed to satisfy the degree requirements.

### Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, as described in Part Two of this bulletin and be recommended by faculty. In order to be recommended for advancement, a student must have (1) achieved a grade point average of 3.0 in 15 units of city planning courses, or (2) passed satisfactorily a written examination in areas of deficiency. The examination will be offered at the end of the spring semester for all students who have completed 12 or more units of study toward the master's degree.

## Specific Requirements for the Master of City Planning Degree

(Major Code: 02061)

In addition to meeting the requirements for classified graduate standing for the purpose of pursuing the Master of City Planning degree, the student must complete an approved program of studies consisting of at least 48 units of approved 500-, 600-, and 700-numbered courses, with no more than nine units of 500-level courses, to include:

- PA 525 The U.S. City Planning Process (3)  
CP 625 Quantitative Techniques in Urban Planning (6)  
CP 630 Seminar in Urban Planning Implementation (3)  
CP 640 Seminar in Urban Planning Theory (3)  
CP 670 History of Urban Planning (3)  
CP 690 Seminar in Land Use Planning Principles and Techniques (3)  
CP 700 Urban Design and Land Use Planning Studio (6)
- Nine units of 600- and 700-numbered courses in planning elective courses, readings and research.
- CP 796 Internship in Urban Planning (3-6) Cr/NC
- PA 604 Methods of Analysis in Public and Urban Affairs (3)
- Other electives to complete program selected with the approval of adviser.
- Students in Plan B are required to pass comprehensive written examinations in general city planning and in three areas of study. Students who have approval of the graduate adviser to pursue Plan A must include on their programs City Planning 799A, Thesis.

At least 39 units must be completed in residence at San Diego State University, and at least 24 units of program courses shall be enrolled in and completed after advancement to candidacy.

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

## Courses Acceptable on Master's Degree Program in City Planning (C P)

### GRADUATE COURSES

#### C P 620. Seminar in Urban Planning Methodologies (3)

Procedures and analytical techniques for advanced urban planning analysis.

#### C P 625. Quantitative Techniques in Urban Planning (6)

Three lectures and nine hours of laboratory.

Prerequisite: Public Administration 604.

Contemporary techniques and methodologies of planning analysis; a practicum emphasizing survey research, environmental impact techniques; case studies in demographic and economic analysis.

**C P 630. Seminar in Urban Planning Implementation (3)**

Prerequisite recommended: City Planning 620.

Analysis of the content and function of zoning, subdivision regulation, codes, capital budgeting, urban renewal, model cities, and other implementation methods and programs.

**C P 635. Seminar in Housing and Housing Policy (3)**

Study, definition and analysis of housing needs and problems. Public policies and programs addressed to housing issues. Alternative solutions and the role of the private and public sectors.

**C P 640. Seminar in Urban Planning Theory (3)**

Prerequisite recommended: City Planning 630.

Alternative theories of planning and organization of the planning function. Emphasis on conceptual foundations, relationship to governmental structure, decision making, and ideological and ethical orientations.

**C P 665. Seminar in Urban and Regional Planning Analysis (3)**

Theories and techniques of urban and regional planning analysis.

**C P 670. History of Urban Planning (3)**

History of urban development and of the field of urban planning.

**C P 680. Seminar in Readings in Urban Planning (3)**

Selected topics in urban planning. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**C P 690. Seminar in Land Use Planning Principles and Techniques (3)**

Two lectures and three hours of laboratory.

Prerequisite: City Planning 630.

Land-use and physical planning principles and techniques at the regional, community, specific and subdivision planning levels.

**C P 700. Urban Design and Land Use Planning Studio (6)**

One lecture and ten hours of laboratory.

Prerequisite: City Planning 690.

Preparation of land-use plans and planning reports at the regional, community and subdivision levels.

**C P 710. Seminar in Theories of Urban Design (3)**

Perspectives and methodologies of contemporary urban design and its contribution toward improving the quality of the physical, social and economic environment.

**C P 720. Seminar in Land Use and Environmental Law (3)**

Cases and studies in zoning, coastal planning, growth management and environmental assessment.

**C P 730. Seminar in Urban Transportation Planning (3)**

Issues, techniques and practices in urban transportation planning with general emphasis on interrelations between transportation and land use planning.

**C P 796. Internship in Urban Planning (3-12) Cr/NC**

Students will be assigned to various government agencies and will work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences. Maximum credit twelve units.

**C P 797. Research in Urban Planning (3) Cr/NC/RP**

Prerequisite recommended: Consent of director of city planning program.

Research in one of the areas of urban planning. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**C P 798. Special Study (1-3) Cr/NC/RP**

Prerequisite recommended: Consent of staff.

To be arranged with director of city planning and instructor. Individual study. Maximum credit six units applicable to a master's degree.

**C P 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**C P 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned symbol of RP.

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

**C P 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Communication

In the College of Professional Studies and Fine Arts

**OFFICE: Professional Studies and Fine Arts 361**  
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**FAX: (619) 594-6246**  
**E-MAIL: socdesk@mail.sdsu.edu**

## Faculty

William F. Eadie, Ph.D., Professor of Communication,  
Director of the School of Communication

Susan A. Hellweg, Ph.D., Professor of Communication, Associate  
Director of the School of Communication

Janis F. Andersen, Ed.D., Professor of Communication,  
Interim Dean of the Graduate Division

Peter A. Andersen, Ph.D., Professor of Communication

Wayne A. Beach, Ph.D., Professor of Communication

George N. Dionisopoulos, Ph.D., Professor of Communication

David M. Dozier, Ph.D., Professor of Communication

Patricia J. Geist-Martin, Ph.D., Professor of Communication  
(Graduate Adviser to Specialization in Communication Studies)

Martha M. Lauzen, Ph.D., Professor of Communication

Myron W. Lustig, Ph.D., Professor of Communication

Barbara Mueller, Ph.D., Professor of Communication

Brian H. Spitzberg, Ph.D., Professor of Communication

K. Tim Wulfemeyer, Ed.D., Professor of Communication

Diane L. Borden, Ph.D., Associate Professor of Communication,  
Executive Assistant to the President

Joel J. Davis, Ph.D., Associate Professor of Communication  
(Graduate Adviser to Specialization in Mass Communication and  
Media Studies)

Donald R. Martin, Ph.D., Associate Professor of Communication,  
Associate Dean of the College of Professional Studies and Fine Arts

Valerie R. Renegar, Ph.D., Assistant Professor of Communication

Joseph E. Spevak, Ph.D., Assistant Professor of Communication

Heather Ward, Ph.D., Assistant Professor of Communication

Mei Zhong, Ph.D., Assistant Professor of Communication

John M. Eger, J.D., The Lionel Van Deerlin Professor of  
Communication and Public Policy

## Associateships

Graduate students are employed in the School of Communication in teaching, research, and other areas. Graduate teaching associateships in communication are available to a limited number of qualified students. A limited number of graduate associate positions also are available in the School of Communication for those with academic or professional experience in various research and creative areas. Contact the graduate advisers for further information. Applications are available online at <http://www.sdsu.edu/soc>. Submit application to the chair of the temporary hiring committee by March 1 for the subsequent fall semester and October 1 for the subsequent spring semester.

## General Information

The School of Communication offers graduate study leading to the Master of Arts degree in communication. The Master of Arts degree in communication prepares students either for additional graduate work leading to a doctoral degree or for various careers in industry.

## Master of Arts Degree in Communication

The Master of Arts degree in communication provides advanced studies in two areas of specialization: Communication Studies and Mass Communication and Media Studies. Each specialization prepares students for one of three career paths: 1) Rigorous theoretical and methodological studies prepare students for additional graduate work at the doctoral level. 2) Studies in specific content areas prepare students for leadership positions in key communication industries and professional areas. 3) Combining studies in communication with selected courses in the College of Education prepares students for teaching careers at the community college level. Placement of communication graduates in doctoral programs is excellent; communication professors recently rated this program as one of the top three master's programs in the nation. Other graduates occupy leadership positions in advertising, human resource development, media and telecommunications management, new media, organizational communication, organizational training, public relations, and telecommunications policy.

Research interests of faculty and students include conversation analysis, interpersonal communication, rhetorical criticism, relational communication, group communication, organizational communication, social influence processes, communication message and program strategies, instructional processes, media organizations and professionals, audience uses of media, media history, media production, media ethics, media law, new media studies and technologies, media criticism, media management, political communication, communication regulation and policy, international communication and intercultural communication.

Graduate students in the School of Communication have access to computer equipment to support research endeavors. Master's degree students are encouraged to work with faculty on research projects and to develop their own research programs.

## Admission to Graduate Study

Students will be admitted for the fall and spring semester. For fall admission, application packages must be received and complete by the previous March 1. For spring admission, application packages must be received and complete by October 1 (or August 31 for international students).

In addition to meeting the general requirements for admission to the University with classified graduate standing as outlined in Part Two of this bulletin, students applying for admission to the Master of Arts degree in communication are evaluated according to the following criteria:

1. Undergraduate major or minor in advertising, communication, film studies, journalism, radio-television, speech communication, public relations, or a related communication discipline. Those lacking adequate undergraduate preparation may be admitted conditionally to the program and are required to take one or more proficiency courses identified for each specialization, as determined by

the graduate adviser for that specialization. Proficiency courses do not count toward the 30 units of a student's graduate program.

2. Minimum grade point average of 2.85 (when A equals 4.0) in the last 60 semester (90 quarter) units attempted (this calculation may not include lower division courses taken after award of a baccalaureate degree).
3. All applicants must post a Graduate Record Examination (GRE) verbal score of 450 or higher; a GRE quantitative score of 450 or higher; a combined GRE verbal and quantitative score of 950 or higher; and a GRE writing assessment (GRE-W) of level 4 or higher.
4. For international applicants for whom English is not their first language, TOEFL paper scores of 550 (or 213 online) or higher and a Certificate in Advanced English (CAE), indicating successful passage of the reading, writing, listening, and English usage test offered by the Cambridge English for Life (EFL) testing program; or a score of 50 or higher on the Test of Spoken English (TSE) offered by the Educational Testing Service.
5. Three letters of recommendation from academic or professional references that speak to the student's ability to succeed in graduate studies.
6. A personal statement of purpose composed by the applicant that: 1) identifies the degree specialization that provides the best fit with the applicant's objectives, 2) describes the applicant's undergraduate and/or professional preparation for graduate studies in the program and specialization, and 3) articulates the personal and/or career objectives that graduate studies in communication will help the applicant pursue.
7. Students seeking transfer from the Master of Arts degree in television, film and new media production into the Master of Arts degree in communication must meet the admission requirements above.

### Advancement to Candidacy

In addition to meeting the general requirements for advancement to candidacy described in Part Two of this bulletin, students seeking the Master of Arts degree in communication must complete Communication 600A and 600B with a B grade or better prior to advancement.

### Specific Requirements for the Master of Arts Degree

(Major Code: 06011)

In addition to meeting the requirements for the Master of Arts degree as described in Part Two of this bulletin and the requirements for one of the following two communication specializations, the student must complete a minimum of 30 units in courses acceptable in master's degree programs. Unless otherwise approved by the graduate adviser, all students must complete Communication 600A during their first semester of graduate study with a grade of B or better and must complete Communication 600B by the end of the second semester of graduate study with a grade of B or better. At least 18 units of the total program must be in courses numbered 600-799. Approval of the graduate adviser is required for all courses numbered 500-599. With the approval of the graduate adviser, students may take up to six units of graduate coursework in departments other than the School of Communication. Students may not repeat any course in their program of study without consent of the graduate adviser and instructor.

#### Specialization in Communication Studies

This specialization provides advanced study of language, interaction, and communication in relational, cultural, and societal contexts. Individuals in the specialization draw from international developments in critical and cultural studies to explore culture and communication; develop a deeper understanding of the intercultural and international dimensions of communication; and explore communication as an interactive process across diverse social relationships, activities and contexts. The program of study within the specialization prepares students for scholarly or applied careers in communication.

**Proficiency Requirements.** Individuals must demonstrate relevant undergraduate coursework for their desired area of focus within the specialization. Individuals without adequate preparation will be asked to take up to three proficiency courses. Specific proficiency courses will be determined in consultation with the graduate adviser after admission to the program.

**Graduate Courses.** Students may select Plan A, thesis, by completing Communication 799A (3 units) or, if Plan B is selected, the student must complete three additional units of 600-700 level coursework in the School of Communication and pass the Comprehensive Examination in Communication. The remaining 27 units of the program must include completion of Communication 600A and 600B with a grade of B or better; six units selected from Communication 610, 620, 640, 660, 665; nine units selected from Communication 610, 620, 640, 660, 665, 696, 701, 706, 708, 715, 721, 735, 740, 747, 750, 755, 765, 766, 771, 792; and six units relevant to the specialization selected with the approval of the graduate adviser. No more than six units may be taken outside the School of Communication. No more than six units may be taken as special study (798).

#### Specialization in Mass Communication and Media Studies

This specialization offers advanced studies for individuals seeking additional knowledge of advertising, public relations, journalistic practices, emerging communication technologies, or the impact of mass communication practices on individuals, groups and society as a whole. The program of study within this specialization is appropriate for individuals who seek a career in the applied communication fields (journalism, advertising, public relations), who wish to pursue careers involving new media communication industries, who wish to teach at the community college level or who wish to continue studies of mass communication and media at the doctoral level.

**Proficiency Requirements.** Individuals must demonstrate relevant undergraduate coursework for their desired area of focus within the specialization. Individuals without adequate preparation will be asked to take up to three proficiency courses. Specific proficiency courses will be determined in consultation with the graduate adviser after admission to the program.

**Graduate Courses.** Students may select Plan A, thesis, by completing Communication 799A (3 units) or, if Plan B is selected, the student must complete three units of 600-700 level coursework in the School of Communication and pass the Comprehensive Examination in Communication. The remaining 27 units of the program must include completion of Communication 600A and 600B with a grade of B or better; six units selected from Communication 610, 620, 640, 660, 665; nine units selected from Communication 502, 503, 505, 506, 540, 560, 574, 575, 580, 581, 585, 589, 591, 596, 696, 701, 708, 750, 764, 766, 771, 780, 785, 792, 798, Television, Film and New Media 562, 615, 660, 700, 761; and six units relevant to the specialization selected with the approval of the graduate adviser. No more than six units may be taken outside the School of Communication. No more than six units may be taken as special study (798).

## Courses Acceptable on Master's Degree Programs in Communication (COMM) (JOUR)

### Communication (COMM) UPPER DIVISION COURSES

#### COMM 500. Current Problems in Mass Communication (3)

Prerequisites: Communication 440, 460, or 480 or Journalism 300; and at least 12 units of upper division coursework in communication.

Problems and topics in mass communication. Ethics, social responsibility, professionalism, multi-cultural issues, international media systems and audiences, global markets, and technology.

#### COMM 501. Management of Telecommunications Systems (3) II

Prerequisite: Communication 375 or 440 or admission to the graduate program. **Proof of completion of prerequisite required:** Copy of transcript.

Organization and administration of telecommunications systems, with emphasis on structure, policy environment, and principal institutions affecting telecommunications industries.

#### COMM 502. Law of Mass Communication (3)

Prerequisites: Communication 200 or Political Science 102, and upper division standing.

Libel, invasion of privacy, censorship, contempt of court, pornography. Constitutional guarantees affecting print and broadcast media. Government restrictions.

#### COMM 503. Instructional Communication (3)

Prerequisites: Eighteen units of upper division coursework in the School of Communication. **Proof of completion of prerequisites required:** Copy of transcript.

Communication messages and strategies as they apply to instructional contexts. Communication within traditional instructional contexts and focus on training programs, adult workshops, and other less traditional information dissemination situations.

#### COMM 505. Government and Telecommunications (3) II

Prerequisite: Twelve upper division units in communication.

Responsibilities of telecommunication organizations as prescribed by law, government policies and regulations, and significant court decisions.

#### COMM 506. Advertising and Society (3)

Prerequisites: Communication 300 and 350.

Theoretical and philosophical analysis of advertising in modern society.

#### COMM 508. Media Literacy (3)

Prerequisites: Eighteen units of upper division coursework in the School of Communication.

Role played by video texts in shaping culture including information distribution, entertainment, and socio-cultural influence exercised by television. Emphasis on audience/medium relationship and to developing critical skills.

#### COMM 530. Conversational Interaction (3)

Prerequisites: Six units selected from Communication 300, 305, or 350; admission to a major or minor in the School of Communication.

Sequential organization of naturally occurring conversational practices. Reliance on recordings and transcriptions for detailed examinations of interactants' methods for achieving social actions and organizing interactional occasions.

#### COMM 540. Media Management Research (3)

Two lectures and two hours of activity.

Prerequisites: Communication 310W and 440 with grades of C (2.0) or better. **Proof of completion of prerequisites required:** Copy of transcript. Limited to Media Management majors and minors, Major Code: 06032.

Applying research in cable, film, radio, television and telecommunication management. Designs, methodologies, analyses, applications of audience, programming, and advertising research.

#### COMM 545. Communication and Rhetorical Movements (3)

Prerequisites: Eighteen units of upper division coursework in the School of Communication.

Historical perspective of role of communication in social change in rhetorical movements and social change.

#### COMM 560. Advertising Research (3) I

Prerequisites: Communication 310W and 460 with grades of C (2.0) or better. **Proof of completion of prerequisites required:** Copy of transcript. Limited to advertising majors and minors, Major Code: 06041.

Systematic application of quantitative and qualitative research to planning, design, and management of advertising campaigns. Cases, practices, and problems in application of research to consumer, market analysis, positioning, creative selection, media planning, and campaign evaluation.

#### COMM 565. Advertising Campaigns (3) II

Prerequisites: Communication 461 and 560.

Planning and creation of advertising campaigns including situation analysis and strategy, advertising and marketing objectives, consumer analysis and target audience selection, creative development, media strategy and tactics, sales promotion, and campaign evaluation.

#### COMM 571. Intercultural Communication Theory (3)

Prerequisites: Eighteen units of upper division coursework in the School of Communication.

Theories of cross-cultural and intercultural communication, including ethnic identity, communication competence, and cultural values.

#### COMM 574. International Advertising (3)

Prerequisites: Communication 300, 350, and six upper division units in School of Communication courses.

Comparative cultural, economic, legal, political, and social conditions relevant to international advertising. Not open to students with credit in Communication 474.

#### COMM 575. Technological Trends in Telecommunication (3)

Prerequisite: Limited to Major Codes: 06011, 06021, 06031, 06032, 06041, 05992, 06033, or admission to graduate program.

Developments and trends in telecommunication and related technology, with implications for the future. Practical experience with on-line computer activities.

#### COMM 580. Communication and Politics (3)

Prerequisites: Eighteen units of upper division coursework in the School of Communication. **Proof of completion of prerequisites required:** Copy of transcript.

Contemporary political communication events and processes, with a focus on speeches, debates, and campaigns.

#### COMM 581. Public Relations Research (3)

Two lectures and two hours of activity.

Prerequisites: Communication 310W and 480 with grades of C (2.0) or better and 489. **Proof of completion of prerequisites required:** Copy of transcript. Limited to public relations majors and minors, Major Code: 05992.

Qualitative and quantitative methods used in evaluation research to plan, track, and evaluate public relations programs. Computerized statistical analysis.

#### COMM 583. Medical Interaction (3)

Prerequisites: Eighteen units of upper division coursework in the School of Communication.

Theoretical and applied approaches to health communication including interactional patterns among doctors, nurses, patients, family members, therapists, counselors, and clients.

#### COMM 584. Legal Interaction (3)

Prerequisites: Eighteen units of upper division coursework in the School of Communication.

Interactional patterns among judges, lawyers, witnesses, juries, and related legal personnel. Implications for understanding constraints on exchange within institutional interaction and social justice as a practical accomplishment.

### **COMM 585. Professional Practices in Public Relations (3) II**

Prerequisites: Communication 581 and credit or concurrent registration in Communication 481.

Advanced cases in public relations management. Theory and practice of issues management, integration of the public relations function in strategic management in a variety of corporate, governmental, nonprofit, social, and cultural organizations.

### **COMM 589. Ethical Issues in Communication (3)**

Prerequisites: Six units selected from Communication 300, 305, or 350; admission to a major or minor in the School of Communication.

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

Classical and modern ethical concepts and issues in communication.

### **COMM 591. International Telecommunications (3) I**

Prerequisite: Twelve upper division units in School of Communication or admission to the graduate program.

Comparative study of economic, social, political determinants of broadcasting, and telecommunication systems around the world.

### **COMM 592. Persuasion (3)**

Prerequisite: Communication 103. Open to majors and nonmajors.

Key variables and theories in the persuasion process: persuasive sources, messages, receiver variables, propaganda, brainwashing, cognitive, behavioral, and social theories of persuasion.

### **COMM 596. Selected Topics (1-4)**

Prerequisite: Senior standing or above.

Specialized study in selected topics. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

## **Communication (COMM) GRADUATE COURSES**

### **COMM 600A. Seminar: Introduction to Communication Graduate Studies (3)**

Prerequisite: Classified or conditionally classified graduate standing in the School of Communication.

Contemporary and emergent communication theory. Extensive writing from exercises in bibliographical techniques, database searches, reference works, scholarly journals, and research proposal. Required for first semester of graduate work; prerequisite for advancement to candidacy. May not be repeated more than once.

### **COMM 600B. Seminar: Communication Research Methods (3)**

Prerequisite: Classified or conditionally classified graduate standing in the School of Communication.

Methods and tools of inquiry in communication research. Survey/experimental methods, conversation analysis, ethnographic, theoretical, critical and rhetorical studies. Required for first semester of graduate work; prerequisite for advancement to candidacy. May not be repeated more than once.

### **COMM 610. Seminar: Advanced Communication Theory (3)**

Prerequisite: Communication 600A.

Advanced methods of theory construction, explication, and evaluation in communication, including alternatives to traditional communication science.

### **COMM 620. Seminar: Quantitative Methods in Communication Research (3)**

Prerequisites: Communication 540, 560, and 581 or Communication 600A and 600B.

Advanced applications of survey methodology; evaluation of experimental and quasi-experimental procedures; methods of statistical inference and research design; application of computer statistical package.

### **COMM 640. Seminar: Critical and Rhetorical Methods in Communication (3)**

Prerequisites: Communication 600A and credit or concurrent registration in Communication 600B.

Methodologies for textual, rhetorical, semiotic, narrative, and reception research. Use of case studies, focus groups, and interpretive methods.

### **COMM 660. Seminar: Ethnographic Methods in Communication Research (3)**

Prerequisites: Communication 600A and 600B.

Historical and contemporary assumptions of ethnographic inquiry, including research design, data collection, and analysis of field materials.

### **COMM 665. Seminar: Conversation Analysis in Communication Research (3)**

Prerequisites: Communication 600A and 600B.

Assumptions and practices of conversation analysis. Repeated examinations of diverse recordings and transcriptions as resources for analyzing distinctive, methodological, and ordered nature of communication contexts.

### **COMM 696. Special Topics (1-3)**

Prerequisites: Communication 600A, 600B, and graduate standing.

Intensive study in specific areas of communication. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### **COMM 701. Seminar: Mass Communication Problems (3)**

Prerequisites: Communication 600A and 600B.

Reading, investigation, and research concerning current topics in problems of mass media. May be repeated with new content. Maximum credit six units.

### **COMM 706. Seminar: Organizational Communication (3)**

Prerequisites: Communication 600A and 600B.

Functions, forms, and consequences of communicating in organizations in a changing work world. Topics such as culture groups, networks, leadership, conflict, and decision making.

### **COMM 708. Seminar: Mass Communication and Society (3)**

Prerequisites: Communication 600A and 600B.

Rights, responsibilities, and characteristics of mass media and mass communication practitioners. Characteristics and responsibilities of audiences and society.

### **COMM 715. Seminar: Nonverbal Communication (3)**

Prerequisites: Communication 600A and 600B.

Nonverbal human behavior, including body movements, gesture, gaze, touch, and integration of vocal and nonvocal activities in human interaction.

### **COMM 721. Seminar: Interaction and Health (3)**

Prerequisites: Communication 600A and 600B.

Personal, interactional, cultural, and political dimensions of communication about health and illness. Assumptions, practices, and structures of discourse across boundaries of family, social, and institutional contexts. May be repeated with new content. Maximum credit six units.

### **COMM 735. Seminar: Relational Communication (3)**

Prerequisites: Communication 600A and 600B.

Contemporary theory and research addressing interpersonal verbal and nonverbal communication in intimate and non-intimate relationships.

### **COMM 740. Seminar: Rhetorical Theory (3)**

Prerequisites: Communication 600A and 600B.

Leading figures in rhetorical theory from Plato to contemporary theorists. Application of theory to public address.

**COMM 747. Seminar in Argumentation (3)**

Prerequisites: Communication 600A and 600B.

Process and theory of argumentation including argument fields, spheres, and evaluation of contexts such as conversation, history, public policy-making.

**COMM 750. Seminar in Selected Topics: Communication Contexts (3)**

Prerequisite: Communication 600A.

Intensive study in specific contextual forms of communication such as legal interaction, gender, group communication, international journalism, and the dark side of communication. See Class Schedule for specific content. May be repeated with new content. Maximum credit nine units applicable to a master's degree in communication.

**COMM 755. Seminar: Public Address (3)**

Prerequisites: Communication 600A and 600B.

Case studies of rhetorical events which illustrate rhetorical theory. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**COMM 764. Seminar: Telecommunication Technology and Policy (3)**

Prerequisites: Communication 600A and 600B.

Contemporary trends in telecommunication and information technology, implications of trends for public policy and affected businesses. Interaction between technology, implications of trends for public policy and affected businesses. Interaction between technology and regulation.

**COMM 765. Seminar: Conversational Interaction (3)**

Prerequisites: Communication 600A and 600B.

Sequential organization of naturally occurring conversational practices. Reliance on recordings and transcriptions for detailed examinations of interactants' methods for achieving social actions and organizing interactional occasions.

**COMM 766. Seminar: Telecommunication Issues and Trends (3)**

Prerequisites: Communication 600A and 600B.

Issues and trends important to coming decade, resulting from rapid evolution of telecommunications and related technologies, and their applications in society.

**COMM 771. Seminar: Intercultural Communication (3) I, II**

Prerequisites: Communication 571, 600A, and 600B.

Analysis of cultural influences on human communication acts. Emphasis on cultural values, perception, social organizations, language, and nonverbal codes.

**COMM 780. Seminar: Public Relations Research (3)**

Prerequisites: Communication 581, 600A, and 600B.

Analysis and critique of contemporary public relations programs and theory. Development of a comprehensive public relations project involving original research.

**COMM 785. Seminar: Advertising Research (3)**

Prerequisites: Communication 560, 600A, and 600B.

Advanced topics in theory, design, and utilization of advertising research.

**COMM 792. Seminar: Persuasion (3) I, II**

Prerequisites: Communication 600A and 600B.

Contemporary theories and models of persuasion, methods of assessing persuasive effect, and analysis of research literature.

**COMM 798. Special Study (1-3) Cr/NC/RP**

Prerequisites: Communication 600A and 600B.

Contract required. Arranged with graduate coordinator in area of study. Individual study. Maximum credit six units applicable to a master's degree.

**COMM 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**COMM 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.

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

**COMM 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

**Journalism (JOUR)  
UPPER DIVISION COURSES**

**JOUR 529. Investigative Reporting (3)**

One lecture and four hours of activity.

Prerequisites: Journalism 420 with minimum grade of C (2.0); upper division standing; and a passing score on the Grammar, Spelling, and Punctuation (GSP) 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.

**JOUR 530. Management of News Organizations (3)**

Prerequisites: Senior standing and twelve upper division units in journalism.

Role of manager in journalism and journalism-related organizations. Interaction of news, entertainment, advertising, circulation, production, and promotion functions as related to economic demands.

**JOUR 550. News Production (3)**

One lecture and four hours of activity.

Prerequisites: Journalism 420 with minimum grade of C (2.0); and a passing score on the Grammar, Spelling, and Punctuation (GSP) test.

News production principles and techniques. Field and laboratory practice.

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# Communicative Disorders

In the School of Speech, Language, and Hearing Sciences  
In the College of Health and Human Services

**OFFICE: Communications Clinic 118**

**TELEPHONE: (619) 594-6774**

**FAX: (619) 594-7109**

<http://chhs.sdsu.edu/slhs/>

## Faculty

Marilyn Newhoff, Ph.D., Professor of Speech, Language, and Hearing Sciences, Director of School  
Elizabeth J. Allen, Ph.D., Professor of Speech, Language, and Hearing Sciences (Graduate Adviser)  
Li-Rong Lilly Cheng, Ph.D., Professor of Speech, Language, and Hearing Sciences  
Kathie M. Christensen, Ph.D., Professor of Speech, Language, and Hearing Sciences  
Vera F. Gutierrez-Clellen, Ph.D., Professor of Speech, Language, and Hearing Sciences  
Steven J. Kramer, Ph.D., Professor of Speech, Language, and Hearing Sciences  
Donald A. Robin, Ph.D., Professor of Speech, Language, and Hearing Sciences  
Michael R. Seitz, Ph.D., Professor of Speech, Language, and Hearing Sciences  
Lewis P. Shapiro, Ph.D., Professor of Speech, Language, and Hearing Sciences  
Donna J. Thal, Ph.D., Professor of Speech, Language, and Hearing Sciences  
Beverly B. Wulfeck, Ph.D., Professor of Speech, Language, and Hearing Sciences  
Jessica A. Barlow, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences  
Carol L. Mackersie, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences  
Laura Dreisbach Hawe, Ph.D., Assistant Professor of Speech, Language, and Hearing Sciences  
Peter Torre, III, Ph.D., Assistant Professor of Speech, Language, and Hearing Sciences

## General Information

The master's degree programs in Speech Pathology and Audiology are accredited by the American-Language-Hearing Association. The master's degree program in Education of the Deaf is accredited by the Council on Education of the Deaf.

The School of Speech, Language, and Hearing Sciences offers graduate study leading to the Master of Arts degree in communicative disorders, and to the credentials described below. The cooperating faculties of San Diego State University and the University of California, San Diego, offer a joint program leading to a Ph.D. in language and communicative disorders. The school offers advanced study in communicative sciences, speech-language pathology, audiology, and education of the deaf. The School of Speech, Language, and Hearing Sciences is committed to preparing speech-language-hearing professionals to meet the challenges of a culturally and linguistically diverse society.

The programs utilize the facilities of the Communications Clinic building, which includes observation rooms, school reference collection, and speech and hearing science laboratories. In the laboratories, students use personal computers, microprocessor based diagnostic audiometers, spectral signal analyzer, acoustic immittance equipment, hearing aid analyzer, digital spectrograph, Visipitch, phonic mirror, state-of-the-art ENG and evoked potential equipment, miniphonators,

audiometric response simulators, laryngoscopic manikin, and audio and video recording equipment with ongoing new acquisitions.

In addition, the school utilizes an off-campus multidisciplinary diagnostic and rehabilitation center (Communications Clinic-Alvarado). Students and faculty participate in providing direct delivery of clinical services to clients and participate in the assistive device assessment program, which evaluates and recommends augmentative or alternative means of communication for persons with severe communication impairment. Field experience is offered in the public schools and community agencies. Practicum and observation experiences are possible at various hospitals, schools, community agencies, convalescent homes, and rehabilitation agencies.

## Section I. Master's Degree Programs

### Admission to Graduate Study

**Students will be admitted to the graduate programs only in the fall semester.** Applications to the University must be submitted by January 15 for the master's degree programs in speech-language pathology, education of the deaf, and communicative sciences. For application information, see the school's Web site, <http://www-rohan.sdsu.edu/dept/chhs/cd/cd.html>, select "M.A. Application" from the index or call (619) 594-7746.

All students must satisfy the general admission and examination requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin. In addition, the applicant must satisfy the following requirements before being considered for admission to classified graduate standing by the school's Admissions Review Committee.

Applicants must have a minimum overall grade point average of 3.2 (on a 4.0 scale) for undergraduate college/university coursework.

#### Application Guidelines for the Master of Arts Program

*(Note: Incomplete applications will not be reviewed)*

##### A. DEADLINE FOR RECEIPT: January 15

1. University application submitted electronically available at <http://www.csumentor.edu>.
2. School application submitted electronically available at <http://www-rohan.sdsu.edu/dept/chhs/cd/cd.html>.

##### B. DEADLINE FOR RECEIPT: January 15

1. GRE scores: GRE scores are required and must be received by January 15. Contact the Educational Testing Service (<http://www.ets.org>) to request scores be sent electronically to SDSU (SDSU code: 4682, department code: 0630).
2. TOEFL scores, if applicable. Contact the Educational Testing Service (<http://www.ets.org>) to request scores be sent electronically to SDSU (SDSU code: 4682).

**C. DEADLINE FOR RECEIPT: January 15**

The following materials should be submitted as a complete package directly to the School of Speech, Language, and Hearing Sciences:

1. One applicant essay (guidelines available on school Web site);
2. Three recommendation forms in sealed and signed envelopes (forms available on school Web site);
3. Two sets of official transcripts (in sealed envelopes) from all institutions attended. (Note: Please have the institution send the official transcripts to you and include them [unopened] in the admissions packet.) If you are an SDSU graduate, include one unofficial transcript in your packet;
4. Optional resume of experiences applicable to this field.

Mail or deliver your complete admissions package to:  
 School of Speech, Language, and Hearing Sciences  
 San Diego State University  
 5500 Campanile Drive  
 San Diego, CA 92182-1518

Once the above requirements have been satisfied, the applicant's file is considered complete and eligible for review by the school's Admissions Review Committee. Admission to the graduate programs is guided by careful consideration of all the above materials by a designated Admissions Review Committee. Applicants whose files are incomplete will not be eligible for admission to classified graduate standing. The number of new admissions is restricted and is determined by space availability; therefore, admission is based on consideration of all application materials and the relative merits of individual applicants among all eligible applicants.

Graduate faculty serve as graduate advisers and are assigned to students upon admission.

**Advancement to Candidacy**

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

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

(Major Code: 12201)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of at least 36 units (45 units for the Concentration in Speech-Language Pathology). A student must complete Speech, Language, and Hearing Sciences 799A, Thesis for Plan A. The thesis option requires approval by the school and may not be appropriate for every student. If Plan B is elected, the student must pass a written comprehensive examination (which may be repeated only twice). No more than six units of coursework outside the school acceptable on the graduate level may be applied to the master's degree.

The School of Speech, Language, and Hearing Sciences offers four concentrations leading to the Master of Arts degree. Each concentration requires completion of a specific pattern of graduate units described below:

**A. Concentration in Speech-Language Pathology.** This concentration has a clinical focus and may be used to satisfy some of the academic preparation for the Certificate of Clinical Competence in Speech-Language Pathology from the American Speech-Language-Hearing Association and for licensure from the State of California. Students are required to complete coursework in all of the following areas:

- a. Voice Disorders
- b. Fluency Disorders
- c. Articulation/Phonology Disorders
- d. Adult Language Disorders
- e. Child Language Disorders

The coursework may be taken during undergraduate or graduate preparation.

**Undergraduate Preparation.** Speech, Language, and Hearing Sciences 106, 159, 205, 300, 320, 321, 323, 340, 340L, 511, 512, 513, 514, 580; Psychology 260; Psychology 270 or Sociology 201 (or equivalent coursework in these areas).

**Graduate Program.** The following core courses are required: Speech, Language, and Hearing Sciences 570, 600, 601, 603, 604, 605, 606, 607, 608, 609A, 609B, 613, 614, 617, 672 or 673, 675. In addition, students must complete six units from Speech, Language, and Hearing Sciences 707, 754, 790, 793, 794, 795, 797, 798, and 799A. Students pursuing the Bilingual Speech-Language Pathology Certificate must complete all core courses plus three units from Speech, Language, and Hearing Sciences 707, 754, 790, 793, 795, 797, 798, and 799A.

Students electing to pursue the Certificate of Clinical Competence in Speech-Language Pathology (ASHA), California licensure for Speech-Language Pathology, or the Clinical-Rehabilitative Services Credential (Language, Speech and Hearing or Special Day Class) for California Schools should complete, in addition to the required courses listed above, additional courses and clinic hours required by national and state organizations. It is school policy that all credential students maintain a 3.0 grade point average in all 600 level and above credential courses.

**B. Concentration in Audiology**

No new students are being accepted. For further information, contact the School of Speech, Language, and Hearing Sciences.

**C. Concentration in Education of the Deaf.** This concentration has a multicultural/educational focus and may be used to satisfy some of the academic and clinical preparation for certification by the Council on Education of the Deaf (CED), and for the California Education Specialist Credential for the Deaf and Hard-of-Hearing.

**Undergraduate Preparation.** Speech, Language, and Hearing Sciences 205, 300, 320, 321, 340, 340L, 350, 357, 513, 550, 558; Psychology 101; Psychology 270 or Sociology 201 (or equivalent). Students must achieve a rating of "advanced" on the SDSU ASL proficiency interview.

**Graduate Program.** The following courses are required: Speech, Language, and Hearing Sciences 550, 600 or 795, 655, 657, 658, 659, 668, 675. In addition to the required courses, candidates must complete nine units from the following courses: Speech, Language, and Hearing Sciences 562, 797, 798; Special Education 500, 501, 502; Policy Studies in Language and Cross-Cultural Education 600, 601, 650, 651. No more than nine units of coursework outside the school may be applied to the master's degree. Candidates following Plan A must also complete Speech, Language, and Hearing Sciences 799A. Candidates following Plan B must complete three units of Speech, Language, and Hearing Sciences 798 or alternate coursework selected with prior consent of the graduate adviser.

**D. Concentration in Communicative Sciences.** This concentration has research and theoretical foci in the area of communicative disorders. Students interested in study with a research environment requiring a strong scientific foundation may avail themselves of this concentration.

**Undergraduate Preparation.** Speech, Language, and Hearing Sciences 106, 159, 205, 300, 320, 321, 323, 340, 340L, 512, 513, 580; Psychology 260; Psychology 270 or Sociology 201 (or equivalent coursework in these areas).

**Graduate Program.** Required courses: 36 units to include Speech, Language, and Hearing Sciences 600; 33 units of electives from 600 and 700-level courses with consent of the faculty adviser that can include up to six units of 500, 600, and 700-numbered courses from engineering, linguistics, physics, psychology, or other departments. Students may complete three units of 799A (Plan A) as part of the 33 units or pass a comprehensive examination (Plan B).

### Section II. Doctoral Program

<http://chhs.sdsu.edu/slhs/phdmain.php>

## General Information

(Major Code: 12201)

The cooperating faculties of San Diego State University and the University of California, San Diego, offer a joint doctoral program in language and communicative disorders. The program's focus is the interdisciplinary study of language and communicative disorders. A major emphasis of the program is to apply techniques developed in cognitive science and neuroscience to the study of language and language disorders. The program involves study and research in normal and abnormal language (including sign languages), and in the neural bases of language use and language loss.

Participating faculty have research interests in a wide range of issues in the processes of language development, language and aging, multilingualism, language disorders, assessment, and intervention. Graduates of the program will be qualified to serve as faculty in university programs in a variety of disciplines, and to provide leadership in research and health services.

The doctoral program faculty at SDSU are members of the School of Speech, Language, and Hearing Sciences, Department of Linguistics and Oriental Languages, and the Department of Psychology. The doctoral program faculty at UCSD are also an interdisciplinary group from the Department of Cognitive Science, Department of Communications, Department of Linguistics, Department of Neurosciences, and the Department of Psychology. The program is coordinated by the doctoral program directors at each campus, in conjunction with an executive committee comprised of three faculty from each campus appointed by the graduate deans from each campus.

The program is innovative in that many of the requirements are designed to function as a model of professional preparation specifically incorporating activities in which a successful teacher and researcher must engage after obtaining the Ph.D. Students will be required to participate in interdisciplinary research throughout the program, learn about the nature and ethics of research, prepare grant proposals, write manuscripts, and will gain experience in oral presentations and teaching. Graduates from the program will be well-prepared for the rigors of an academic/research career.

## Faculty

The following faculty participate in the doctoral program in language and communicative disorders and are available as advisers, for direction of research, and as members of dissertation committees.

**San Diego State University:** Barlow (Speech, Language, and Hearing Sciences), Cheng (Speech, Language, and Hearing Sciences), Choi (Linguistics and Oriental Languages), Christensen (Speech, Language, and Hearing Sciences), Fenson (Psychology), Friend (Psychology), Gutierrez-Ciellen (Speech, Language, and Hearing Sciences), Mueller (Psychology), Newhoff (Speech, Language, and Hearing Sciences), Reilly (Psychology), Robin (Speech, Language, and Hearing Sciences), Shapiro (Speech, Language, and Hearing Sciences), Thal (Speech, Language, and Hearing Sciences), Wulfeck (Speech, Language, and Hearing Sciences).

**University of California, San Diego:** Ackerman (Linguistics), Bellugi (Salk Institute, Psychology), Carver (Psychology), Elman (Cognitive Science), Emmorey (Cognitive Neuroscience), Ferreira (Psychology), Kritchovsky (Neurosciences), Kutas (Cognitive Science), Moore (Linguistics), Padden (Communications), Swinney (Psychology), Trauner (Neuroscience).

## Admission to Doctoral Study

The doctoral program in language and communicative disorders draws from a variety of disciplines including speech, language, and hearing sciences, psychology, cognitive science, linguistics, engineering, and other related sciences. Students should have adequate preparation in mathematics, statistics, and biological sciences. Backgrounds in neurosciences and/or language sciences, or language disorders is helpful, but not required for admission.

Applicants for admission to the doctoral program must meet the general requirements for admission to both universities, as specified in the current SDSU and UCSD catalogs. Applicants must meet the special requirements of this program which include (a) an acceptable baccalaureate or master's degree or equivalent from a regionally accredited institution; (b) a GPA of at least 3.25 on a 4.0 scale in the last 60 semester (or 90 quarter) credits of upper division and/or graduate courses (c) good standing in the last institution attended; (d) suitable scores on both the quantitative and verbal sections of the Graduate Record Examination; (e) submission of appropriate application form and supporting materials as outlined below.

Applicant files are reviewed as a group by an admissions committee, composed of doctoral program faculty from each campus. Other doctoral faculty may review applicant files and make recommendations to the admissions committee. Assuming that the above requirements are met, decisions will also be guided by an evaluation of the adequacy of the applicant's preparation in view of their stated needs and objectives. Given the limited number of spaces available (4 to 6 new admissions each year are anticipated, subject to available facilities), the admissions committee will select the best qualified applicants to fill the available spaces. No minimum set of qualifications will guarantee an applicant admission to the doctoral program. The admissions committee will make recommendations for admission to the graduate deans from each campus.

**Application.** Students seeking admission to the doctoral program should write directly to the Doctoral Program Coordinators (Mail Code 1518), San Diego State University, 5500 Campanile Drive, San Diego, CA 92182, in order to obtain an information packet explaining the application process and materials. A complete application requires the following:

- Appropriate application form.
- Applicant's statement of interest.
- Transcripts of academic work completed.
- Results of the Graduate Record Examination.
- Three letters of recommendation.

Students will be admitted to the doctoral program only in the fall semester/quarter. Applications must be received by January 20 to be considered for the doctoral program beginning in the following fall semester/quarter. All other supporting materials must be received by February 1.

## Application Guidelines for the SDSU/UCSD Joint Doctoral Program in Language and Communicative Disorders

### A. Due January 20

In order to apply to the SDSU/UCSD Joint Doctoral Program, applicants must submit the following in a **single envelope**:

1. Application Form;
2. Statement of Purpose;
3. Three letters of recommendation in sealed envelopes;
4. Two sets of official transcripts from each college or university attended;
5. Photocopy of the GRE scores received by you from the Educational Testing Service;
6. Publication reprints or presentation abstracts, if available;
7. Photocopy of TOEFL scores (if applicable).

Items listed above should be mailed to:

SDSU/UCSD Joint Doctoral Program in  
Language and Communicative Disorders  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1518

To be admitted to the Joint Doctoral Program, applicants must also electronically submit the University application available at <http://www.csumentor.edu>.

### B. Due February 1

1. Official GRE scores.
2. Official TOEFL scores (paper or computer version), if applicable.

If necessary, official scores may be mailed to:

Office of Admissions and Records  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-8020

## Specific Requirements for the Doctor of Philosophy Degree

**Faculty Adviser.** Upon admission to the program, the executive committee will assign each student a faculty adviser. The faculty adviser will help the student select a program of study during the first year. The faculty adviser, in conjunction with the doctoral program coordinators, will help the student select a first laboratory rotation. Once the student has selected a major area of study (see below) the student will be reassigned an appropriate adviser.

**Residency Requirements.** Students will be required to complete credits equivalent to one year's full-time enrollment at each campus. The definition of residence must be in accord with the regulations of SDSU and UCSD. Students may be enrolled in courses at both institutions during any given semester/quarter.

**Language Requirement.** Students are required to have some experience in the acquisition of a second language. This may be satisfied through informal learning, immersion, or two or more years of formal coursework in a second language. Any recognized natural language will be acceptable to fulfill this requirement (including American Sign Language or other sign languages). Artificial languages, e.g., computer languages, will not satisfy this requirement. For students selecting the multilingualism concentration, proficiency must be demonstrated in English and at least one other language.

**Major Area of Concentration.** By the end of the first year, all students select a major field of emphasis by choosing one of three concentrations: Adult Language, Child Language, or Multilingualism. All students will be required to take some courses in each of the three concentrations.

The *Adult Language* concentration is intended to provide intensive education in communicative disorders in adults. Students in this concentration will also develop expertise in the study of language processing in normal adults.

The *Child Language* concentration is intended to provide specialized education in childhood (birth to adolescence) communicative disorders. Students in this concentration will also achieve competence in developmental psycholinguistics emphasizing language acquisition in normally-developing children.

The *Multilingualism* concentration is intended to provide education in cross-linguistic, ethnographic, and other comparative studies of communicative disorders in children and/or adults, including those associated with bilingualism and second language acquisition (including acquisition of sign language in deaf individuals).

**Course Requirements.** The program for each student will consist of a common core of courses designed to provide the basic tools for research and a foundation knowledge in the important issues in language and communicative disorders, together with specific electives appropriate to the student's chosen concentration.

The *Tools* requirement consists of two courses in statistics/research design, a course in neuroanatomy and physiology, a course in language structure and theory, and a professional survival skills course. Specific courses which can be used to satisfy this requirement are listed below.

The *Foundations* requirement consists of three courses on normal language and three courses on disorders of language. Specific courses which can be used to satisfy this requirement are listed below.

The *Electives* requirement consists of at least five courses, with a minimum of three courses related to the chosen concentration. These electives must be chosen from a broad list of approved options from anthropology, cognitive science, communicative disorders, computer science, linguistics, neurosciences, and psychology. Consult with adviser for approved elective courses. Other electives may be taken to satisfy this requirement with permission of the adviser. The five required electives must be approved by the student's adviser and the doctoral program coordinators. Students may select additional electives with approval of the adviser.

**Laboratory Rotations.** In order to obtain experience in different research methodologies, each student will be required to complete three laboratory rotations, each lasting a minimum of one semester or quarter. During each rotation, students will enroll in the associated laboratory course. The laboratory rotations must be approved by the student's adviser and the doctoral program faculty member who supervised that laboratory.

**Projects.** All students will be required to complete two research projects during their first two years of the program (first and second year projects). These projects are usually connected with the laboratory rotations and approved by the doctoral program faculty working in the laboratory. These projects will involve experiment design, data collection, analyses, preparation of a potentially publishable manuscript, and an oral presentation of the research findings at one of the laboratory seminars. Students will be encouraged to submit their projects for presentation at professional meetings and to submit them to an appropriate journal.

**Methods Minor.** All students will be required to develop basic expertise in experimental design and statistics, and all students will become familiar with standard techniques for behavioral assessment, e.g., intelligence testing, standardized tests of language ability, analyses of free speech, design and implementation of experimental measures of language and other related cognitive behaviors. In addition,

by the end of the third year, all students will declare a methods minor from one of three options: behavioral dynamics, neural imaging, or neural modeling. It is expected that the student will gain experience in the chosen minor through at least one laboratory rotation and enrollment in applicable courses selected with adviser recommendation.

The *Behavioral Dynamics* minor is intended for students who want to specialize in computer-controlled methods for the study of language and cognitive processing in real-time.

The *Neural Imaging* minor is intended for students who want to complement behavioral studies with neuro-anatomical and neuro-physiological techniques, including event-related brain potentials and functional magnetic resonance imaging.

The *Neural Modeling* minor is intended for students who are interested in the simulation of normal and abnormal language and cognition in artificial neural networks. Students who elect this minor will be required to take Cognitive Science 201F or Computer Science and Engineering 258A as an elective.

**Qualifying Examination.** After successful completion of the first and second year projects, the student is eligible to take the qualifying examination. The qualifying examination consists of a *written component* which is to be in the form of a scholarly review of one or more issues related to the student's chosen area of research and an *oral component* which will be a formal presentation of the paper to be presented at the annual fall doctoral colloquium or at a separate colloquium. Students will be encouraged to write their integrative paper in a form and quality which may be submitted to an appropriate journal.

**Teaching.** The teaching requirement may be satisfied under one of two options. *Model 1* requires that the doctoral student teach a full course and submit the course syllabus to the Executive Committee for review at the end of the semester/quarter. *Model 2* requires that the doctoral student serve as a TA (SDSU) and/or TA (UCSD) for two courses. The student will develop a syllabus in an area related to one of these courses and present a master lecture to the Executive Committee and an invited audience on a topic in the syllabus chosen by the Executive Committee.

**Dissertation Committee.** Prior to developing a dissertation proposal, the student must have a dissertation committee. The committee members are recommended by the doctoral program coordinators with consent of the executive committee, and then appointed by the graduate deans of both campuses. The dissertation committee will consist of at least five members, including four from the doctoral program faculty groups (with at least two members from each campus) and one faculty member from outside the doctoral program faculty groups.

**Dissertation Proposal.** The dissertation proposal will take the form of an NIH or NSF grant proposal. For model 1 dissertation (see below), the proposal will be based on completed research which become pilot studies for the grant proposal. The student may be encouraged to submit the grant proposal to support their future research, e.g. post doctoral studies, or a First Investigator Award. For model 2 dissertation, the proposal will become the basis for the dissertation research to be completed. The dissertation proposal must be approved by the student's dissertation committee.

**Advancement of Candidacy.** A student will be recommended for advancement to candidacy after completing all requirements as described above, including the qualifying examination and the dissertation proposal. Students eligible for advancement to candidacy are recommended to the Graduate Deans of both institutions. When approved by both institutions, students will be notified by the Graduate Studies office at UCSD.

**Dissertation.** After advancement to candidacy, the remaining requirement will be the satisfactory completion of a dissertation. The dissertation may take one of the following two forms:

*Model 1 dissertation.* Students who have maintained continuity through their second year project, qualifying examination, and dissertation proposal, and who have successfully generated publishable research which has been submitted to respected journals, may use a minimum of three such interconnected manuscripts as their dissertation. The dissertation will contain an introduction and review of the literature which conceptually links the submitted studies, the studies themselves (exactly as they have been prepared for publication), and a conclusion which pulls the results together in a broader theoretical framework.

*Model 2 dissertation.* Students may choose to carry out a more traditional dissertation involving the appropriate written presentation of original research carried out by the student under the guidance of the student's dissertation committee chair.

**Dissertation Defense.** The dissertation defense will be the same for both dissertation models and will consist of an oral presentation of the dissertation material to the doctoral committee and a publicly invited audience.

**Award of the Degree.** The Doctor of Philosophy degree in language and communicative disorders will be awarded jointly by the Regents of the University of California and the Trustees of The California State University in the names of both institutions.

**Financial Support.** Funding for graduate students cannot be guaranteed, although every effort will be made to provide students with some form of support through faculty grants, graduate teaching associateships, research assistantships, or scholarships. The program endeavors to provide financial support that will enable all students to devote full time to study and research training. Financial support will be awarded consistent with the policies of the Graduate Divisions at each campus. Tuition and fees will be determined in accord with extant policies at the campus in which the student is matriculated in a given year.

## Credentials

The School of Speech, Language, and Hearing Sciences offers academic and practica coursework applicable to two credentials required for working in California public schools: The Clinical-Rehabilitative Services (C-RS) Credential (**Credential Code: 00900**) and the Education Specialist Credential for the Deaf and Hard of Hearing (**Credential Code: 00461**).

Applicants to a credential program are required to submit scores from the California Basic Education Skills Test (CBEST) as part of the application for admission to a credential program. Note that the CBEST is given only three or four times each year.

Credential candidates are required to have the Certificate of Clearance (finger printing) prior to beginning the school experience. Candidates should apply for the Certificate of Clearance several months prior to submitting an application to the department for school practicum placement in order for the certificate to be processed in time for the placement.

### Education Specialist Credential: Deaf and Hard-of-Hearing (Credential Code: 00461)

The Education Specialist Credential for the Deaf and Hard-of-Hearing is required for persons wishing to teach children and youth who are deaf, hard-of-hearing, or deaf with special needs. The coursework in this special sequence meets the standards of the

California Commission on Teacher Credentialing and the National Council on Education of the Deaf.

### Admission Requirements:

1. Formal application to the graduate program in the School of Speech, Language, and Hearing Sciences. Applicants must satisfy the admission requirements for classified graduate standing with a concentration in education of learners who are deaf, hard-of-hearing, or deaf with special needs.
2. Interview with a faculty member in the School of Speech, Language, and Hearing Sciences.
3. American Sign Language proficiency at the intermediate level or higher as assessed by an SDSU-ASL proficiency interview.
4. Passing scores on the MSAT, RICA, and CBEST.

### Program Requirements:

1. Coursework selected from the School of Speech, Language, and Hearing Sciences and Departments of Policy Studies in Language and Cross-Cultural Education, and Special Education.
2. A minimum of 200 hours of supervised clinical practica.
3. A minimum of 300 hours of supervised student teaching in special day and residential school settings.

The credential program involves a total of 56 units. The following courses are required:

**Core courses:** Speech, Language, and Hearing Sciences 550, 558; Policy Studies in Language and Cross-Cultural Education 600; Special Education 500, 501, 502.

**Pedagogy courses:** Speech, Language, and Hearing Sciences 655, 657, 668; Policy Studies in Language and Cross-Cultural Education 601, 650, 651.

**Deaf and Hard-of-Hearing courses:** Speech, Language, and Hearing Sciences 511, 556, 562, 656, 658, 659, 675, 953.

### Clinical or Rehabilitative Services Credential: Language, Speech and Hearing

(Credential Code: 00900)

Students desiring to work with pupils with speech-language and hearing impairments on an itinerant or pull-out basis must complete the Clinical-Rehabilitative Services (C-RS) Credential for Language, Speech and Hearing (LSH). A master's degree in communicative disorders is required of all candidates graduating with a C-RS credential. Candidates for C-RS credential in Language, Speech and Hearing (LSH) must complete the requirements for the Certificate of Clinical Competence (CCC) from the American Speech-Language Hearing Association and the requirements of California licensure in Language and Speech. See sections on Certificates and Licensure.

### Admission Requirements:

1. Formal application to San Diego State University and to the School of Speech, Language, and Hearing Sciences. All applicants for the credential must satisfy the admission requirements of the University and of the school for classified graduate standing and be recommended by the school for admission to the credential program.
2. California Basic Education Skills Test (CBEST) results.
3. Interview with the coordinator of the Language, Speech and Hearing credential.

### Program Requirements:

1. The credential program requires a master's degree with a concentration in Speech-Language Pathology.
2. The following courses are also required: Speech, Language, and Hearing Sciences 525, 541, 626, 627, 929, and 933.

3. The program of professional preparation for the C-RS Credential in Language and Speech requires a minimum of 75 semester credit hours, including a minimum of 27 semester credit hours in basic sciences and a minimum of 36 semester credit hours in professional coursework. At least 30 of the 36 semester credit hours must be in courses for which graduate credit is received, and at least 21 of the 30 graduate semester credit hours must be in the professional area for which the credential is sought. The candidate must complete a minimum of 25 supervised observation hours and 350 clinical contact hours including 50 clock hours in each of three types of clinical setting. This credential also requires that a minimum of 100 clock hours be completed in the school setting. See the section on Certificates and the Credential Coordinator for additional information.

## 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 a master's degree and 75 semester units (at least 27 of the 75 semester units must be in basic science coursework, and at least 36 of the 75 semester units must be in professional coursework). At least 30 of the 36 professional coursework units must be in courses for which graduate credit was received. A minimum of 21 of the 30 units must be completed at the graduate level in the professional area for which the certificate is sought. The certificate requires 375 clock hours of supervised clinical observation (25 hours) and clinical practicum (350 hours), and at least 250 or the 350 clock hours must be in the professional area for which the certificate is sought while the applicant is engaged in graduate study. Clock hours must satisfy designated categories for age span, types of disorders, assessment and intervention. The applicant must pass a national examination in the area for which the certificate is sought and complete a Clinical Fellowship (following approval of academic coursework and clinical practica). Consult an adviser in the area in which certificate is desired.

### Preparation Leading to the Professional Certificate from the Council on Education of the Deaf

Students may complete the academic and practica requirements leading to the Professional Certificate given by the Council on Education of the Deaf. The Professional Certificate requires a specific pattern of courses and teaching experiences. Consult an adviser in the Program for Education of the Deaf for more information.

### Preparation Leading to State Licensure in Speech Pathology or Audiology

Students may complete the academic and clinical practicum requirements leading to California State Licensure in Speech Pathology or in Audiology, a legal requirement for all individuals professionally employed in non-public school settings and some public school settings. The Speech Pathology and Audiology Examining Committee which operates within the California State Board of Medical Quality Assurance requires a master's degree or equivalent in communicative disorders in the area (Speech Pathology or Audiology) in which the license is to be granted, 300 clock hours of supervised clinical experience, a national examination, and nine months of full-time supervised work experience (Required Professional Experience). Most Licensure and ASHA Certification requirements may be fulfilled concurrently. Consult an adviser in the area in which licensure is desired for specific information.

### Liability Insurance

Students enrolled in Speech, Language, and Hearing Sciences 340L, 357, 525, 541, 556, 626, 627, 646, 656, 933, 953 are required to purchase professional liability insurance.

## Bilingual Speech-Language Pathology Certificate

The Certificate in Bilingual Speech-Language Pathology is designed for students who plan to work with bilingual populations with speech, language, and hearing sciences.

To be a candidate for the certificate, the student must be actively seeking state licensure or a master's degree program in speech-language pathology since the certificate is coordinated with these endeavors. Candidates seeking admission to the certificate program must present acceptable GRE scores and schedule an interview with the school certificate coordinator to ascertain specific requirements and units. They must demonstrate a proficiency in two languages (English and one other) and satisfy admission requirements of the University and the department as listed in the Bulletin of the Graduate Division. The certificate is limited to those languages for which there is an available clinical population. Consult the certificate coordinator for approved languages.

The certificate program requires completion of 13 units including nine units of substantive coursework and four units of graduate practicum with the targeted bilingual population. The certificate is competency-based and up to three units of specific requirements may be waived upon demonstration of competency. Course requirements include Speech, Language, and Hearing Sciences 672, 673, 794 and/or 795 upon approval of the certificate coordinator. Students interested in a target language other than Spanish may take Speech, Language, and Hearing Sciences 798 with permission from the certificate coordinator.

With the approval of the school, a student may apply no more than three units of coursework from the certificate program toward the master's degree.

## Courses Acceptable on Master's and Doctoral Degree Programs in Speech, Language, and Hearing Sciences (SLHS)

### UPPER DIVISION COURSES

#### SLHS 503. Low Incidence Communicative Disorders (3)

Prerequisites: Speech, Language, and Hearing Sciences 320 and 321.

Characteristics, etiologies, assessment, and intervention strategies for fluency, voice, and craniofacial/cleft palate disorders. (Formerly numbered Communicative Disorders 503.)

#### SLHS 511. Pediatric Aural Rehabilitation (3)

Prerequisites: Speech, Language, and Hearing Sciences 320, 323, and 340. Recommended: Speech, Language, and Hearing Sciences 300, 357, and 513.

Theoretical, methodological, and technical issues related to facilitating receptive and expressive communication in individuals who are deaf or hard-of-hearing. Emphasizes multidisciplinary case management of children. (Formerly numbered Communicative Disorders 511.)

#### SLHS 512. Phonological Acquisition and Disorders (3)

Prerequisite: Speech, Language, and Hearing Sciences 320.

Phonology, phonological development, and phonological disorders as they relate to basic linguistic theory. Concepts considered through critical thinking and problem-solving. (Formerly numbered Communicative Disorders 512.)

#### SLHS 513. Language Development and Disorders in Early Childhood (3)

Prerequisites: Speech, Language, and Hearing Sciences 300, 320, 321.

Language and communication development, delay, and disorders as they relate to theory and clinical practice in children from infancy through preschool age. (Formerly numbered Communicative Disorders 513.)

#### SLHS 514. Language Development and Disorders in School Age Children and Adolescents (3)

Prerequisites: Speech, Language, and Hearing Sciences 300, 320, 321.

Language development, delay, and disorders as they relate to developmental theory and clinical practice for school-age children from 5 through 18 years of age. (Formerly numbered Communicative Disorders 514.)

#### SLHS 524. Clinical Methods in Speech-Language Pathology (2)

Prerequisites: Speech, Language, and Hearing Sciences 512 and Speech, Language, and Hearing Sciences 513 or 514.

Clinical issues, policies, and methods in speech-language pathology. Experience in writing lesson plans and clinical reports. Includes clinical observation to partially fulfill requirements for clinic clearance. May be taken concurrently with Speech, Language, and Hearing Sciences 525. (Formerly numbered Communicative Disorders 524.)

#### SLHS 525. Clinical Processes (1-2)

Two to four hours of clinical practica and grand rounds attendance once per month.

Prerequisite: Consent of instructor.

Topics, observation, and experience related to practice of speech-language pathology. Maximum credit five units. (Formerly numbered Communicative Disorders 525.)

#### SLHS 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 Speech, Language, and Hearing Sciences 205, 340, 340L. (Formerly numbered Communicative Disorders 540.)

#### SLHS 541. Hearing Screening of Children (1) Cr/NC

Three hours of laboratory screening per week.

Prerequisites: Speech, Language, and Hearing Sciences 340 and 340L.

Field experiences in audiometric and impedance screening of children to obtain contact hours in screening required by American Speech-Language-Hearing Association, California License, and Clinical-Rehabilitative Services credential. (Formerly numbered Communicative Disorders 541.)

#### SLHS 550. Education of Deaf Children and Youth (3)

Prerequisite: Speech, Language, and Hearing Sciences 350.

Educational programs, services and resources for learners who are deaf; historical background, philosophy, sociological and psychological problems. (Formerly numbered Communicative Disorders 550.)

**SLHS 556. Clinical Practice with Learners Who Are Deaf or Hard-of-Hearing (1)**

Two hours of supervision, one hour of staffing per week, and grand rounds attendance once per month.

Prerequisites: Speech, Language, and Hearing Sciences 159, 357; credit in two of the following and concurrent registration in the third: Speech, Language, and Hearing Sciences 511, 513, 562. Admission to clinical practicum includes successful completion of competency examination.

Supervised therapy with representative challenges found in the deaf and hard-of-hearing population. Maximum one unit first semester; maximum credit two units. (Formerly numbered Communicative Disorders 556.)

**SLHS 558. ASL Structure and Acquisition (3)**

Prerequisites: Speech, Language, and Hearing Sciences 289, 350; Linguistics 452.

ASL phonology, morphology, syntax, and discourse structure, including simple and complex sentence structure, storytelling, and sociolinguistics. Analyzing language samples in ASL. Developing lesson plans to teach ASL to deaf and hard-of-hearing children. (Formerly numbered Communicative Disorders 400.)

**SLHS 562. Oral Communication for Children Who Are Deaf or Hard-of-Hearing (3)**

Prerequisite: Speech, Language, and Hearing Sciences 550.

Current methods for developing oral/aural communication skills with learners who are deaf or hard-of-hearing and youth. Differential problems of acquisition of communicative competence. Assessment and intervention procedures for classroom and clinical settings. (Formerly numbered Communicative Disorders 562.)

**SLHS 570. Dysphagia (2)**

Prerequisite: Speech, Language, and Hearing Sciences 321.

Measurement techniques and research in dysphagia. Assessment and treatment of dysphagia and swallowing problems in children and adults. (Formerly numbered Communicative Disorders 570.)

**SLHS 580. Communication Processes and Aging (3)**

Prerequisites: Twelve upper division units in an appropriate major.

Normal and disordered communication processes in the aging. (Formerly numbered Communicative Disorders 580.)

**SLHS 595. Research Practicum (1-3)**

Prerequisites: Consent of instructor and approval of school chair.

Participation in a specific research activity under faculty supervision. Maximum combined credit of six units of Speech, Language, and Hearing Sciences 595 and 795. (Formerly numbered Communicative Disorders 595.)

**SLHS 596. Selected Topics in Speech, Language, and Hearing Sciences (1-4)**

Prerequisite: Twelve units in speech, language, and hearing sciences 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**

**SLHS 600. Research Methods in Communication Sciences and Disorders (2)**

Prerequisite: Consent of instructor.

Methods, evaluation, and exposition of research in communication sciences and disorders. (Formerly numbered Communicative Disorders 600.)

**SLHS 601. Speech-Language Science Instrumentation and Applications (2)**

Prerequisite: Consent of instructor.

Instrumentation and measurement techniques in speech and language science and disorders. (Formerly numbered Communicative Disorders 601.)

**SLHS 603. Neuroscience of Speech and Language (2)**

Prerequisite: Consent of instructor.

Basic neuroanatomy and neurophysiology of speech, language, and related cognitive systems. (Formerly numbered Communicative Disorders 603.)

**SLHS 604. Craniofacial Disorders (2)**

Prerequisite: Consent of instructor.

Review of research in diagnosis and intervention for persons with cleft palate and other craniofacial disorders. (Formerly numbered Communicative Disorders 604.)

**SLHS 605. Fluency and Fluency Disorders (2)**

Prerequisite: Consent of instructor.

Theory, diagnosis, and treatment of fluency disorders in children, adolescents, and adults. (Formerly numbered Communicative Disorders 605.)

**SLHS 606. Voice and Voice Disorders (2)**

Prerequisite: Consent of instructor.

Normal voice mechanism, symptoms and cause of voice and resonance disorders and their management. (Formerly numbered Communicative Disorders 606.)

**SLHS 607. Phonology and Phonological Disorders (3)**

Prerequisite: Consent of instructor.

Characterization of phonological disorders, assessment frameworks, intervention strategies. Theoretical frameworks of phonology as applied to and experimentally evaluated in speech-language pathology. Methodology considered within context of clinical cases studies designed to facilitate critical thinking and problem-solving. (Formerly numbered Communicative Disorders 607.)

**SLHS 608. Acquired Neuromotor Speech Disorders (3)**

Prerequisite: Consent of instructor.

Theories and clinical methods of diagnosis and intervention pertaining to motor speech disorders (dysarthria and apraxia of speech) in adults. (Formerly numbered Communicative Disorders 608.)

**SLHS 609A. Acquired Neurogenic Language and Cognitive Disorders I (3)**

Prerequisite: Consent of instructor.

Theories and clinical methods of diagnosis and intervention pertaining to language and communication disorders in adults with left or right hemisphere brain damage. (Formerly numbered Communicative Disorders 602.)

**SLHS 609B. Acquired Neurogenic Language and Cognitive Disorders II (3)**

Prerequisite: Speech, Language, and Hearing Sciences 609A.

Theories and clinical methods of diagnosis and intervention pertaining to cognitive and linguistic disorders in adolescents and adults with traumatic brain injury, dementing illness or frontal lobe impairments.

### **SLHS 613. Language Disorders: Infancy Through Preschool (3)**

Prerequisite: Consent of instructor.

Major theories of language development with focus on early language development; effect of theoretical perspective on approaches to assessment and intervention; development and evaluation of assessment and intervention procedures and instruments. (Formerly numbered Communicative Disorders 613.)

### **SLHS 614. Language Disorders: School Age Through Adolescence (3)**

Prerequisite: Consent of instructor.

Normal and impaired language development in children five years through adolescence. Assessment and intervention for language disorders across spoken and written modalities. (Formerly numbered Communicative Disorders 614.)

### **SLHS 617. Diagnostic Methods in Speech-Language Pathology (2)**

Prerequisite: Consent of instructor.

Principles and procedures for culturally relevant assessment of communication disorders in children and adults. Ethnographic interviewing; formal, informal, and unbiased testing; clinical reporting. Practice with selected methods and tools.

### **SLHS 626. Clinical Practice in Speech-Language Pathology (1-3)**

Two to six hours of clinical practice and Grand Rounds attendance once per month.

Prerequisite: Consent of instructor.

Supervised diagnostic and intervention practice with children and adults. Up to 10 hours per week of client contact and staffing. Up to three units may be taken concurrently. Maximum credit nine units. (Formerly numbered Communicative Disorders 626.)

### **SLHS 627. Advanced Field Clinical Practice in Speech-Language Pathology and Audiology (1-3) Cr/NC**

Two hours of therapy, one hour of staffing, and Grand Rounds attendance once per month.

Prerequisite: Consent of instructor.

Supervised practice with speech-language-hearing problems in off-campus settings. Up to 10 hours per week of client contact plus staffing. Up to three units may be taken concurrently. Maximum credit nine units.

### **SLHS 640. Psychoacoustics (3)**

Prerequisite: Audiology 705.

Psychophysical concepts underlying clinical audiology. Overview of psychoacoustic abilities in individuals with normal hearing and sensorineural hearing loss. (Formerly numbered Communicative Disorders 640.)

### **SLHS 643. Auditory Physiology and Otoacoustic Emissions (3)**

Prerequisite: Graduate standing.

Peripheral and central physiology of auditory system. Mechanisms underlying normal and clinical populations. Relation of physiology to measures of otoacoustic emissions. Practical experience in conducting and interpreting otoacoustic emissions. (Formerly numbered Communicative Disorders 643.)

### **SLHS 646. Advanced Clinical Practice in Aural Rehabilitation (1) Cr/NC**

Two hours of therapy and one hour of methods.

Prerequisites: Minimum of two units in Speech, Language, and Hearing Sciences 525, 626, 645, or Audiology 701. Recommended: Credit or concurrent registration in Speech, Language, and Hearing Sciences 610.

Supervised practicum with representative cases requiring advanced preparation in aural rehabilitation. (Formerly numbered Communicative Disorders 646.)

### **SLHS 655. Curriculum in Education of the Deaf and Hard-of-Hearing (3)**

Prerequisites: Speech, Language, and Hearing Sciences 513 and 556.

Application of cognitive processing theory to development and evaluation of curriculum, materials, and procedures; selection of learning modalities and appropriate modification of curriculum. (Formerly numbered Communicative Disorders 655.)

### **SLHS 656. Advanced Clinical Practice with Learners Who are Deaf or Hard-of-Hearing (1) Cr/NC**

Three hours of laboratory.

Prerequisite: Speech, Language, and Hearing Sciences 556.

Supervised clinic practicum at an advanced level with representative deaf cases. Maximum two units per semester; maximum credit four units. (Formerly numbered Communicative Disorders 656.)

### **SLHS 657. Assessment of Learners Who are Deaf or Hard-of-Hearing (3)**

Prerequisite: Speech, Language, and Hearing Sciences 556.

Diagnosis of multiple-handicapped, hearing impaired children; including clinical teaching, critical overview of assessment methods, materials and equipment, prognosis, current philosophies and trends. (Formerly numbered Communicative Disorders 657.)

### **SLHS 658. Seminar in Deafness (3)**

Prerequisites: Speech, Language, and Hearing Sciences 550 and 556.

Problems of deafness, evaluation of research, interdisciplinary approach to aural habilitation. Offered every other year. See Class Schedule for specific content and semester offered. (Formerly numbered Communicative Disorders 658.)

### **SLHS 659. Seminar in Education of Deaf-Blind Children and Youth (3)**

Prerequisite: Speech, Language, and Hearing Sciences 656.

Interdisciplinary approach to education of deaf-blind children and youth. Development of communicative competence. Offered in alternate years. See Class Schedule for specific content and semester offered. (Formerly numbered Communicative Disorders 659.)

### **SLHS 668. Multicultural Issues in Deafness (3)**

Prerequisite: Speech, Language, and Hearing Sciences 350 or equivalent experience.

Review and analysis of research in multicultural lifespan communication processes in deaf individuals. Emphasis on communication needs in health care, education, and informal social settings. (Formerly numbered Communicative Disorders 668.)

### **SLHS 672. Assessment and Intervention of Bilingual Children with Communicative Disorders (3)**

Assessment and intervention approaches for bilingual children with communicative disorders. Consideration of available cross-linguistic identification criteria and instruments. Factors influencing selection of procedures, planning, and program models. (Formerly numbered Communicative Disorders 672.)

### **SLHS 673. Seminar in Communicative Disorders in Bilingual Spanish-English Children (3)**

Prerequisites: Speech, Language, and Hearing Sciences 300 and demonstrated Spanish language competence.

Normal and atypical Spanish language development applied to assessment and treatment of communication disorders in bilingual and monolingual Spanish children. Alternative assessment and intervention methods. (Formerly numbered Communicative Disorders 673.)

**SLHS 675. Augmentative Communication (2)**

Prerequisite: Consent of instructor.

Alternative and augmentative approaches, strategies and technology for individuals with severe communication impairments. Assessment and intervention. Project required. (Formerly numbered Communicative Disorders 675.)

**SLHS 696. Selected Topics in Speech, Language, and Hearing Sciences (1-3)**

Prerequisite: Graduate standing.

Intensive study in specific areas of audiology, education of hearing impaired, speech and hearing science, and speech-language pathology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a master's degree.

**SLHS 701. Instrumentation in Audiology and Hearing Sciences (3)**

Two lectures and three hours of laboratory.

Prerequisites: Speech, Language, and Hearing Disorders 610, 643; Audiology 705, 720.

Advanced applications and calibrations of a variety of different audiological instruments to enhance critical thinking, reasoning, and problem-solving abilities when using audiological equipment.

**SLHS 707. Seminar in Phonological Acquisition (3)**

Prerequisite: Consent of instructor.

Theoretical, empirical, methodological, and applied issues associated with phonological acquisition of first-language learners, children with speech disorders, and second-language learners.

**SLHS 754. Seminar in Disorders of Speech Production (3)**

Prerequisite: Consent of instructor.

Evaluation of research in disorders of speech production (apraxia, dysarthria, stuttering) from perceptual, acoustic, and physiologic perspectives. Includes models of motor control and speech production as a basis for understanding disorders.

**SLHS 790. Seminar in Foundations of Language Science (3)**

Prerequisite: Consent of instructor.

Current issues, theory, and research concerning language representation, processing, and neurological organization in adults and children. (Formerly numbered Communicative Disorders 790.)

**SLHS 793. Seminar in Disorders of Language and Cognition/Children (3)**

Prerequisite: Consent of instructor.

Language impairment in children, including primary versus secondary language impairment, modular versus processing explanations, relationships between language and cognition, as well as disassociations of development across different populations. (Formerly numbered Communicative Disorders 793.)

**SLHS 794. Seminar in Language Disorders in Multilingual Populations (3)**

Prerequisite: Consent of instructor.

Language disorders in linguistically diverse populations. Disorders of phonological, morphological, syntactic, and semantic aspects of target languages and their clinical implications. (Formerly numbered Communicative Disorders 794.)

**SLHS 795. Advanced Research Practicum (3)**

Prerequisites: Consent of instructor and approval of director of school.

Participation in a specific research activity under faculty supervision. Maximum combined credit of six units of Speech, Language, and Hearing Sciences 595 and 795. (Formerly numbered Communicative Disorders 795.)

**SLHS 797. Research (1-3) Cr/NC/RP**

Prerequisites: Consent of instructor and approval of director of school.

Research in speech-language pathology, deaf education or audiology. Maximum credit six units applicable to a master's degree.

**SLHS 798. Special Study (1-3) Cr/NC/RP**

Prerequisites: Consent of instructor and approval of director of school.

Individual study. Maximum credit six units applicable to a master's degree.

**SLHS 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**SLHS 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.

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

**SLHS 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

**SLHS 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Individual investigation to the general field of the dissertation.

**SLHS 898. Doctoral Special Study (1-8) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Individual study in the field of specialization. Maximum credit eight units applicable to the doctoral degree.

**SLHS 899. Doctoral Dissertation (1-15) Cr/NC/RP**

Prerequisites: An officially constituted dissertation committee and advancement to candidacy.

Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

**SLHS 929. Orientation to Public School Practicum (1)**

Prerequisites: Speech, Language, and Hearing Sciences 517. Minimum of 100 hours of supervised clinical practicum and departmental approval. Concurrent registration in Speech, Language, and Hearing Sciences 933 or 953.

Goals, materials and procedures for organizing and administering speech, language and hearing programs in the school. (Formerly numbered Communicative Disorders 929.)

**SLHS 933. Clinical Practice in Public Schools (1-4) Cr/NC**

Prerequisites: Credit or concurrent registration in Speech, Language, and Hearing Sciences 929; four units of practica; postbaccalaureate standing; California Basic Education Skills Test; Certificate of Clearance; school approval.

Clinical practice in elementary or secondary schools or community colleges in speech-language pathology. Applies only toward Clinical-Rehabilitative Services Credential (C-RS) or Certificate of Clinical Competency in Speech-Language Pathology (ASHA). (Formerly numbered Communicative Disorders 933A-933B.)

## ***Communicative Disorders***

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### **SLHS 953. Directed Internship: Education of the Deaf (1-5) Cr/NC**

Prerequisites: Speech, Language, and Hearing Sciences 655, 657, 658, 668, and two units of 656. ASL fluency evaluation required prior to enrollment.

Supervised student teaching in schools and special day classes with learners who are deaf, hard-of-hearing, or deaf with special needs. Practicum meets standards of California Commission on Teacher Credentialing and National Council on Education Council on Education of the Deaf. (Formerly numbered Communicative Disorders 953.)

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# Computational Science

**OFFICE: Geology/Mathematics/Computer Science 206H**  
**TELEPHONE: (619) 594-3430**  
**FAX: (619) 594-5291**  
<http://www.sci.sdsu.edu/compsi>

In the College of Sciences

## Associated Faculty for Computational Science

José E. Castillo, Ph.D., Professor of Mathematics, Program Director  
Subrata Bhattacharjee, Ph.D., Professor of Mechanical Engineering  
Steven M. Day, Ph.D., Professor of Geological Sciences,  
The Rollin and Caroline Eckis Chair in Seismology  
Terrence G. Frey, Ph.D., Professor of Biology  
fredric j. harris, M.S.E.E., Professor of Electrical and Computer Engineering  
Joseph Katz, D.Sc., Professor of Aerospace Engineering and Engineering Mechanics  
Joseph M. Mahaffy, Ph.D., Professor of Mathematics  
Patrick J. Papin, Ph.D., Professor and Department Chair of Physics  
Allen Plotkin, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics  
Robert S. Pozos, Ph.D., Professor of Biology  
Peter Salamon, Ph.D., Professor of Mathematics  
Anca Mara Segall, Ph.D., Professor of Biology  
Donald R. Short, Jr., Ph.D., Professor of Mathematical and Computer Sciences, Emeritus  
Kris Stewart, Ph.D., Professor of Computer Science  
Marko I. Vuskovic, Ph.D., Professor of Computer Science  
Andrew L. Cooksy, Ph.D., Associate Professor of Chemistry  
Douglas H. Deutschman, Ph.D., Associate Professor of Biology  
Eric G. Frost, Ph.D., Associate Professor of Geological Sciences

Colleen Kelly, Ph.D., Associate Professor of Statistics  
Eugene A. Olevsky, Ph.D., Associate Professor of Mechanical Engineering  
Kim Bak Olsen, Ph.D., Associate Professor of Geological Sciences  
Faramarz Valafar, Ph.D., Associate Professor of Computer Science  
Arlette R.C. Baljon, Ph.D., Assistant Professor of Physics  
Peter Blomgren, Ph.D., Assistant Professor of Mathematics  
Andrew J. Bohonak, Ph.D., Assistant Professor of Biology  
Ricardo Carretero, Ph.D., Assistant Professor of Mathematics  
Juanjuan Fan, Ph.D., Assistant Professor of Statistics  
Marcus Greferath, Ph.D., Assistant Professor of Mathematics  
Thomas J. Impelluso, Ph.D., Assistant Professor of Mechanical Engineering  
Calvin W. Johnson, Ph.D., Assistant Professor of Physics  
Scott Kelley, Ph.D., Assistant Professor of Biology  
Richard Levine, Ph.D., Assistant Professor of Statistics  
John J. Love, Ph.D., Assistant Professor of Chemistry  
Antonio Palacios, Ph.D., Assistant Professor of Mathematics  
Marie A. Roch, Ph.D., Assistant Professor of Computer Science  
Forest Rohwer, Ph.D., Assistant Professor of Biology  
Eric L. Sandquist, Ph.D., Assistant Professor of Astronomy  
Roxana N. Smarandache, Ph.D., Assistant Professor of Mathematics  
Satchi Venkataraman, Ph.D., Assistant Professor of Aerospace Engineering and Engineering Mechanics  
Fridolin Weber, Ph.D., Assistant Professor of Physics

## Section I. Master's Degree Program

### General Information

The computational science program offers a Master of Science degree. It is offered in collaboration with the Departments of Biology, Chemistry, Computer Science, Geological Sciences, Mathematics and Statistics, and Physics, in the College of Sciences.

Graduates of this program will have a solid foundation in a field of science and the additional training and experience required of computational science professionals. Fundamental science, in one of the specializations, dominates the program. This is supplemented with additional courses in computational science. Real scientific problem-solving is emphasized, through a thesis that could be done in conjunction with a carefully managed extramural research program. A significant proportion of the students in this program will be employed in positions related to their area of studies, thereby providing opportunities for extramural support. Graduates will be prepared for positions in scientific research, scientific programming, and software engineering.

### Associateships

Graduate teaching associateships and graduate nonteaching associateships may be available from the individual departments. See the appropriate department of this bulletin for more information.

### Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. If the undergraduate preparation of the students in the desired specialization is deficient, they will be required to take courses for the removal of the deficiency. These courses, taken by students as a classified graduate student, are in addition to the minimum 30 units required for the master's degree. A complete student program must be approved by the computational science program director. The requirements for entering this program consist of one year of computer programming (e.g., C or Fortran), competence in linear algebra and calculus, and a background equivalent to a bachelor's degree in the area of interest.

In addition to submitting an application to the University, students interested in this program are required to 1) Arrange for three letters of recommendation to be sent to the Computational Science Program Director; 2) Submit to the Computational Science Program Director a personal statement, motivating their interest for the program and briefly describing their research interests and educational goals; 3) Two official transcripts (in sealed envelopes); and 4) GRE scores.

### Advancement to Candidacy

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

### Specific Requirements for the Master of Science Degree

(Major Code: 07992)

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Two of this bulletin. The student must also complete a graduate program of 30 units, of which at least 15 units must be in 600- and 700-level courses excluding 797, 798, and 799A to include:

1. Twelve units selected from:
  - Computer Science 503. Scientific Database Techniques (3)
  - Computer Science 505. Parallel Computing (3)
  - Computer Science 689. Scientific Visualization (3)
  - Mathematics 636. Mathematical Modeling (3)
  - Mathematics 693A. Advanced Numerical Analysis (3)
  - Mathematics 693B. Advanced Numerical Analysis (3)
2. Six units of approved 500-, 600-, or 700-level courses in disciplines related to the student's specialization.
3. Six units of approved 500-, 600-, or 700-level electives.
4. Six units of research including Thesis, 797 and 799.

A complete student program must be approved by the computational science program director. The requirements for entering this program consists of one year of computer programming in a programming language such as C or Fortran, competence in linear algebra and calculus, with background equivalent to a bachelor's degree in the area of interest.

### Section II. Doctoral Program

<http://www.sci.sdsu.edu/compsciphd>

### General Information

San Diego State University and Claremont Graduate University, offer jointly a doctoral program in computational science. The cooperating faculties are from the Colleges of Engineering and Sciences at San Diego State University and participating units from Claremont Graduate University.

### Admission to Doctoral Study

In order to be considered for admission into the program, applicants must fulfill the general requirements for admission with graduate standing to both institutions. Applicants must meet special requirements of this program which include (a) a baccalaureate degree from an accredited institution in a scientific discipline or engineering. Applications from outstanding candidates with degrees in other areas may be accepted conditionally; normally, these students will be expected to take during their first year of enrollment the necessary coursework to eliminate deficiencies; (b) an undergraduate minimum grade point average of 3.0 and minimum 3.50 in any previous graduate coursework; (c) suitable scores on both the quantitative and verbal sections of the Graduate Record Examination.

**Application:** A complete application requires the following:

- Appropriate application form.
- Transcripts of all post-secondary coursework.
- Results of the Graduate Record Examination.
- Applicant's statement of purpose, explaining their interest in the program.
- Three letters of recommendation from former or current professors, supervisors, or other appropriate persons.

**Faculty Advisers and Doctoral Committee:** Upon admission to the program, the student will be assigned a faculty mentor from either institution. After completing the first year of study and receiving a progress evaluation, the student will select a doctoral adviser. The doctoral adviser will aid in the development of a suitable course of study for the student, administer the student's qualifying examination, monitor progress of student research and administer the defense of the doctoral dissertation.

### Specific Requirements for the Doctor of Philosophy Degree

The program consists of a minimum of 72 units of coursework, independent study, and research (including transfer credit) distributed as follows:

Minimum 24 units of graduate level coursework at SDSU (computational science program);

Minimum 24 units of graduate level coursework at CGU (graduate mathematics program);

Minimum 24 units of research, practicum, dissertation, and graduate seminar at either institution.

24 to 48 additional units of research, practicum, dissertation, and graduate seminar (COMP 800) may be taken at either institution. A student entering the program with a Bachelor of Science degree will satisfy the initial 24 unit requirement by completing a Master of Science degree in computational science at SDSU, then take 24 units of coursework at CGU. Students with an advanced degree other than computational science will complete appropriate courses and a research project to obtain the equivalent of an M.S. degree in computational science.

**Claremont Graduate University Courses:** Students are required to take 24 units at Claremont Graduate University. There is a core course requirement that must be satisfied with students selecting at least one course each from three of the following four categories:

**Category 1:** Mathematics 389, Discrete Modeling.

**Category 2:** Advanced Statistics with Computation: Examples of courses that would fulfill this requirement include Mathematics 351, Time Series; Mathematics 352, Nonparametric Statistics with Resampling Methods; Mathematics 353, Advanced Topics in Statistics Inference; Mathematics 355, Linear Statistical Models.

**Category 3:** Mathematics 368, Advanced Numerical Analysis or Mathematics 362, Numerical PDEs.

**Category 4:** Exotic Algorithms: Mathematics 469, Artificial Neural Networks; Mathematics 359 or 369, Monte Carlo Methods.

The additional units taken to make up the 24 unit requirement at Claremont Graduate University are electives to be selected with approval of the faculty adviser at SDSU and CGU. For example, students interested in computational problems in finance may elect to take Mathematics 358, Mathematical Finance, or other related electives. Students whose computational interests lie in signal processing and encryption may take Mathematics 335, Integral Transforms; Mathematics 374, Encoding and Encryption; and/or Mathematics 350, Kalman Filtering. The student's program of study beyond the core requirement will be tailored to the student's individual research interests.

**Research Units at SDSU:** Computational Science 797, 800, 810, 890, 895, 896, 897, 898, 899.

**Qualifying Examination.** The qualifying examination shall consist of a term research project supervised by a faculty mentor. The topic of the project will be approved by the program directors in consultation with the faculty mentor. The student will be required to prepare a written account of the research work performed and of its results, and offer an oral presentation before the members of the advisory committee. This level of evaluation will be equivalent and coincide with the computational science Master of Science degree final examination.

**Practicum and Doctoral Research.** Dissertation research will be carried out here at one of the two institutions, at an industry, or at a national laboratory. In the latter two cases, its denomination is practicum.

**Dissertation Proposal.** The dissertation proposal shall be submitted by the student to the advisory committee no later than upon completion of the student's third academic year in the program. The dissertation proposal will take the form of a scientific grant proposal to a major funding agency. The proposal will describe the research project that the student intends to carry out, on which the doctoral dissertation will be based. The student will also be required to deliver an oral presentation before the computational science faculty. Upon successful completion of the presentation, the student will be recommended for advancement to candidacy for the doctoral degree.

**Doctoral Dissertation.** Upon completion of the dissertation research, the candidate will submit the dissertation to the advisory committee. The candidate will also present a public oral defense of the dissertation. Before the presentation, an account of the work performed will be submitted for publication to a peer-reviewed, international research journal. Upon successful completion of the presentation, the candidate's advisory committee will make a recommendation to the Graduate Deans.

## Faculty

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

### San Diego State University

Program Director: José E. Castillo

Committee Members: Baljon, Bhattacharjee, Carretero, Castillo, Cooksy, Day, Deutschman, Frey, Greferath, Impelluso, Johnson, Kelley, Kelly, Love, Mahaffy, Mellors, Olevsky, O'Sullivan, Palacios, Paolini, Pullman, Roch, Rohwer, Salamon, Sandquist, Segall, Smarandache, Swiniarski, Tarokh, Valafar, Venkataraman, Vuskovic

### Claremont Graduate University

Program Director: John Angus

Committee Members: Angus, Cumberbatch, Dewey, Landsberg, Nadim, dePillis, Liebesking-Hadas, Raval, Spanier, Wild, Williamson

## Courses Acceptable on Master's and Doctoral Degree Programs in Computational Science (COMP)

### UPPER DIVISION COURSE

#### COMP 596. Advanced Topics in Computational Science (1-4)

Prerequisite: Consent of instructor.

Advanced special topics in computational 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 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

#### COMP 600. Seminar (1-3)

Prerequisite: Consent of instructor.

An intensive study in advanced computational science. May be repeated with new content. Topic to be announced in the Class Schedule. Maximum credit six units applicable to a master's degree.

#### COMP 696. Selected Topics in Computational Science (3)

Prerequisite: Graduate standing.

Intensive study in specific areas of computational science. See Class Schedule for specific content. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

#### COMP 797. Research (1-3) Cr/NC/RP

Prerequisite: Six units of graduate level computational science courses.

Research in computational science. Maximum credit six units applicable to a master's degree.

#### COMP 798. Special Study (1-3) Cr/NC/RP

Prerequisite: Consent of staff; to be arranged with program director and instructor.

Individual study. Maximum credit six units applicable to a master's degree.

#### COMP 799A. Thesis or Project (3) Cr/NC/RP

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

#### COMP 799B. Thesis or Project Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.

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

#### COMP 800. Seminar (3)

Prerequisite: Admission to the doctoral program.

Topics in different areas of computational science.

#### COMP 810. Colloquium in Computational Science (1) Cr/NC/RP

Prerequisite: Admission to the doctoral program.

Discussions on advances in computational science research. Course to be taken every semester.

#### COMP 890. Supervised Research and Qualifying Examination (3-6) Cr/NC/RP

Prerequisites: Admission to the doctoral program and consent of instructor.

Research and preparation for qualifying examination.

#### COMP 895. Dissertation Proposal (3) Cr/NC/RP

Prerequisites: Successful completion of qualifying examination and consent of instructor.

Research and preparation of dissertation proposal to be presented in order to advance to candidacy.

#### COMP 896. Practicum (1-9) Cr/NC/RP

Prerequisite: Admission to the doctoral program.

Independent investigation in general area of field of dissertation. Conducted in industry or national laboratory under faculty supervision. Maximum credit 36 units.

#### COMP 897. Doctoral Research (1-9) Cr/NC/RP

Prerequisite: Admission to the doctoral program.

Independent investigation in general field of dissertation. Maximum credit 36 units.

#### COMP 898. Doctoral Special Study (1-3) Cr/NC/RP

Prerequisite: Advancement to candidacy.

Individual study leading to study and research required for doctoral dissertation.

#### COMP 899. Doctoral Dissertation (1-15) Cr/NC/RP

Prerequisites: An officially constituted dissertation committee and advancement to candidacy.

Preparation of the dissertation for the doctoral degree.

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# Computer Science

In the College of Sciences

**OFFICE: Geology/Mathematics/Computer Science 413**  
**TELEPHONE: (619) 594-6191**

## Faculty

Leland L. Beck, Ph.D., Professor of Computer Science,  
Chair of Department  
Kasi Anantha, Ph.D., Professor of Computer Science  
John L. Carroll, Ph.D., Professor of Computer Science  
John D. Donald, Ph.D., Professor of Computer Science  
Kris W. Stewart, Ph.D., Professor of Computer Science  
Roman W. Swiniarski, Ph.D., Professor of Computer Science  
Mahmoud Tarokh, Ph.D., Professor of Computer Science  
Marko I. Vuskovic, Ph.D., Professor of Computer Science  
Carl F. Eckberg, Ph.D., Associate Professor of Computer Science  
Faramarz Valafar, Ph.D., Associate Professor of Computer Science  
Roger E. Whitney, Ph.D., Associate Professor of Computer Science  
Joseph Lewis, Ph.D., Assistant Professor of Computer Science  
Marie A. Roch, Ph.D., Assistant Professor of Computer Science  
William A. Root, M.S., Staff Scientist

## Associateships

Graduate teaching associateships in computer science are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the Department of Computer Science.

## General Information

The Department of Computer Science offers graduate study leading to the Master of Science degree in computer science. The areas in which courses are offered include software, systems, architecture, artificial intelligence, and computer science theory.

Master's level research projects are available in the following areas of computer science: distributed systems, multiprocessing, operating systems, graphics, neural networks, formal languages, numerical methods, robotics, signal processing, and computational complexity. Specialized laboratories exist for microprocessor architecture, graphics, and robotics and intelligent machines.

## Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. In addition, for fully classified graduate standing students must complete Computer Science 560 and 570 or equivalent. Classified graduate standing is prerequisite to all 600- and 700-level courses; conditional graduate standing is possible. Students convicted of plagiarism or cheating on examinations may lose classified graduate standing.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Computer Science:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE General Test score;
- (3) TOEFL score (if required).

Refer to section on Admission to Postbaccalaureate and Graduate Study in this bulletin for further details.

Mail or deliver your complete admissions package to:  
Department of Computer Science  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7720

## Advancement to Candidacy

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

## Specific Requirements for the Master of Science Degree in Computer Science

**(Major Code: 07011)**

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

1. Complete a minimum of 30 units of 500-, 600-, and 700-level courses selected with the approval of the adviser. One to three units of Computer Science 798 may be added to the 30 minimum units required, when used for an internship or practical training. All programs must include at least 24 units chosen from computer science and mathematics.

Students must select Plan A (Thesis) or Plan B (Comprehensive Examinations) as described below. (Selecting Plan A is contingent upon finding a full time computer science faculty member to supervise the thesis. The number of students that can be accommodated in Plan A is limited by faculty resources.)

### Plan A (Thesis)

A total of 30 units of 500/600/700-level courses as follows:

- a. At least 15 units from Computer Science 600 and 700 level courses excluding Computer Science 797, 798, 799A.
- b. Students select two areas of study from the areas listed below, and take at least two courses from each area.
- c. Three units of Thesis (799A), and an oral presentation and defense.

With approval of the graduate adviser, students may take Computer Science 798 as preparation for Computer Science 799A (Thesis).

### Plan B (Comprehensive Examinations)

A total of 30 units of 500/600/700-level courses as follows:

- a. At least 18 units from Computer Science 600 and 700 level courses excluding Computer Science 797, 798, 799A.
- b. At least one course from each of the following areas of study: PFL, OSA, ALC, and one course from either ISR or DSW.
- c. Comprehensive examinations in three subjects selected from data structures and algorithms; programming languages; numerical analysis; operating systems and architecture; automata and formal languages; intelligent systems and robotics.

Full time international students on Plan B who have completed all their coursework must take at least two qualifying examinations per semester.

## Areas of Study

- (PFL) Programming and Formal Languages:** Computer Science 520, 524, 532, 535, 620A, 620B, 632.
- (OSA) Operating Systems and Architecture:** Computer Science 571, 572, 574, 670, 672, 674.
- (ALC) Algorithms and Complexity:** Computer Science 562, 564, 660, 662, 664; Mathematics 525, 542, 626, 693A, 693B.
- (ISR) Intelligent Systems and Robotics:** Computer Science 550, 553, 556, 557, 558, 559, 581, 650, 653, 656, 657.
- (DSW) Distributed Systems and Web Technology:** Computer Science 514, 551, 561, 574, 576, 580, 651, 678, 683, 690.

## Courses Acceptable on Master's Degree Program in Computer Science (cs)

## UPPER DIVISION COURSES

**CS 501. Computational Software (3)**

Prerequisites: Computer Science 106 and 310.

Design and implementation of software for computational science. Makefiles in UNIX environment, efficient Fortran and 00 programming, use of common application libraries, file and source code management, software documentation, construction of libraries and applications. Designed for computational science students. Computer science majors must obtain adviser approval.

**CS 503. Scientific Database Techniques (3)**

Prerequisites: Computer Science 205, 310, and Mathematics 245.

Fundamental data models for handling scientific data, including flat file, indexed compressed files, relational databases, and object oriented databases, and their associated query technologies; e.g. file formats, input/output libraries, string searching, structured query language, object-oriented structured query language, hypertext markup language/common gateway interface, and other specialized interfaces. Designed for computational science students. Computer science majors must obtain adviser approval. See Computer Science 514.

**CS 505. Parallel Computing (3)**

Prerequisite: Computer Science 310. Recommended: Computer Science 501.

Motivations and methods of high performance computing. Modern computer architecture characteristics, uniprocessor programming and tuning, shared and distributed memory programming techniques, benchmarking. Designed for computational science students. Computer science majors must obtain consent of adviser.

**CS 514. Database Theory and Implementation (3)**

Prerequisites: Computer Science 310 and Mathematics 245.

Database systems architecture. Storage structures and access techniques. Relational model, relational algebra and calculus, normalization of relations, hierarchical and network models. Current database systems.

**CS 520. Advanced Programming Languages (3)**

Prerequisites: Computer Science 237, 310, and 320.

Object oriented programming, concurrent programming, logic programming. Implementation issues.

**CS 524. Compiler Construction (3)**

Prerequisites: Computer Science 237, 310, and 320.

Syntactical specification of languages. Scanners and parsers. Precedence grammars. Run-time storage organization. Code generation and optimization.

**CS 530. Systems Programming (3) I, II**

Prerequisites: Computer Science 237 and 310.

Design and implementation of system software. Relationship between software design and machine architecture. Topics from assemblers, loaders and linkers, macro processors, compilers, debuggers, editors. Introduction to software engineering and review

of programming fundamentals and object oriented concepts. Large project in object oriented programming is required. Not acceptable for the M.S. degree in computer science.

**CS 532. Software Engineering (3)**

Prerequisites: Computer Science 320 and 530.

Theory and methodology of programming complex computer software. Analysis, design, and implementation of programs. Team projects required.

**CS 533. Component Based Software Engineering (3)**

Prerequisites: Computer Science 310 and 320.

Component based (CB) software development using UML and other design methods. Development of components for use in CB systems; CB software architectures; development of CB systems; comparison of traditional and CB system development methods.

**CS 534. Software Measurement (3)**

Prerequisite: Computer Science 532.

Basics of software measurement and use of measurement information to ensure quality software and determine software process effectiveness. Software estimation, cost estimation models, definition of various measures, tools to support measurement collection and analysis, analysis techniques, and case studies.

**CS 535. Object-Oriented Programming and Design (3)**

Prerequisites: Computer Science 310 and 320.

Basic concepts of object-oriented programming; classes, objects, messages, data abstraction, inheritance, encapsulation. Object-oriented design methodology.

**CS 550. Artificial Intelligence (3)**

Prerequisites: Computer Science 108 and either Mathematics 245 or 523.

Heuristic approaches to problem solving. Systematic methods of search of the problem state space. Theorem proving by machine. Resolution principle and its applications.

**CS 551. User Interface Environments (3)**

Prerequisites: Computer Science 310 and 320.

Design of user-machine interfaces in interactive systems. Problems faced by user of an interactive system; basic issues and principles involved in design and implementation of good and friendly user-machine graphical interfaces.

**CS 552. Artificial Intelligence II (3)**

Prerequisite: Computer Science 550.

Limitations of symbol-based approach to artificial intelligence from Computer Science 550. Presented alternatives are genetic and probabilistic approaches, connectionist and emergent representation and learning, natural language processing, intelligence measures and cognitive models. Seminal publications shaping these techniques.

**CS 553. Neural Networks (3)**

Prerequisites: Computer Science 320 and Mathematics 254.

Principles of neural networks, their theory and applications.

**CS 555. Raster Computer Graphics (3)**

Prerequisite: Computer Science 551.

Bit map graphics, algorithms to connect between different formats and enhancement of pictures.

**CS 556. Robotics: Mathematics, Programming, and Control (3)**

Prerequisites: Computer Science 320, Mathematics 254, knowledge of the C programming language.

Robotic systems including manipulators, actuators, sensors, and controllers. Algebraic methods for spatial description of solid objects, manipulator kinematics and control. Robot programming languages and robot programming systems.

**CS 557. Computer Control Systems (3)**

Prerequisites: Computer Science 310 and Mathematics 254.

Analysis and programming of real-time computer control systems, implementation of digital controllers including programming, intelligent control systems and fuzzy control.

**CS 558. Computer Simulation (3)**

Prerequisites: Computer Science 310 and Statistics 550.

Methodology of simulation for discrete and continuous dynamic systems. State-of-the-art programming techniques and languages. Statistical aspects of simulation. Students will design, program, execute, and document a simulation of their choice.

**CS 559. Computer Vision (3)**

Prerequisites: Computer Science 310 and Mathematics 254.

Algorithms and computer methods for processing of images. Visual perception as a computational problem, image formation, characterization of images, feature extraction, regional and edge detection, computer architectures for machine vision.

**CS 560. Algorithms and Their Analysis (3) I, II**

Prerequisite: Computer Science 310.

Algorithms for solving frequently occurring problems. Analysis techniques and solutions to recurrence relations. Searching and sorting algorithms. Graph problems (shortest paths, minimal spanning trees, graph search, etc.). NP complete problems. Not acceptable for the M.S. degree in Computer Science.

**CS 561. Multimedia Systems (3)**

Prerequisite: Computer Science 551.

System aspects of multimedia authoring, browsing, and database subsystem; digital representation for different media; audio and video; operating system support for continuous media applications; architectures; design and implementation of multimedia support systems; use of multimedia technology in software engineering.

**CS 562. Automata Theory (3)**

Prerequisite: Mathematics 245 or 521A.

Definition of finite automata. Classification of finite automaton definable languages. Minimization of finite automata. Nondeterministic finite automata. Sequential machines with output. Regular sets and expressions. Introduction to grammars.

**CS 564. Introduction to Computability (3)**

Prerequisite: Mathematics 245 or 523.

Definition of algorithm by abstract (Turing) machines. Universal Turing machines. Primitive recursive and recursive functions. The equivalence of the computational power of Turing machines and recursive functions. Limitations and capabilities of computing machines; the halting problem.

**CS 566. Queuing Theory (3)**

Prerequisites: Computer Science 108 and Statistics 550.

Performance prediction of computer networks and other systems (e.g., inventory control, customer service lines) via queuing theory techniques. Operational analysis.

**CS 570. Operating Systems (3) I, II**

Prerequisites: Computer Science 310, 370, and knowledge of the C programming language.

File systems, processes, CPU scheduling, concurrent programming, memory management, protection. Relationship between the operating system and underlying architecture. Not acceptable for the M.S. degree in Computer Science.

**CS 571. UNIX Network Administration (3)**

Prerequisite: Computer Science 470.

Network administration for UNIX workstations and servers. File server, mail server, boot sever, and Web server. TC/IP administration, routing, subnetting, and NIS plus data base.

**CS 572. Microprocessor Architecture (3)**

Prerequisites: Computer Science 370 and knowledge of the C programming language.

Architecture of state-of-the-art microprocessor. Internal pipeline, internal cache, external cache, and memory management. Programming a uniprocessor. Communication among computers in a distributed environment. Architecture and programming of a multiprocessor system.

**CS 574. Computer Security (3)**

Prerequisites: Computer Science 310; Mathematics 245; Statistics 550; and credit or concurrent registration in Computer Science 570.

Principles of computer security and application of principles to operating systems, database systems, and computer networks. Topics include encryption techniques, access controls, and information flow controls.

**CS 575. Supercomputing for the Sciences (3)**

Prerequisite: Extensive programming background in Fortran or C.

Interdisciplinary course, intended for all science and engineering majors. Advanced computing techniques developed for supercomputers. Overview of architecture, software tools, scientific computing and communications. Hands-on experience with CRAY.

**CS 576. Computer Networks and Distributed Systems (3)**

Prerequisite: Credit or concurrent registration in Computer Science 570.

Local area networks and wide area networks; mechanisms for interprocess communication; rules for distribution of data and program functions.

**CS 578. ATM Networking (3)**

Prerequisite: Computer Science 576.

Asynchronous transfer mode communication networks, including fundamental concepts, technologies, architectures, infrastructures, and interoperability of legacy technologies. Review of basic communication and networking concepts, including transmission media, multiplexing, link control protocols, and wide area networks.

**CS 580. Client-Server Programming (3)**

Prerequisites: Computer Science 570 and knowledge of an object-oriented programming language. Recommended: Computer Science 576.

Client-server model, networking protocols for client-server programs, algorithmic issues in client-server programs, client-server protocols, implementing client-server applications.

**CS 581. Computational Linguistics (3)**

(Same course as Linguistics 581.)

Prerequisites: Computer Science 320 or Linguistics 571; Linguistics 570 or Mathematics 245.

Basic concepts in computational linguistics including regular expressions, finite-state automata, finite-state transducers, weighted finite-state automata, and n-gram language models. Applications to phonology, orthography, morphology, syntax. Probabilistic models. Statistical techniques for speech recognition.

**CS 596. Advanced Topics in Computer Science (1-4) I, II**

Prerequisite: Consent of instructor.

Selected topics in computer science. May be repeated with the approval of the instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

For additional courses useful to computer scientists, see:	
Mathematics 541.	Introduction to Numerical Analysis and Computing
Mathematics 542.	Introduction to Numerical Solutions of Differential Equations
Mathematics 561.	Applied Graph Theory
Mathematics 579.	Combinatorics

## GRADUATE COURSES

(Classified graduate standing is expected for all graduate courses.)

**CS 620A. Formal Languages and Syntactic Analysis I (3)**

Prerequisites: Computer Science 310, 320 or 520, and 562.

Regular, context-free, context-sensitive, and general grammars. Corresponding machine model recognizers. Chomsky and Greibach normal forms. Closure, decidability and undecidability properties.

**CS 620B. Formal Languages and Syntactic Analysis II (3)**

Prerequisite: Computer Science 620A.

Properties of deterministic context-free languages. Backtrack and matrix based general parsing techniques. LL(k) and LR(k) based parser generators. Precedence grammars.

**CS 632. Advanced Software Engineering (3)**

Prerequisite: Computer Science 532.

Theoretical and practical concepts associated with the specification, design, testing, and maintenance of large software systems. Use of automated tools in engineering such systems.

**CS 635. Advanced Object-Oriented Design and Programming (3)**

Prerequisites: Computer Science 535 and knowledge of an object-oriented programming language.

Advanced topics in object-oriented programming and design, code reuse, building class libraries, quality of objects, coupling, cohesion, design patterns, distributed objects.

**CS 636. Management of Software Development (3)**

Prerequisite: Computer Science 532 or 535.

Managing software projects. Modern software management process models. Project planning, cost estimation, tracking and control, staffing, risk management, and software process improvement.

**CS 650. Seminar in Artificial Intelligence (3)**

Prerequisite: Computer Science 550.

General problem-solving programs, expert problem solving, game-playing programs, pattern recognition and natural language processing. Understanding vision, manipulation, computer decision. May be repeated with new content with approval of graduate adviser. Maximum credit six units applicable to a master's degree.

**CS 651. Advanced Multimedia Systems (3)**

Prerequisite: Computer Science 561.

System aspects of multimedia authoring, browsing, and database subsystems. Formal models for hypermedia documents. Conversion of flat text into hypertext. Artificial intelligence in hypermedia systems. Architectures, design, and implementation of multimedia support systems. Use of multimedia technology in software engineering.

**CS 653. Data Mining and Knowledge Discovery (3)**

Prerequisite: Computer Science 320.

Foundations of data mining and knowledge discovery. Diverse methods, algorithms, design techniques and application practice including statistical and Bayesian methods, pattern recognition, clustering, knowledge discovery in data sets, machine learning, neural networks, rough and fuzzy sets.

**CS 656. Advanced Robotics (3)**

Prerequisite: Computer Science 556.

Computer-based techniques for low-, medium-, and high-level robot control including sequential and parallel schemes for robot dynamics, robot programming and robot task planning.

**CS 657. Intelligent Systems and Control (3)**

Prerequisites: Computer Science 535 and 560 or Computer Science 530.

Genetic and evolutionary algorithms, genetic programming and applications, fuzzy logic and approximate reasoning, rule-based inference engines, intelligent path planning and applications to robotics, dynamic systems and their simulations using Simulink, conventional control and intelligent control, intelligent agents, autonomous and multi-agent systems.

**CS 660. Combinatorial Algorithms and Data Structures (3)**

Prerequisite: Computer Science 560.

Algorithm design techniques. Network flow and matching. Complexity analysis. NP-completeness, reductions among NP-complete problems. Approximation algorithms for NP-complete problems such as the traveling salesman problem.

**CS 662. Theory of Parallel Algorithms (3)**

Prerequisites: Computer Science 560 and Mathematics 254.

Models for parallel computation. Parallel algorithms for several common problems including sorting, searching, graph problems, and matrix problems. Complexity of parallel algorithms. Lower bounds on parallel complexity.

**CS 664. Theory of Computability (3)**

Prerequisite: Computer Science 562 or 564.

Turing machines and other formal models of computation. Recursive function theory. The Ackermann function. Solvable and unsolvable problems.

**CS 670. Advanced Operating Systems (3)**

Prerequisite: Computer Science 570.

Survey of advanced operating systems including distributed systems. Associated design issues. Case studies.

**CS 672. Microcomputer Software (3)**

Prerequisite: Computer Science 572.

Design and implementation of a real time operating system for a state-of-the-art microprocessor. Applications of the operating system.

**CS 674. Advanced Computer Architecture (3)**

Prerequisite: Computer Science 572.

Advanced computer architecture, including parallel and distributed architecture, and accompanying software and algorithmic issues.

**CS 678. Broadband Communication Networks (3)**

Prerequisite: Computer Science 576.

High performance communication technologies and networking protocols, frame relay, and wireless treatment of ATM (Asynchronous Transfer Mode) communication networks, including fundamental concepts, technologies, architectures, infrastructures, and interoperability of legacy technologies.

**CS 683. Emerging Technologies (3)**

Prerequisite: See Class Schedule for prerequisites.

Emerging technologies in computing. Issues and concepts underlying new technology. Hands on experience. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**CS 689. Scientific Visualization (3)**

Prerequisites: Computer Science 555 and Mathematics 254.

Cognitive principles governing effective design and analysis of data representations, design strategies for enhancing dimensionality and information density of visual portrayals of information; survey of and practice in use of available software tools for visualization.

**CS 690. Web Based Infrastructures for E-Business (3)**

Prerequisite: Computer Science 651.

Principles and modern infrastructure technologies for building distributed web-based business to business and business to consumer applications.

**CS 696. Selected Topics in Computer Science (3)**

Prerequisite: Consent of instructor.

Intensive study in specific areas of computer science. May be repeated with new content. See Class Schedule for specific content. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

## Computer Science

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### **CS 700. Applications of Computer Science (3)**

Prerequisite: Classified graduate standing in mathematics or computer science.

Topic to be chosen from such applications as theorem proving, simulation, learning theory, graphics definition languages. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **CS 790. Practicum in Teaching of Computer Science (1) Cr/NC**

Prerequisite: Award of graduate teaching associateship in computer science.

Supervision in teaching computer science. Lecture writing, style of lecture presentation and alternatives, test and syllabus construction, and grading system. Not applicable to an advanced degree. Required for first semester GTA's. Maximum credit four units applicable to a master's degree.

### **CS 797. Research (1-3) Cr/NC/RP**

Prerequisite: Six units of graduate level computer science courses.

Research in computer science. Maximum credit six units applicable to a master's degree.

### **CS 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

### **CS 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

### **CS 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.

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

### **CS 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Criminal Justice and Criminology

In the School of Public Administration and Urban Studies  
and the Department of Sociology

In the College of Professional Studies and Fine Arts and  
In the College of Arts and Letters

**OFFICE: Professional Studies and Fine Arts 100**  
**TELEPHONE: (619) 594-1948**

## Faculty

Louis M. Rea, Ph.D., Professor of Public Administration and Urban Studies, Director of School of Public Administration and Urban Studies  
Natalie R. Pearl, Ph.D., Associate Professor of Public Administration and Urban Studies, Program Director (Graduate Adviser)  
Charles F. Hohm, Ph.D., Professor of Sociology, Associate Dean of the College of Arts and Letters  
Bohdan Kolody, Ph.D., Professor of Sociology  
James L. Wood, Ph.D., Professor of Sociology  
Ruth Xiaoru Liu, Ph.D., Associate Professor of Sociology  
Jana L. Pershing, Ph.D. Associate Professor of Sociology  
Sheldon X. Zhang, Ph.D., Associate Professor of Sociology  
Kyle Farmbry, Ph.D., Assistant Professor of Public Administration and Urban Studies  
Jeffrey S. McIlwain, Ph.D., Assistant Professor of Public Administration and Urban Studies  
Dana M. Nurge, Ph.D., Assistant Professor of Public Administration and Urban Studies  
Sherry Ryan, Ph.D., Assistant Professor of Public Administration and Urban Studies  
Evelyn Zellerer, Ph.D., Assistant Professor of Public Administration and Urban Studies

## Associateships

Graduate teaching associateships and graduate assistantships are available to a limited number of qualified students. Please speak with program director for more information.

## General Information

The School of Public Administration and Urban Studies in the College of Professional Studies and Fine Arts, in conjunction with the Department of Sociology in the College of Arts and Letters, offer graduate study leading to the Master of Science degree in criminal justice and criminology.

Students pursuing a Master of Science degree in criminal justice and criminology will master criminological theory and quantitative research methods and will learn to apply the theory and methods to real-world research and policy issues. Students will also examine criminal justice policy issues at the local, state, national, and international levels.

Research facilities include the Institute of Public and Urban Affairs and the Social Science Research Laboratory. The San Diego metropolitan region affords significant research and internship opportunities for the graduate student in federal, state, and local agencies as well as in community-based organizations.

## Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. Students must also satisfy the following requirements: (1) a 3.0 grade point average in the undergraduate major and a 3.00 overall grade point average; (2) an acceptable score on the GRE General Test; (3) two letters of recommendation from individuals who are familiar with the student's academic work and/or employment performance; and (4) a 500 word essay addressing professional and educational goals.

Students are expected to have undergraduate proficiency in the following four areas: (1) basic knowledge of the criminal justice system; (2) basic knowledge of criminological theory; (3) statistics; and (4) research methods.

Students whose preparation is deemed insufficient by the graduate adviser may be admitted as conditionally classified and will be required to complete specified courses in addition to the minimum required for this degree.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

In addition, the following materials should be submitted as a complete package directly to the School of Public Administration/Master of Criminal Justice and Criminology:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE General Test score;
- (3) Two letters of reference;
- (4) 500-word essay describing your professional and educational goals.

Mail or deliver your complete admissions package to:

School of Public Administration/  
Master of Criminal Justice and Criminology  
(Attention: Dr. Natalie R. Pearl)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4505

## Advancement to Candidacy

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

## Specific Requirements for the Master of Science Degree

**(Major Code: 22091)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree in Part Two of this bulletin, students must complete an officially approved course of study as outlined below. Students must earn a minimum

## ***Criminal Justice and Criminology***

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grade point average of B (3.0) in the master's program and no less than a B- grade in each core course. All students in this program will complete a thesis under the direction of a faculty adviser. All faculty listed are eligible to be thesis advisers.

### **Graduate Program (30 units total)**

#### Substantive Courses (15 units required):

CJA 601	Seminar in the Administration of Criminal Justice (3)
CJA 602	Seminar in the Criminal Justice System as a Social Institution (3)
CJA 603	Seminar in Community and Restorative Justice (3)
CJA 604	Seminar in Criminal Justice and Urban Administration (3)
CJA 605	Seminar in Juvenile Justice and Youth Violence (3)

#### Research Methods Courses (6 units required):

PA 604	Methods of Analysis in Public and Urban Affairs (3)
PA 606	Seminar in Quantitative Approaches to Public Administration (3)

#### Criminal Justice and Criminological Theory (3 units required):

SOC 743	Seminar in Criminology and Criminal Justice Theory (3)
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#### Electives (3 units: Select one with approval of graduate adviser):

CJA 543	Community Resources in Criminal Justice Administration (3)
CJA 570	Organized Crime: Domestic and International Perspectives (3)
CJA 797	Research in Criminal Justice Administration (3) Cr/NC/RP
PA 660	Administration and Public Policy Development (3)
POL S 577	Principles of International Law (3)
SOC 601	Advanced Social Theory (3)
SOC 796*	Field Practicum (3) Cr/NC
WMNST 572	Women and Violence (3)

#### Thesis (3 units required):

CJA 799A	Thesis (3) Cr/NC/RP
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**OR**

SOC 799A	Thesis (3) Cr/NC/RP
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\* Internship strongly recommended for students who have not had research or practical experience in professional criminal justice field.

Course descriptions for courses can be found in the section of this bulletin under the appropriate heading.

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# Economics

In the College of Arts and Letters

**OFFICE: Nasatir Hall 305**  
**TELEPHONE: (619) 594-1675**  
**FAX: (619) 594-5062**

## Faculty

Mark A. Thayer, Ph.D., Professor of Economics,  
Chair of Department (Graduate Adviser)  
Renatte K. Adler, Ph.D., Professor of Economics  
Raford D. Boddy, Ph.D., Professor of Economics  
Roger S. Frantz, Ph.D., Professor of Economics  
James B. Gerber, Ph.D., Professor of Economics  
Shoshana A. Grossbard-Shechtman, Ph.D., Professor of Economics  
Arthur E. Kartman, Ph.D., Professor of Economics  
Catalina Amuedo-Dorantes, Ph.D., Associate Professor of Economics  
Eric J. Brunner, Ph.D., Associate Professor of Economics  
Edmund M. Balsdon, Ph.D., Assistant Professor of Economics  
Cynthia A. Bansak, Ph.D., Assistant Professor of Economics  
Jennifer Imazeki, Ph.D., Assistant Professor of Economics  
Kusum Mundra, Ph.D., Assistant Professor of Economics  
Thitima Puttitanun, Ph.D., Assistant Professor of Economics

## Associateships

A number of teaching and research associateships are available for qualified students. Appointments permitting up to 20 hours of service per week are available. In addition, students interested in pursuing teaching careers at the community college level may apply for a teaching apprenticeship position. Application forms and additional information may be obtained from the graduate student coordinator of the Department of Economics.

## Scholarships

The Department of Economics administers two scholarship programs that are available to qualified students. Incoming students may apply for a Terhune scholarship. Terhune Scholarships are designed to cover tuition and fees for the first year of graduate study. The Center for Public Economics annually awards several scholarships ranging from \$300 to \$1,500 in the spring semester. Application forms and additional information for these programs may be obtained from the graduate student coordinator of the Department of Economics.

## General Information

The Department of Economics offers a Master of Arts degree in economics. The program provides students with advanced training in decision-making techniques and quantitative analysis by building on a core of applied microeconomic and econometric classes. Students learn to apply analytic methods to business and policy issues, use advanced econometric methods and computer software. An internship program provides students with valuable work experience. The program is designed to (1) prepare students for careers in consulting, domestic and multinational firms and government agencies, (2) provide students with university-level teaching experience and access to community college teaching positions, and (3) provide advanced training in economics for students planning on entering a Ph.D. program.

## Admission to Graduate Study

Admission to the Master of Arts program in economics is a three-step process.

Step 1. Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

Step 2. The following materials should be submitted as a complete package directly to the Department of Economics:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) Two letters of recommendation;
- (3) A personal statement of no more than 750 words that describes why you wish to pursue graduate study in economics;

Mail or deliver your complete admissions package to:

Graduate Admissions Coordinator  
Department of Economics  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4485

Step 3. Have GRE test scores sent to SDSU (SDSU code: 4682). If you are an international student whose postsecondary instruction is in a language other than English you must have TOEFL test score sent to SDSU. International students interested in applying should first contact the International Student Center.

## Advancement to Candidacy

In addition to the general requirements for advancement to candidacy described in Part Two of this bulletin, the student must have completed Economics 630, 631, 640, and 641 with at least a 3.0 (B) average and no individual core course grade lower than a 2.7 (B-). Deficiencies may be addressed by retaking core courses.

## Specific Requirements for the Master of Arts Degree

**(Major Code: 22041)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree described in Part Two of this bulletin, the student must complete an approved graduate program of at least 30 units. Each program must include Economics 630, 631, 640, 641, 740, and 795. No program may contain more than nine units of approved courses outside economics. In addition, no program may contain more than six units of 500-level courses.

A written comprehensive examination covering the core fields of microeconomics and econometrics is required for Plan B students. Students selecting Plan A must include Economics 799A in their program and complete a master's thesis.

As an alternative to electing a general program, the student may choose to specialize in Latin American Policy Studies or Urban and Regional Policy. The specialization in Latin American Policy Studies with its applied and interdisciplinary focus, is designed to provide students with advanced training in Latin American policy issues. The specialization in Urban and Regional Policy, with its applied and interdisciplinary focus, is designed to provide students with advanced training in urban and regional policy issues.

### Specialization in Latin American Policy Studies

- ECON 720 Seminar in Latin American Economies (3)  
LATAM 601 Seminar on Methodology of Latin American  
Studies (3)

#### One course selected from the following:

- HIST 558 Latin America in World Affairs (3)  
POL S 566 Political Change in Latin America (3)  
POL S 567 Political Systems of Latin America (3)

### Specialization in Urban and Regional Policy

- ECON 710 Seminar in Urban and Regional Economics (3)

#### At least one course selected from the following:

- C P 620 Seminar in Urban Planning Methodologies (3)  
C P 625 Quantitative Techniques in Urban Planning (6)  
GEOG 584 Geographic Information Systems Applications (3)  
GEOG 683 Advanced Geographic Information Systems (3)

#### One course selected from the following:

- C P 665 Seminar in Urban and Regional Planning  
Analysis (3)  
GEOG 596 Advanced Topics in Urban and Regional  
Policy (3)  
GEOG 685 Advanced Quantitative Methods in Geography (3)  
GEOG 780 Seminar in Techniques of Spatial Analysis (3)

## Courses Acceptable on Master's Degree Programs in Economics (ECON)

### UPPER DIVISION COURSES

#### ECON 507. Mathematical Economics (3)

Prerequisite: Mathematics 121 or 150. Recommended: Economics 320 or 321.

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.

#### ECON 561. International Trade (3)

Prerequisites: Economics 320 and 321.

Theory and policy of international trade with examples drawn from current issues. Models of determinants of trade. Free trade and protectionism. Trade and economic development. Trading blocs, the European community, GATT and U.S. trade policy.

#### ECON 565. North American Economic Relations (3)

Prerequisites: Economics 101 and 102. Recommended: Economics 360.

Socioeconomic development of U.S., Mexico, and Canada since World War II. Issues affecting the three countries' relations, including trade investment, technology, and international organizations and agreements.

#### ECON 592. International Monetary Theory and Policy (3)

Prerequisite: Economics 320 or 490.

International monetary spillovers from domestic macroeconomic policies. Foreign exchange markets and balance of payments. Fixed, flexible and managed exchange rates. Bretton Woods, international monetary fund, and world debt crisis.

#### ECON 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

#### ECON 630. Microeconomic Theory (3)

Prerequisite: Economics 321.

Theories of the consumer, the firm, and the market. Topics in welfare and general equilibrium. Duality and uncertainty.

#### ECON 631. Applied Microeconomic Methods (3)

Prerequisite: Economics 630.

Decision-making techniques in applied microeconomics including cost-benefit analysis, choice under uncertainty and applied game theory techniques.

#### ECON 640. Econometrics (3)

Prerequisites: Economics 321; Mathematics 120 or 121 or 150.

Measurement in economics. Use of economic models involving multiple regression analysis, simultaneous equation systems, and time series analysis.

#### ECON 641. Applied Research in Econometrics (3)

Prerequisite: Economics 640.

Econometric applications and techniques including discrete choice, panel data simultaneous equations and time series. Data analysis and statistical software training in STATA, SAS, and SPSS.

#### ECON 696. Experimental Topics (3)

Prerequisite: Consent of instructor.

Intensive study in specific areas of economics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

#### ECON 700. Seminar in Microeconomic Applications (3)

Prerequisites: Economics 630 or classified graduate standing in another department and consent of instructor.

Microeconomic applications to individual, firm, or government. Maximum credit six units of Economics 700 applicable to a master's degree. See Class Schedule for specific content. Seminar topics include:

- Seminar in Industrial Organization and Firm Behavior
- Seminar in Labor Economics
- Seminar in Economic Issues in Demography
- Seminar in Experimental Economics

#### ECON 710. Seminar in Public Economics (3)

Prerequisites: Economics 630 or classified graduate standing in another department and consent of instructor.

Government in a market economy. Impact on individual and firm behavior. Maximum credit six units of Economics 710 applicable to a master's degree. See Class Schedule for specific content. Seminar topics include:

- Seminar in Environmental Issues
- Seminar in Public Expenditures
- Seminar in Urban and Regional
- Seminar in Regulation
- Seminar in Tax Policy

**ECON 720. Seminar in Development and Planning (3)**

Prerequisite: Consent of instructor.

Development process and policies. Planning techniques. Relations among developing and developed countries. Maximum credit six units of Economics 720 applicable to a master's degree. See Class Schedule for specific content. Seminar topics include:

Seminar in Development Economics  
Seminar in Development Planning  
Seminar in International Trade and Commercial Policy

**ECON 730. Seminar in Macroeconomic Policy (3)**

Prerequisite: Consent of instructor.

Applications of macroeconomics to open economics. Maximum credit six units of Economics 730 applicable to a master's degree. See Class Schedule for specific content. Seminar topics include:

Seminar in National Monetary Institutions  
Seminar in International Monetary Policy  
Seminar in Business Cycles  
Seminar in Macroeconomic Modeling and Prediction

**ECON 740. Seminar in Applied Economic Research (3)**

Prerequisites: Advancement to candidacy and consent of graduate adviser.

Advanced treatment of research design and methodology. Application of empirical techniques to selected problems. (Formerly numbered Economics 740A.)

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

Prerequisite: Consent of instructor.

Economic development in historical perspective. Maximum credit six units of Economics 750 applicable to a master's degree. See Class Schedule for specific content. Seminar topics include:

Seminar in U.S. Economic History  
Seminar in Economic Growth in Historical Perspective  
Seminar in Contemporary Economic Systems

**ECON 795. Internship in Economics (3) Cr/NC**

Prerequisites: Economics 630, 640, and approval of graduate adviser.

Students will be assigned to various jobs in which economic theory can be applied to decision making. Supervision will be shared by the graduate adviser and on-the-job supervisor.

**ECON 797. Research (3) Cr/NC/RP**

Prerequisites: Classified graduate standing and consent of instructor.

Independent research project in an area of economics.

**ECON 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

**ECON 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**ECON 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

**ECON 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Education

In the College of Education

## General Information

The College of Education offers graduate study leading to the Master of Arts degree in education with concentrations in the following: counseling, educational technology, elementary curriculum and instruction, postsecondary educational leadership and instruction, reading education, secondary curriculum and instruction, educational leadership, special education, educational research, and policy studies in language and cross-cultural education. Some of these concentrations are designed to permit concurrent completion of the requirements for the correspondingly named advanced credentials.

Graduate study is also offered leading to the Master of Science degree in counseling and the Master of Science degree in rehabilitation counseling.

The degree of Doctor of Philosophy (Ph.D.) in education with a multicultural emphasis is offered jointly with Claremont Graduate University. Inquiries concerning this program should be addressed to the Director of the SDSU/CGU Doctoral Program, College of Education. Informal inquiries may also be made through the program office at (619) 594-6544.

The degree of Doctor of Education (Ed.D.) is offered currently with the University of San Diego with concentrations in educational technology, and teaching and learning with an emphasis in literacy. Inquiries should be addressed to Director, SDSU/USD Doctoral Program, College of Education, San Diego State University, San Diego, CA 92182. The telephone number for the program office is (619) 594-0909.

The degree of Doctor of Philosophy (Ph.D.) in mathematics and science education is offered jointly with the University of California, San Diego. For specific information about this program, refer to the Mathematics and Science Education section of this bulletin.

### Section I. Doctoral Programs

San Diego State University is in the process of securing approval for a joint Ed.D. degree in Educational Leadership with California State University, San Marcos and the University of California, San Diego. For further information, contact the Department of Educational Leadership.

## Doctor of Philosophy Degree in Education

(Major Code: 08011)

<http://edweb.sdsu.edu/doc>

## Admission to Doctoral Study

The doctoral program in Education offered by San Diego State University and Claremont Graduate University invites applications from individuals whose academic focus is on democratic schooling, social justice, equal educational outcomes for all students and the improvement of educational systems serving diverse communities.

To be considered for admission to the SDSU/CGU program, students must meet the general requirements for admission to both institutions with classified (full) graduate standing as outlined in the current respective bulletins. These include a master's degree in education or a related field from an accredited institution, good academic standing in the last institution attended, and an acceptable score on the Graduate Record Examination. Experience in the field is desirable. Students are admitted only in the fall of each academic year. Applicants must submit copies of all transcripts of previous college work, three letters of recommendation, a 1000-word personal statement, and results of the Graduate Record Examination. Personal interviews are conducted for the most promising applicants.

## Specific Degree Requirements for the Ph.D. Degree in Education

A minimum of 48 semester units of residency, 24 at each institution, is required before a student is eligible to take qualifying examinations. In the interest of establishing an effective working relationship with faculty at both Claremont and San Diego State University, 12 of the student's first 24 units must be undertaken at Claremont Graduate University. In addition to these residency units, additional coursework may be needed before the student is competent to conduct dissertation research. The student must further demonstrate command of two research tools, including essential expertise in quantitative methods. After successful completion of four qualifying examinations and an oral defense of that work, the student is advanced to candidacy and enters the dissertation phase of the program.

Students seeking admission to the joint doctoral program in education should write directly to Alberto M. Ochoa, Director of the program, requesting application materials. Upon admission to the program, the student is guided by the requirements for the doctoral program given in Part Two of this bulletin and those listed under Education in the Claremont Graduate University Bulletin.

## Faculty

The faculty bring diverse research and teaching interests to the study of democratic schooling, social justice, and diversity in education. Among the members of the faculty, the student will find rich resources of expertise in such areas as public policy, organizational theory and leadership, curriculum and instruction, higher education, counseling and school psychology, language development, qualitative and quantitative analysis, bilingual and cross-cultural education, educational technology, and special education.

### San Diego State University

Director: Alberto M. Ochoa

Associate Director: Daniel J. Kitchen

Faculty: B. S. Allen, Atkins, Basom, Berg, Bezuk, Cegelka, Dodge, Espinosa, Evans, Farnan, Fisher, Flood, Frase, Gallego, Graves, Hoffman, Ingraham, Jacobs, Kelly, Kitano, Kuhlman, Lapp, Lewis, Lynch, Mason, Mathison, McFarlane, Ochoa, Pang, Philipp, Piland, Pohan, Ritchie, Rossett, Saba, Santa Cruz, Sax, Yerrick, Young

**Claremont Graduate University**

Director: Mary Poplin

Faculty: Arguelles, Darder, Drew, Dreyer, Foster, Hale, Kerchner, Matsui, Poplin, Regan, Schuster, Smith, Weeres

**Doctor of Education Degree**

(Major Code: 08011)

<http://edweb.sdsu.edu/sdsu-usd>**Admission to Doctoral Study**

Students are admitted to this degree program in the fall term only, and applications for admission must be received by February 15. Application materials may be obtained from Cheryl L. Mason, program director at SDSU. The information can also be obtained on the program Web site at <http://edweb.sdsu.edu/SDSU-USD/home.htm>. Not all areas in which the degree is offered are available every year and cohorts of students will be accepted for admission as one or more of the concentrations become available. For the specific degree offerings open for admission each year, contact the program director at SDSU.

To be considered for admission to the SDSU/USD program, students must meet the general requirements for admission to both San Diego State University and the University of San Diego. These include a master's degree in education or a related field from an accredited institution, good academic standing in the last institution attended, an acceptable score on the Graduate Record Examination, and experience in the field. Students are admitted only in the fall semester of the academic year. Applicants must submit copies of all transcripts of previous college work, three letters of recommendation, a personal statement, a professional resume, and results of the Graduate Record Examination. Personal interviews are conducted for the most promising applicants.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should also be submitted as a complete package directly to the SDSU-USD program office:

- (1) Three sets of official transcripts (in sealed envelopes);
- (2) Unofficial GRE scores;
- (3) Department application (concurrent with University application);
- (4) Three letters of reference;
- (5) Personal statement;
- (6) Professional resume.

Mail or deliver your complete admissions package to:

SDSU-USD Doctoral Program in Education  
(Attention: Caroline Balzer)  
College of Education  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1112

**Specific Degree Requirements for the Ed.D. Degree in Education**

The faculties of the Colleges of Education at San Diego State University and at the University of San Diego jointly offer professional programs leading to the degree. This degree emphasizes the preparation of educational leaders and practitioners who can make significant contributions to solving problems in education and fostering the improvement of schools and other learning environments. The program draws primarily on the faculty expertise and resources of San Diego State University and the University of San Diego, but these resources may be augmented from time to time by participation of selected faculty members from the University of California, San Diego; California State University, San Marcos; and California State University, San Bernardino.

The program requires a minimum of 60 units of graduate level coursework. At least 24 course credits and six units of dissertation must be completed on each campus. All students will complete 15 units of core courses as well as six units of coursework in advanced research. With the concurrence of the faculty adviser, students will develop an area of study directly related to their educational objective. This program may include an internship.

Upon completion of 12 units of study, each student will meet with an adviser and a joint faculty committee to assess progress in the program, to develop a program of study, to discuss possible internship experience, and to define a research focus. After 30 semester units have been completed, students are eligible to begin the qualifying examinations process. Students who successfully complete these examinations will be recommended for advancement to candidacy and will be eligible to begin the dissertation phase of the program. Once enrolled for dissertation units, students must maintain continuous registration in that course until the doctoral faculty approves the dissertation. Once enrolled for dissertation, students are ineligible to apply for an official leave of absence.

**Faculty**

The following members of the cooperating institutions participate in the joint Doctor of Education degree and are available for direction of research and as members of doctoral committees:

**San Diego State University**

Director: Cheryl L. Mason

Faculty: B. S. Allen, Atkins, Basom, Berg, Bezuk, Cegelka, Cordeiro-Kaplan, Dodge, Espinosa, Evans, Farnan, Fearn, Fisher, Flood, Frase, Gallego, Gibson, Graves, Grisham, Hall, Hoffman, Ingraham, Jacobs, Johnson, Jones, Kelly, Kitano, Kuhlman, Lapp, Lewis, Lynch, Mason, Mathison, McFarlane, Molebash, Moss, Ochoa, Pang, Philipp, Piland, Pohan, Pumpian, Ritchie, Robinson-Zanartu, A. Rodriguez, J. Rodriguez, Rossett, Saba, Santa Cruz, Sax, Streshly, Wang, Yerkes, Yerrick, Young

**University of San Diego**

Director: Cheryl Getz

Faculty: Ammer, Alexandrowicz, Barnes, Collins, Cordeiro, Dantas, Galloway, Gelb, Infantino, Monroe, Quezada, Rowell, Sisserson, Zyglycynski

## Section II. Master's Degree Programs

### Master of Arts Degree in Education

#### Admission to Graduate Study

Applicants must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. In addition, applicants must have completed a minimum of 12 units in professional education courses and must either be admitted to the program of teacher education or hold a valid California credential, other than an emergency or provisional credential, before being recommended for classified graduate standing. (This is not applicable to students in the Departments of Administration, Rehabilitation and Postsecondary Education, Counseling and School Psychology, Educational Technology, Special Education, and Teacher Education.)

A student desiring a concentration in educational leadership must, in addition to the above, meet specific requirements for admission to the appropriate advanced credential program. A student desiring a master's degree concentration in counseling, policy studies, or in special education must also meet specific admission requirements. (For further information, refer to the College of Education, Office of Graduate Programs, Room Education 100K, or to the coordinators of the respective programs. Students in counseling and school psychology should go directly to the department for further information.)

#### Advancement to Candidacy

A student desiring a Master of Arts degree in education with a concentration in educational leadership, counseling, educational research, educational technology, elementary curriculum and instruction, reading education or secondary curriculum and instruction may be advanced to candidacy upon completion of the basic requirements as described in Part Two of this bulletin.

#### Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for admission to the University with classified graduate standing and the credential requirements as applicable, the student must satisfy the basic requirements for the master's degree described in Part Two of this bulletin. In addition, the student must meet the requirements specified for one of the concentrations in education (described below). Courses common to all concentrations are Education 690 or Teacher Education 634, and Plan A, which requires Education 799A, or Plan B in which two options are available, Education 791A-791B-791C or Education 795A-795B. All candidates for the Master of Arts degree in education who elect Plan B must pass a comprehensive examination.

##### The Comprehensive Examination

This written examination, designed to evaluate the achievement in the specific area of the student's concentration, is required of all candidates for the master's degree in education. A student is eligible to take the comprehensive examination only after advancement to candidacy.

The examination is offered near the midpoint of each semester. A reservation must be made at least one week in advance of the examination. For information on exact dates, and for a reservation, check with the Office of Graduate Programs, College of Education, Room Education 100K, or with the coordinators of the respective programs.

#### Selection of Plan A or Plan B

In general, applicants will be programmed for Plan B, the seminar plan. After the student is approximately half way through the program, has secured an adviser and established a thesis plan, permission to transfer to Plan A may be requested. Plan A is designed for students who have a particular research problem they wish to investigate in some detail. Requests for transfer to Plan A must be prepared as an official change in program for the master's degree, countersigned by the faculty adviser, and submitted to the Office of Graduate Programs in the College of Education.

Both Plan B options provide students the opportunity (1) to have two experiences which emphasize research or evaluation and writing, (2) to participate actively in the projects of the other members of the seminar, and (3) to subject their own work to critical evaluation by the other seminar members. Both plans require the ability to formulate and define research or evaluation problems, to assemble data pertinent to the problem, to draw conclusions, and to present the study in acceptable written form. It is expected that the two seminars will be at least as demanding as the thesis with respect to the difficulty and quantity of work required. Selection of one of the Plan B options must be made with the approval of the departmental faculty adviser.

#### Course Requirements

Note: Students are requested to consult with the appropriate master's degree adviser prior to taking any coursework leading to the master's degree. Students are urged to take Education 690 (3 units) as early as possible in their first graduate year.

#### Concentrations

##### Counseling

(Major Code: 08261)

The Master of Arts degree in education with a concentration in counseling provides a sequential and integrated program of study in the theories, research, and practice of counseling. The program, usually with Plan A, is designed to provide the student with the education and experiences necessary to prepare for doctoral studies in counseling. The program, usually with Plan B, is intended for individuals who seek to increase their understanding of human behavior and improve their interpersonal skills in their current or anticipated profession or occupation. This program does *not* culminate in professional credentials or licensure in counseling. Individuals seeking California credentials in school counseling or school psychology or licensure in marriage and family therapy are referred to the respective program director in the Department of Counseling and School Psychology (<http://edweb.sdsu.edu/csp/>).

The Community Based Block (CBB) is a special unit within the Department of Counseling and School Psychology that leads to the Master of Arts degree. The CBB is community based in two senses of the word "community." The basic approach to learning is the development of a total, self-contained "learning community" - a group of approximately 30 full-time graduate students and at least three core faculty members committed to working and learning together. The word "community" also refers to the locale of the program (almost all of the program is off-campus) and to its special focus on working in innercity settings with multiethnic populations. The program is designed for students who intend to work in a variety of human relations settings and includes appropriate fieldwork placements.

Students interested in continuing in one of the Master of Science concentrations upon completion of the Community-Based Block may apply to the concentration. See the directors of marriage and family therapy, school counseling, and school psychology for further information.

1. Prerequisite: Admission to the Department of Counseling and School Psychology (see Counseling and School Psychology section of this bulletin).
2. ED 690 Methods of Inquiry (3)

3. Core program (minimum of 15 units):
  - a. Common Core (3 units):
    - CSP 600 Cross-Cultural Counseling Communication Skills (2)
    - CSP 600L Cross-Cultural Counseling Prepracticum (1) Cr/NC
  - b. Foundations (minimum of 6 units):
    - CSP 610A Determinants of Human Behavior: Personality (3)
    - CSP 610B Determinants of Human Behavior: Social and Cultural (3)
    - CSP 610C Determinants of Human Behavior: Development (3)
    - CSP 610D Determinants of Human Behavior: School Learning (3)
    - CSP 610E Determinants of Human Behavior: Biological (3)
    - CSP 615 Seminar in Multicultural Dimensions in Counseling (3)
  - c. Theory, Research, and Techniques (minimum of 6 units):
    - CSP 601 Theoretical Foundations of Counseling and Marriage and Family Therapy (3)
    - CSP 622A Ecosystems Assessment Intervention I: Students (3)
    - CSP 622B Ecosystems Assessment Intervention II: Schools (3)
    - CSP 623 Ecobehavioral Assessment Intervention (3)
    - CSP 625 Theories of Marriage and Family Therapy-I (3)
    - CSP 625L Marriage and Family Therapy Theories in Practice-I (1)
    - CSP 640 Testing and Assessment for Marriage and Family Therapists (2)
    - CSP 662 Counseling Interventions with Children and Adolescents (3)
    - CSP 670 Theory and Process of Group Counseling (3)
    - CSP 680 Theory and Process of Consultation (3)
4. Electives (6-9 units) Selected in consultation with adviser and may include courses listed above.
5. Research (3-6 units).
  - ED 799A Thesis (3)
  - or ED 795A-795B Seminar (3-3)
  - or ED 791A-791B-791C (6)

**Educational Leadership:  
Specialization in Postsecondary Education  
(Major Code: 08271)**

The Master of Arts degree in education with a concentration in educational leadership and a specialization in postsecondary education is intended for students pursuing leadership positions in postsecondary education, foreign school administrators, administrators of educational programs in private industry, civil service, or the nonprofit sector, administrators of technical and vocational programs or school-to-work programs, or those who have other administrative objectives in educational fields.

To apply for admission into the postsecondary education specialization, a student must complete an application for admission to both the University and the postsecondary education specialization program. All applications should include at least two letters of recommendation. All applicants should note that academic degree and experience required varies with the career goal of the student. Upon admission to the University and the department, all students will discuss the degree curriculum with the graduate adviser during the first semester in the program. Only students who show reasonable promise of success in postsecondary education as a career will be admitted to this program. In order to continue in the program, the student must demonstrate ongoing academic, professional and personal growth.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Administration, Rehabilitation and Postsecondary Education:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) Department application;
- (4) Two letters of recommendation.

Mail or deliver your complete admissions package to:  
 Interwork Institute  
 (Attention: Graduate Adviser)  
 San Diego State University  
 3590 Camino del Rio North  
 San Diego, CA 92108-1716

**Specific Requirements for the Master of Arts degree in Education with a Concentration in Educational Leadership and a Specialization in Postsecondary Education.**

A minimum of 30 units to include:

1. Core program: Six to nine units selected from the following:
  - ARP 605 Postsecondary Education (3)
  - ARP 610 Educational Leadership (3)
  - ARP 747 Educational Leadership in a Diverse Society (3)
2. Six to nine units selected, with the approval of the graduate adviser, from the following:
  - ARP 611 Program Development and Evaluation in Postsecondary Education (3)
  - ARP 631 Seminar in Teaching in Postsecondary Education (3)
  - ARP 680 Seminar in Administration, Rehabilitation and Postsecondary Education (3)
  - ARP 720 Educational Human Resource Development in Postsecondary Education (3)
  - ARP 727 Emerging Issues in Educational Leadership (3)
  - ARP 730 Seminar in Adult Learning (3)
  - ARP 740 Advanced Seminar in Administration, Rehabilitation and Postsecondary Education (3)
  - ARP 755 Governance and Policy Development in Postsecondary Education Learning Organizations (3)
3. Electives selected with the approval of the graduate adviser (6-9 units).
4. ED 690 Methods of Inquiry (3)
5. Research: Three to six units selected from the following:
  - ED 791A Evaluation Techniques (3)
  - ED 791B-791C Practicum: Evaluation (1-3) or
  - ED 795A-795B Seminar (3-3) or
  - ED 799A Thesis (3)

**Educational Leadership: Specialization in Student Affairs  
in Postsecondary Education  
(Major Code: 08271)**

The Master of Arts degree in education with a concentration in educational leadership and a specialization in student affairs in postsecondary education is intended for students pursuing positions in postsecondary education, student services professionals, or those who have other administrative objectives in educational fields.

To apply for this concentration with a specialization in student affairs in postsecondary education, a student must complete an application for admission to both the University and the student affairs postsecondary education program. All applications should include at least two letters of recommendation. All applicants should note that academic degree and experience required varies with the career goal of the student. Upon admission to the University and the department, all students will discuss the degree curriculum with the graduate adviser during the first semester in the program. Only students who show reasonable promise of success in postsecondary education as a career will be admitted to this program. In order to continue in the program, the student must demonstrate ongoing academic, professional, and personal growth.

## Education

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Administration, Rehabilitation and Postsecondary Education:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) Department application;
- (4) Two letters of recommendation.

Mail or deliver your complete admissions package to:

Interwork Institute  
(Attention: Graduate Adviser)  
San Diego State University  
3590 Camino del Rio North  
San Diego, CA 92108-1716

### **Specific Requirements for the Master of Arts degree in Education with a Concentration in Educational Leadership and a Specialization in Student Affairs Postsecondary Education.**

A minimum of 30 units to include:

1. Core program: Six to nine units selected from the following:  
ARP 605 Postsecondary Education (3)  
ARP 610 Educational Leadership (3)  
ARP 620 Student Affairs in Higher Education (3)
2. Nine to 12 units selected, with the approval of the graduate adviser, from the following:  
ARP 621 Theoretical Foundations of Student Affairs (3)  
ARP 622 Communication and Group Process in Student Affairs Leadership (3)  
ARP 623 Seminar: Critical Leadership Issues in Student Affairs (3)  
ARP 680 Seminar in Administration, Rehabilitation and Postsecondary Education (3)  
ARP 727 Emerging Issues in Educational Leadership (3)  
ARP 730 Seminar in Adult Learning (3)  
ARP 740 Advanced Seminar in Administration, Rehabilitation and Postsecondary Education (3)  
ARP 747 Educational Leadership in a Diverse Society (3)  
ARP 760 Internship in Educational Leadership (2-6) Cr/NC/RP
3. ED 690 Methods of Inquiry (3)
4. Research: Three to six units selected from the following:  
ED 791A Evaluation Techniques (3)  
ED 791B-791C Practicum: Evaluation (1-3) or  
ED 795A-795B Seminar (3-3) or  
ED 799A Thesis (3)

### **Educational Leadership: Specialization in PreK-12 (Major Code: 08271)**

The Master of Arts degree in education with a concentration in educational leadership and a specialization in preK-12 is intended for students pursuing administrative posts in preK-12 educational organizations, including school business managers. Students who intend to pursue administrative careers in California public schools, grades preK-12, need to obtain the Preliminary Administrative Services Credential and then the Professional Administrative Services Credential. Students in the preK-12 specialization may earn a degree without earning a California Preliminary Services Credential or in combination with the credential.

To apply for admission into the preK-12 specialization, a student must complete an application for admission to both the University and the Department of Educational Leadership. All applications should include two letters of recommendation from two supervisory administrators. Upon admission to the University and the program, all students will discuss the degree curriculum with the graduate adviser during the first semester in the program.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Educational Leadership:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) CBEST score;
- (3) GRE scores (official notification);
- (4) Department application;
- (5) Two letters of recommendation.

Mail or deliver your complete admissions package to:

Department of Educational Leadership  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1190

### **Specific Requirements for the Master of Arts degree in Education with a Concentration in Educational Leadership and a Specialization in PreK-12 Educational Leadership.**

A minimum of 30 units to include:

1. Core program: Six units.  
EDL 600 Principles of Educational Administration (3)  
EDL 610 Educational Leadership in PreK-12 Educational Organizations (3)
2. Six to nine units selected, with the approval of the graduate adviser, from the following:  
EDL 630 Curriculum Design and Management (3)  
EDL 652 Seminar in Instructional Improvement and Evaluation (3)  
EDL 655 Administering Educational Organizations (3)  
EDL 680 Seminar in PreK-12 Educational Administration (3)  
EDL 740 Advanced Seminar in PreK-12 Educational Leadership and Administration (3)
3. Electives selected with the approval of the graduate adviser (6-9 units).
4. ED 690 Methods of Inquiry (3)
5. Research: Three to six units selected from the following:  
ED 791A Evaluation Techniques (3)  
ED 791B-791C Practicum: Evaluation (1-3) or  
ED 795A-795B Seminar (3-3) or  
ED 799A Thesis (3)

The Master of Arts degree in Education with a concentration in Educational Leadership is also offered at the Imperial Valley Campus.  
For course requirements consult the Imperial Valley Campus Bulletin.

### **Specific Requirements for the Preliminary Administrative Services Credential**

**(Credential Code: 00501)**

(Academic coursework and experience required vary with the career goal of the student - see adviser):

1. Prerequisites:
  - a. An application for admission to the Educational Leadership Department.
  - b. Basic skills examination (CBEST).
  - c. Two letters of recommendation from school district or agency where employed.
  - d. A counseling interview with a program area faculty.
  - e. Valid California credential for teaching, pupil personnel services, school nursing, speech pathology, or librarianship.
  - f. Three years of successful, full-time K-12 school experience.
  - g. Students must have completed at least 1 unit (or the equivalent) of coursework dealing with computers in education.
  - h. Completion of GRE Writing Assessment.

2. Possession of a master's degree in Educational Administration or another field related to educational practice.	
3. EDL 600 Principles of Educational Administration . . . . .	3
EDL 610 Educational Leadership in PreK-12 Educational Organizations . . . . .	3
EDL 630 Curriculum Design and Management . . . . .	3
EDL 652 Seminar in Instructional Improvement and Evaluation . . . . .	3
EDL 655 Administering Educational Organizations . . . . .	3
EDL 660 Field Experience in Educational Leadership . . . . .	4-10
Electives selected with approval of adviser . . . . .	3
Total	22-28

4. All students must meet the state mandated requirement for competencies needed to serve individuals with disabilities. Consult with a program adviser in the Department of Special Education for coursework and waiver requirement

**Specific Requirements for the Professional Administrative Services Credential: (Credential Code: 00502)**

Candidates pursuing the Professional Administrative Services Credential must be in a credentialed administrative position. The candidate must complete the credential program within five years of initial appointment to an administrative position.

The following are required for admission to the Professional Administrative Services Credential program:

1. An application for admission to the program.
2. Admission to postbaccalaureate status at San Diego State University.
3. Possession of a valid Preliminary Administrative Services Credential or a Clear Administrative Services Credential.
4. Possession of a master's degree in Educational Leadership or another field related to educational practice.
5. Two letters of recommendation from knowledgeable field references
6. A letter of formal commitment of participating school district to support field experience requirement.
7. Minimum grade point average of 3.25 in graduate study.
8. A selection interview with program area faculty members.

**Program**

The program requirements for the Professional Administrative Services Credential are:

	Units
EDL 707 Educational Law and Finance . . . . .	3
EDL 720 Human Resource Development in PreK-12 Educational Organizations . . . . .	3
EDL 727 Emerging Issues in PreK-12 Educational Organizations . . . . .	3
EDL 747 Leadership in Diverse PreK-12 Educational Organizations . . . . .	3
EDL 760 Internship in PreK-12 Educational Organizations . . . . .	4-12
Electives selected with approval of adviser . . . . .	0-6
Total	22-30

Issuance of the Professional Administrative Services Credential requires completion of two years of successful, fulltime, K-12 administrative experience earned while holding the Preliminary Administrative Services Credential.

**Educational Research  
(Major Code: 08241)**

The Master of Arts degree in education with a concentration in educational research is designed to prepare students having a basic background in education to conduct measurement, research, and evaluation activities at a professional level. Emphasis is upon preparation for research activities at the school district level.

1. Prerequisite: A basic background in education (a minimum of 12 units of professional education) including at least one course in tests and measurement
2. ED 690 Methods of Inquiry (3 units)
3. Core program (9 units): Policy Studies in Language and Cross-Cultural Education 612, Educational Ethnography in Multicultural Settings (3 units); Teacher Education 646, Seminar in Educational Measurement (3 units); and 3 units of educational research design selected with the approval of the adviser
4. Electives (15 units) selected with adviser's approval
5. ED 799A, Thesis (3 units)

**Educational Technology  
(Major Code: 08992)**

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Educational Technology:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) Department application;
- (4) Three letters of recommendation (in sealed envelopes);
- (5) Personal statement.

Mail or deliver your complete admissions package to:

Department of Educational Technology  
Campus Program  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92108-1182

The Master of Arts degree in education with a concentration in educational technology enables students to prepare for careers as instructional technologists, educational specialists, instructional designers, trainers, and experts in educational computing. State-of-the-art coursework and internships in companies, agencies and schools prepare candidates to analyze performance problems and design, develop and evaluate instructional strategies and products. Students graduate with a portfolio including educational computer software, video, multimedia, print and web-based materials. For further information, see the coordinator of educational technology. Course requirements follow:

1. Prerequisite: Varies with the career goal of the student. Students use educational technology skills in settings as diverse as the schools, museums, multimedia companies, and corporate training programs. For most students, Educational Technology 540 and 541 are prerequisites. See adviser.
2. ED 690 Methods of Inquiry (3 units).
3. Core program (15 units): The core is composed of courses in education and related fields, selected with the approval of the adviser on the basis of the student's interests and goals. A minimum of nine units must be taken in courses at the 600 and 700 level.
4. Electives (6-9 units) selected with the approval of the adviser.
5. Research (3-6 units)
  - ED 791A Evaluation Techniques (3)
  - ED 791B-791C Practicum: Evaluation (1-3) or
  - ED 795A-795B Seminar (3-3 units) or
  - ED 799A Thesis (3 units)

**Specialization in Educational Computing within Educational Technology Concentration:** Students specializing in educational computing must include among their 15 core units Educational Technology 544 and 572. Recommended electives to be approved by the program adviser include Educational Technology 561, 596, 644, 670, 671, 684, 775, and Special Education 650. Specialization prerequisites are Educational Technology 540 and 541.

**Specialization in Workforce Education and Lifelong Learning:** This specialization will allow students to prepare themselves as professionals who will focus on the development of education and training programs for youth and adults who are traditionally undereducated, non-college educated and who work in non-management jobs.

Students specializing in Workforce Education and Lifelong Learning pursue the following program: Prerequisites are Educational Technology 540 and 541. Required courses included in the 15 unit core are Educational Technology 544, and Administration, Rehabilitation and Postsecondary Education 565. Recommended electives to be approved by the program adviser may include: Educational Technology 572, 640, 644, 650, 670, 684, 685; Administration, Rehabilitation and Postsecondary Education 605, 631, 730, 747; Policy Studies in Language and Cross-Cultural Education 601, 602, 612; Teacher Education 631, 639.

**Elementary Curriculum and Instruction**

(Major Code: 08021)

The Master of Arts degree in education with a concentration in elementary curriculum and instruction is designed to increase professional competence in the form of more breadth, depth, and technical skill in curriculum and instruction, either generally or in selected areas of specialization.

1. Prerequisite: A basic background in education (minimum of 12 units) to include curriculum and methods, growth and development, educational psychology, and history and philosophy of education.

The School of Teacher Education will consider a letter of petition from individuals without professional units or a California teaching credential with equivalent experience related to the field of education.

2. Education 690, Methods of Inquiry (3 units).
3. Core program (15 units): The core is composed of courses in education and related fields, selected with the approval of the adviser on the basis of the student's interests, professional needs and goals. The core program will include:
  - a. Teacher Education 600, Curriculum Development in Education (3 units); or related course with approval of adviser.
  - b. Teacher Education 626, Advanced Educational Psychology; or Teacher Education 655, Sociocultural Foundations of American Education; or Teacher Education 656, Struggle for the American Curriculum; or Teacher Education 657, Philosophy of Education (3 units); or related course with approval of adviser.
  - c. Teacher Education 610A, Seminar in Mathematics Education - Elementary School; or Teacher Education 610C, Seminar in Science in Elementary Education; or Teacher Education 630, Seminar in Reading Education; or Teacher Education 631, Seminar in Language Arts; or related course with approval of the adviser (3 units).
  - d. 500/600/700-numbered courses in teacher education with the approval of the adviser (3-6 units).
  - e. 500/600/700-numbered courses in education or related fields selected with the approval of the adviser (up to 6 units).
4. Electives (6-9 units) selected with the approval of the adviser.
5. Special Study and Research (3-6 units): Education 791A-791B-791C, Evaluation (3-1-3 units); or Education 795A-795B, Seminar (3-3 units); or Education 799A, Thesis (3 units).

The program of study must include at least 15 units of 600- and 700-level courses.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the School of Teacher Education (BA-246). The department application may be obtained by calling (619) 594-6544:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) Department application.

Mail or deliver your complete admissions package to:

Ceci Necoechea  
College of Education (BA-246)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92108-1153

The Master of Arts degree in Education with a concentration in Elementary Curriculum and Instruction is also offered at the Imperial Valley Campus.

For course requirements consult the Imperial Valley Campus Bulletin.

**Mathematics Education (K-8)**

(Major Code: 17012)

The Master of Arts degree in education with a concentration in K-8 mathematics education is designed to provide teachers a deeper understanding of issues in learning and teaching mathematics in grades K-8, and increased knowledge of current trends, research, and assessment in mathematics education. Students can expect to acquire new perspectives and skills about mathematics teaching, specialized knowledge of children's mathematical understanding, and preparation for leadership among teachers in mathematics teaching.

1. **Prerequisites:** Applicant must have at least one year of teaching experience or consent of program coordinator, and must file an application for admission to both the University and the K-8 mathematics education program. Successful applicants must demonstrate personal, professional, and academic potential for success in this program. See the K-8 Mathematics Education Master of Arts program Web site at <http://coe.sdsu.edu/departments/MathEd/master.htm> for specific admission criteria.

**2. Core Program (12 units):**

- |           |  |
|-----------|--|
| MTHED 600 | Teaching and Learning Mathematics in Early Grades (Pre-K to 4) (3) |
| MTHED 601 | Teaching and Learning Mathematics in the Middle Grades (3)         |
| MTHED 603 | Seminar on Research in Mathematics Learning and Instruction (3)    |
| TE 511    | Assessment in Mathematics Education (3)                            |

**3. Electives (9 units):** With the approval of the adviser, select three courses from the following:

- |           |  |
|-----------|--|
| PLC 553   | Language Assessment and Evaluation in Multicultural Settings (3) |
| PLC 601   | Language Policies and Practices (3)                              |
| EDTEC 540 | Educational Technology (3)                                       |
| EDTEC 541 | Web-Based Multimedia Development (3)                             |
| EDTEC 570 | Advanced Teaching with Technologies (3)                          |
| EDTEC 572 | Technology for Course Delivery (3)                               |
| MTHED 502 | Technology in Teaching and Learning Mathematics: Grades K-8 (3)  |
| MTHED 604 | Seminar on Curriculum and Evaluation Issues in Mathematics (3)   |
| MTHED 605 | Algebra in the 7-14 Curriculum (3)                               |

MTHED 606 Geometry in the 7-14 Curriculum (3)  
 TE 610A Seminar in Mathematics Education—Elementary School (3)  
 TE 790 Seminar in Teacher Education (3)  
 Or three units of a 500- or 600-level course approved by the program coordinator.

**4. Research (9 units):**

ED 690 Methods of Inquiry (3)  
 ED 795A Seminar (3)  
 ED 795B Seminar (3)

**Policy Studies in Language and Cross-Cultural Education**

(Major Code: 08994)

The Master of Arts degree in education with a concentration in policy studies in language and cross-cultural education is designed to provide special knowledge and training for two diverse audiences with different career goals. Plan 1, curriculum and critical pedagogy, is geared for the classroom teacher or resource specialist who will be working directly with language minority students. Plan 2 has been developed to allow students to specialize in areas outside of the Department of Policy Studies in Language and Cross-Cultural Education. The nine unit specializations may be in other College of Education departments or in departments across campus, with permission of the department adviser and the cooperating department. This allows for career options in a variety of settings with an emphasis in a noneducational discipline, to provide classroom teachers, researchers, and other specialists with a different orientation in examining policy research.

Students in each specialization will take a core of nine units in the Policy Studies in Language and Cross-Cultural Education Department. All students in Plan B will also take a comprehensive examination\* covering coursework for the M.A. degree.

\* It is recommended that students enroll in PLC 686 in preparation for the comprehensive examination.

**Prerequisites:**

PLC 600 Foundations of Democratic Schooling (3)  
 PLC 601 Language Policies and Practices (3)

**Research:** 7-9 units total.

ED 690 Methods of Inquiry (3) AND  
 ED 795A-795B Seminar (6) OR  
 ED 799A Thesis (3) AND  
 ED 797 Research (1-3)

**Electives:** 3-6 units selected with approval of adviser.

**Plan I: Curriculum and Critical Pedagogy Specialization**

**Core:**

PLC 612 Educational Ethnography in Multicultural Settings (3)  
 PLC 613 Organizational Strategies and Professional Development for the Multicultural School Community (3)  
 PLC 650 Bilingual/Cross-Cultural Curriculum Development and Practice (3)

**Specialization:** Select nine units from the following with consent of adviser.

PLC 553 Language Assessment and Evaluation in Multicultural Settings (3)  
 PLC 596 Special Topics in Bilingual and Multicultural Education (3)  
 PLC 602 Cross-Cultural Context of School Communities (3)

PLC 603 Community and Schools in a Diverse Society (3)  
 PLC 651 Multicultural Methods and Curriculum in Content Areas (1-3)  
 PLC 652 Multicultural Methods and Curriculum in Language Arts (3)  
 PLC 686 Seminar in Multicultural Education (1-6)  
 PLC 798 Special Study (1-6) Cr/NC/RP

**Plan II: Outside Specialization**

**Core:**

PLC 612 and six units selected from PLC 553, 602, 613, or 650 with approval of adviser.

**Specialization:** Nine units taken outside the Department of Policy Studies in Language and Cross-Cultural Education with consent of graduate adviser, and a cooperating department or program.

**Reading Education**

(Major Code: 08301)

The Master of Arts degree in education with a concentration in reading education is designed to provide increased knowledge and skill for those who are or wish to become reading/language arts specialists in public or private schools and clinics. The program prepares candidates to teach, tutor, develop curriculum, offer in-service instruction and administer reading centers for students ranging from kindergarten through community college, university, and adult levels. This degree is often earned concurrently with a California Reading/Language Arts Specialist Credential, which has a number of common requirements.

1. Prerequisites: A valid California teaching credential, grades K-12, or completion of a minimum of 12 units of professional coursework in education, including a basic course in methods and materials for teaching reading and a course in children's/adolescent literature prior to or concurrent with enrollment in TE 637, Instructional Strategies for Reading/Language Arts.
2. Core program (24 units)
  - TE 631 Seminar in Language Arts (3)
  - TE 633 Leadership in Literacy Education (1)
  - TE 634 Seminar in Research Investigations in Reading and Language Arts (4)
  - TE 635 Assessment of Reading and Language Arts (3)
  - TE 636 Advanced Assessment of Reading and Language Arts (3)
  - TE 637 Instructional Strategies for Reading and Language Arts (4)
  - TE 639 Literacy and Language (3)
  - 3. ED 795A-795B Seminar (3-3) or  
 ED 799A Thesis (3) and Electives (3)

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the program advisers:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) Department application (paper only);
- (4) Personal statement;
- (5) Three letters of reference on official letterhead.

Mail or deliver your complete admissions package to:

School of Teacher Education  
 (Attention: Pamela J. Ross)  
 San Diego State University  
 5500 Campanile Drive  
 San Diego, CA 92182-1153

### Secondary Curriculum and Instruction (Major Code: 08031)

The Master of Arts degree in education with a concentration in secondary curriculum and instruction, is designed as the base for applicants to increase professional competence in any of the fields typically taught in secondary schools, and for obtaining those competencies and technical skills in curriculum and instruction either generally, or in selected areas of specialization.

1. Prerequisite: A basic background in education (12 units).

The School of Teacher Education will consider a letter of petition from individuals without professional units or a California teaching credential with equivalent experience related to the field of education.

2. ED 690 Methods of Inquiry (3 units)
3. Core program (6 units): to include TE 600, Curriculum Development in Education (3 units); three units from TE 604, Advanced Problems in Instruction; or TE 655, Sociocultural Foundations of American Education; or TE 656, Struggle for the American Curriculum; or related courses with approval of adviser.
4. Electives (15 units) selected with the approval of the graduate adviser on the basis of the student's interests, goals and needs. A minimum of three units must be in 600- or 700-numbered courses. A maximum of six units may be selected from cognate fields outside the College of Education.
5. ED 791A Evaluation Techniques (3) and  
ED 791B-791C Practicum: Evaluation (1-3) or  
ED 795A-795B Seminar (3-3 units) or  
ED 799A Thesis (3 units) and Electives (3 units)

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the School of Teacher Education (BA-246). The department application may be obtained by calling (619) 594-6544:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) Department application.

Mail or deliver your complete admissions package to:

Ceci Necoechea  
College of Education (BA-246)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1153

The Master of Arts degree in Education with a concentration in Secondary Curriculum and Instruction is also offered at the Imperial Valley Campus.

For course requirements consult the Imperial Valley Campus Bulletin.

### Special Education (Major Code: 08081)

The Master of Arts degree in education with a concentration in special education provides the professional educator with advanced knowledge and skills in special education. This degree has many requirements in common with the Level II Education Specialist Credentials in Special Education and may be earned concurrently with those credentials. The M.A. degree can include specializations in the following areas: early childhood, developing gifted potential, mild/moderate disabilities, moderate/severe disabilities, resource specialization, severely emotionally disturbed/behaviorally disordered, teaching low achieving students in the mainstream, and school to

adult transition. All programs must be approved by the graduate adviser. Although the M.A. degree is usually linked to a teacher credential, it is open to individuals with undergraduate degrees in a wide range of disciplines in consultation with the graduate adviser.

#### Specialization in Developing Gifted Potential

Core (15 units): Special Education 508, 644, 649, 658, 771.

Related Fields (6-9 units 500-level or above) by advisement or Advanced Specialization (6 units): Special Education 650 and three units of electives selected with approval of adviser.

Research (6-9 units): Education 690\* and Education 791A, 791B-791C; or 795A\*-795B\*; or 799A.

#### Specialization in Early Childhood

Prerequisites: Special Education 500, 527, 528; or Special Education 527 and Preliminary or Professional California credential in Early Childhood Special Education.

Core (12 units): Education 690\*; Special Education 655; six units selected from approved coursework in specialization area.

Advanced Specialization: Special Education 681 – 3 units (in section approved by adviser) and 9-12 units selected from approved electives at 500-level or above.

Culminating Experience (3-6 units): Education 795A\*-795B\* or Education 791A, 791B, 791C or Education 799A.

#### Specialization in Mild/Moderate Disabilities

Prerequisites: Special Education 500, 524, 527; or Special Education 527 and Preliminary or Professional California credential in Mild/Moderate Disabilities.

Core (12 units): Education 690\*; Special Education 651, 653; three units selected from approved coursework in specialization area.

Advanced Specialization: Special Education 681 – 3 units (in section approved by adviser) and 9-12 units selected from approved electives at 500-level or above.

Culminating Experience (3-6 units): Education 795A\*-795B\* or Education 791A, 791B, 791C or Education 799A.

#### Specialization in Moderate/Severe Disabilities

Prerequisites: Special Education 500, 525, 527; or Special Education 527 and Preliminary or Professional California credential in Moderate/Severe Disabilities.

Core (12 units): Education 690\*; Special Education 651, 654; three units selected from approved coursework in specialization area.

Advanced Specialization: Special Education 681 – 3 units (in section approved by adviser) and 9-12 units selected from approved electives at 500-level or above.

Culminating Experience (3-6 units): Education 795A\*-795B\* or Education 791A, 791B, 791C or Education 799A\* in departmentally approved sections.

#### Resource Specialization

Prerequisites: Special Education 500 and 501.

Core: Education 690\* and 6-9 units selected from Special Education 524, 525, 529, 634, 635, 645, 647, 648, 662, 664, 677.

Advanced Specialization: Special Education 681 – 3 units (in section approved by adviser); 3-6 units selected from Special Education 651, 652, 653; 6-9 units selected from approved electives at 500-level or above.

Culminating Experience (3-6 units): Education 795A\*-795B\* or Education 791A, 791B, 791C or 799A.

#### Specialization in Severely Emotionally Disturbed/ Behaviorally Disordered

Prerequisites: Special Education 500 and 501.

Core (14 units): Special Education 529, 634, 647, 677; Education 690\*.

Advanced Specialization: Special Education 681 – 3 units (in section approved by adviser) and 7-10 units selected from approved electives at 500-level or above.

Culminating Experience (3-6 units): Education 795A\*-795B\* or Education 791A, 791B, 791C or Education 799A.

### Specialization in Teaching Low Achieving Students in the Mainstream

No new students are being admitted to this program during the 2004-2005 academic year. Contact Special Education Department.

Prerequisites: Special Education 501; Special Education 971 (4-6 units).

Core (15 units): Special Education 553, 647, 648, 650 (3); Education 690\*.

Advanced Specialization: 9-12 units selected from Special Education 527, 681 – 3 units (in section approved by the adviser), 771 (1-3), 798, three units of approved electives at 600-level or above or Special Education 527.

Culminating Experience (3-6 units): Education 795A\*-795B\* or Education 791A, 791B, 791C or Education 799A.

#### Specialization in Vocational Transition

Prerequisite: Special Education 501 or Administration, Rehabilitation and Postsecondary Education 684.

Core (15-18 units): Special Education 664; Education 690\*; 6-9 units selected from (a) Special Education 524 or 525; (b) Special Education 645 or 648; (c) Special Education 771 or Administration, Rehabilitation and Postsecondary Education 744 or Counseling and School Psychology 730; Education 690\*.

Advanced Specialization: Special Education 681 – 3 units (in section approved by adviser); 6-9 units selected from Special Education 645, 650, 662, 798 (1-6), Administration, Rehabilitation and Postsecondary Education 645, 687; and 3-6 units of approved electives at the 600 or 700 level.

Culminating Experience (3-6 units): Education 795A\*-795B\* or Education 791A, 791B, 791C or Education 799A.

\* In departmentally approved sections.

## Master of Science Degree in Rehabilitation Counseling

### General Information

The rehabilitation counseling program has the primary objective of preparing rehabilitation students to enter the field of rehabilitation and provide rehabilitation and case management services with consumers with physical, emotional, and/or cognitive disabilities. Expanded curriculum is highlighted in assistive technologies, rehabilitation of deaf and hard of hearing consumers, mental health, career assessment, administration of rehabilitation programs, disability management, diversity program development and work within the public and private sectors. The degree is accredited by the Commission on Rehabilitation Education (CORE). A limited number of graduate stipends from the Rehabilitation Services Administration are available to (1) students who are committed to entering rehabilitation in publicly supported programs after graduation, and (2) students with a financial need. Graduates qualify for CRC and CWAVES certification.

### Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin. The student must file an application for admission to San Diego State University with both the Office of Graduate Admissions and the Rehabilitation Counseling Program.

Students seeking admission to the graduate program which leads to a Master of Science degree in rehabilitation counseling should address their inquiries to the coordinator of the program. Detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms. As there are specific requirements for the program, it is not sufficient to file only the general university admission application. Students are typically admitted in the fall semester each year.

Criteria for admission require that students submit evidence in written form and through interviews demonstrating personal, professional, and academic adequacy for the Master of Science degree in rehabilitation counseling. Only students who show reasonable promise of success in rehabilitation counseling as a career will be admitted to this program. In order to continue in the program, the student must demonstrate ongoing academic, professional and personal growth.

A student may transfer a maximum of 30 semester units from another CORE accredited graduate program in rehabilitation counseling. Evaluation of transfer credits will be made at the time of acceptance to the program. Approval of graduate transfer credit from other programs will be at the discretion of the coordinator and subject to final approval by the Graduate Division.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Administration, Rehabilitation and Postsecondary Education/Interwork Institute:

- (1) Department application;
- (2) Two sets of official transcripts (in sealed envelopes);
- (3) GRE scores;
- (4) Letters of reference;
- (5) Personal statement.

Mail or deliver your complete admissions package to:

Interwork Institute (Attention: Graduate Adviser)  
San Diego State University  
3590 Camino del Rio North  
San Diego, CA 92108-1716

### Advancement to Candidacy

To be eligible for advancement to candidacy the student must, in addition to holding classified graduate standing, have completed at least 24 units of the coursework listed on the official program, maintain good standing in the rehabilitation counseling program, and otherwise comply with the regulations of the Graduate Division as described in Part Two of this bulletin.

### Specific Requirements for the Master of Science Degree in Rehabilitation Counseling

(Major Code: 12221)

In addition to meeting the requirements for classified graduate standing, and the basic requirements for the master's degree, as described in Part Two of this bulletin, the student must complete a minimum of 60 graduate units of 500-, 600- and 700-numbered courses, to include:

#### Core program (24 units):

- |               |  |
|---------------|--|
| ARP 645A-645B | Assessment in Rehabilitation (3-3)                         |
| ARP 660       | Theory and Process of Counseling in Rehabilitation (3)     |
| ARP 684       | Rehabilitation Foundations (3)                             |
| ARP 685A-685B | Medical and Psychological Aspects of Disability (3-3)      |
| ARP 687       | Placement Practices with Individuals with Disabilities (3) |
| ED 690        | Procedures of Investigation and Report (3)                 |

#### 15 units of required courses selected from the following:

- |               |   |
|---------------|---|
| ARP 607       | Applications of Rehabilitation Technology (3)                             |
| ARP 610       | Educational Leadership (3)  |
| ARP 648       | Group Dynamics in Rehabilitation (3)                                      |
| ARP 680       | Seminar in Administration, Rehabilitation and Postsecondary Education (3) |
| ARP 710A-710B | Seminar in Rehabilitation (3-3)   |
| ARP 720       | Educational Human Resource Development in Postsecondary Education (3)     |

## Education

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ARP 740	Advanced Seminar in Administration, Rehabilitation and Postsecondary Education (3)
ARP 747	Educational Leadership in a Diverse Society (3)
ARP 755	Governance and Policy Development in Postsecondary Learning Organizations (3)
CSP 615	Seminar in Multicultural Dimensions in Counseling (3)

**A minimum of six units selected from the following:**

ARP 743	Fieldwork in Rehabilitation (3-6) Cr/NC
ARP 744	Practicum in Rehabilitation (3-12) Cr/NC
ARP 745	Internship in Rehabilitation (3-9) Cr/NC

6-9 units of electives as determined by consent of the faculty adviser.

### Comprehensive Examination

A written comprehensive examination is required. The student must demonstrate satisfactory performance on a written comprehensive examination, in lieu of thesis, prepared by the rehabilitation counseling program. Reservations for the examination must be made in advance in the Rehabilitation Counseling Program Office at 3590 Camino del Rio North, San Diego, CA 92108-1716.

### Program Structure

The rehabilitation counseling program offers a 60 semester unit format that leads to the Master of Science in rehabilitation counseling. Students are accepted on a full-time and part-time basis.

## Master of Science Degree in Counseling

### General Information

The Department of Counseling and School Psychology offers graduate study leading to either the 30-unit Master of Arts degree in education with a concentration in counseling or the 60-unit Master of Science degree in counseling with concentrations in three areas. Applicants interested in the Community-Based Block should refer to the section on the Master of Arts degree with a Concentration in Counseling.

The Master of Science degree in counseling provides an integrated sequence of study in the theories, research, and practice of counseling and mental health services as applied in the schools. The degree preparation offers a core of competencies and experiences with specialized study and experiences provided via defined concentrations: Marriage and Family Therapy; School Counseling; and School Psychology.

Course offerings are organized by professional concentration. The majority are sequenced in year-long blocks. Most students attend full time (a minimum of nine units per semester), although limited part-time study is offered. All students in the Community-Based Block must attend full time.

The following departmental courses may be open to students who have not been accepted into a program and are interested in exploring departmental offerings: Counseling and School Psychology 400, 401, 450, 521, and 610A. See the department Web site at <http://edweb.sdsu.edu/csp>.

### Financial Assistance

The department sponsors the Counseling and School Psychology Loan Fund honoring Professors Leonard Strom and John Schmidt which along with other University-wide programs, is administered by the Office of Financial Aid and Scholarships. The department offers the Gertrude Bell scholarship to one first year student accepted to one of the four programs. Other forms of financial assistance administered by the University are presented elsewhere in this bulletin.

### Accreditation

The National Council for the Accreditation of Teacher Education (NCATE) has accredited the specializations in school counseling and, in conjunction with the National Association of School Psychologists (NASP), in school psychology. These national accreditations, however, do not guarantee certification or credentialing as school counselors or school psychologists outside of California. It is the student's responsibility to be aware of other states' requirements, and to arrange adjustment in the program accordingly if credentials are to be sought elsewhere.

### Admission to Graduate Study

In seeking admission to graduate study in counseling, the student should contact the Department of Counseling and School Psychology or visit the department Web site, requesting appropriate application materials. Degree, program, and concentration information and detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms. All application materials become the property of the department and will not be returned to the applicant.

*NOTE: In addition to application with the Department of Counseling and School Psychology, the student must file an application for admission to San Diego State University with the Office of Graduate Admissions. The admissions process includes a written application and group interview. Admission is for the fall semester only. There is no spring admission. Students may apply to more than one program. If admitted to more than one program, the student must develop an individualized sequence of study with an adviser. Students who consider completing the one year Community-Based Block program and transferring to another department program for further professional study should seek specific information on this option from the specific program.*

Students applying for admission should electronically submit the SDSU Graduate Division application available at <http://www.csumen-tor.edu>.

The following materials should be submitted as a complete package directly to the selected concentration of the Department of Counseling and School Psychology:

- (1) Completed program application form;
- (2) Personal statement;
- (3) Three letters of recommendation;
- (4) Two sets of official transcripts (in sealed envelopes) of all collegiate work (one set for SDSU graduate admissions and one set for department concentration);
- (5) Two sets of GRE scores (official notification);
- (6) Vita.

For school counseling and school psychology applicants:

- (7) Required personal statements;
- (8) California Basic Educational Skills Test (CBEST) must be taken.

Each concentration requires specific materials. Candidates should refer to concentration requirements available on the department Web site or by contacting the department office.

Applications to each program are made separately. Faculty begin review of applications in school psychology and in school counseling on January 15 for admission for the next year. Marriage and Family Therapy applications must be received by February 1 for consideration for fall admission. Community-Based Block applications received by February 1 are given high priority for fall admission, and review begins on that date.

Mail or deliver your complete admissions package to:

Department of Counseling and School Psychology  
(name of concentration)  
College of Education  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1179

No minimum set of qualifications in any way guarantees admission. From the large number of applications typically received, applicants considered to have demonstrated high potential are interviewed. Interviews assist the faculty in determining four areas of readiness: academic, multicultural, interpersonal, and preprofessional.

Recommendations are made by the concentration Admissions Committee to the department faculty and chair who make the final recommendation for admission to the University.

## Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, as described in Part Two of this bulletin and be recommended by the faculty. A student may be advanced to candidacy when the official program for the Master of Science degree has been filed and after having earned a minimum grade point average of 3.0 in at least 24 units listed on the official program.

## Specific Requirements for the Master of Science Degree in Counseling

(Major Code: 08261)

In addition to meeting the requirements for admission to the University with classified graduate standing, the student must satisfy the basic requirements for the master's degree described in Part Two of this bulletin. In addition, the student must meet the requirements specified below.

### Selection of Plan A or Plan B

The selection of Plan A, the thesis or project or Plan B, the comprehensive examination plan, is made in consultation with the adviser at the time the official program of study is filed. Plan A thesis is designed for students who have a particular research problem they wish to investigate in some detail. The Plan A project is expected to be a rigorous application of research and theory in a professional endeavor. The comprehensive examination option for Plan B requires demonstration of the integration and application of theory, research, and techniques. It is expected that the student will take the comprehensive examination concurrently with or following enrollments in Counseling and School Psychology 710B. The examination is offered near the end of each semester. Information is available from the Counseling and School Psychology office, the student's adviser, the department Web site, or the concentration materials.

### Course Requirements

Students are expected to consult with their adviser prior to taking any coursework leading to the master's degree. Selections of courses have been designated for the concentrations and must be reviewed with the adviser.

The student must complete a minimum of 60 units (62 units for the Specialization in School Psychology) of 500-, 600-, 700-numbered courses, including:

1. Common Core (6 units):
  - ED 690 Methods of Inquiry (3)
  - CSP 600 Cross-Cultural Counseling Communication Skills (2)
  - CSP 600L Cross-Cultural Counseling Prepracticum (1) Cr/NC
2. Foundations (a minimum of 9 units):
  - CSP 601 Theoretical Foundations of Counseling and Marriage and Family Therapy (3)
  - CSP 610A Determinants of Human Behavior: Personality (3)
  - CSP 610B Determinants of Human Behavior: Social and Cultural (3)
  - CSP 610C Determinants of Human Behavior: Development (3)
3. Theory, Research, and Techniques (a minimum of 12 units):
  - CSP 610D Determinants of Human Behavior: School Learning (3)
  - CSP 610E Determinants of Human Behavior: Biological (3)
  - CSP 615 Seminar in Multicultural Dimensions in Counseling (3)
  - CSP 601 Theoretical Foundations of Counseling and Marriage and Family Therapy (3)
  - CSP 622A Ecosystems Assessment – Intervention I: Students (3)
  - CSP 622B Ecosystems Assessment – Intervention II: Schools (3)
  - CSP 623 Ecobehavioral Assessment – Intervention (3)
  - CSP 625 Theories of Marriage and Family Therapy I (3)
  - CSP 625L Marriage and Family Therapy Theories in Practice I (1)
  - CSP 640 Testing and Assessment for Marriage and Family Therapists (2)
  - CSP 662 Counseling Interventions with Children and Adolescents (3)
  - CSP 670 Theory and Process of Group Counseling (3)
  - CSP 680 Theory and Process of Consultation (3)
4. Integration and Application of Theory, Research, and Techniques (a minimum of 6 units):
  - CSP 730 Fieldwork in Counseling (2-6) Cr/NC
  - CSP 740 Practicum: Individual Counseling (3) Cr/NC
  - CSP 741 Practicum: Group Counseling (3) Cr/NC
  - CSP 750 Advanced Seminar and Practicum: Individual Counseling (3-6) Cr/NC
  - CSP 755 Practicum I: Marriage and Family Therapy (3) Cr/NC
  - CSP 765 Practicum II: Marriage and Family Therapy (3) Cr/NC
  - CSP 780 Internship (2-12) Cr/NC
  - CSP 785 Marriage and Family Therapy Traineeship (1-10) Cr/NC
5. Research (a minimum of 3 units):
  - CSP 710A Professional Seminar (3) or
  - CSP 799A Thesis (3) Cr/NC/RP
6. Electives: 24 units selected with adviser's approval.

### Concentration in Marriage and Family Therapy

The Master of Science in counseling with a concentration in marriage and family therapy is designed to prepare students for practice in the field of marriage and family therapy. The student must complete, in consultation with an adviser, an official program of study that includes a minimum of 60 units of 600- and 700-numbered required and elective courses. To fulfill the educational requirements to qualify for California state licensure in marriage and family therapy, as published by the Board of Behavioral Sciences Laws and Regulations relating to the practice of Marriage and Family Therapy, Licensed Social Work, and Licensed Educational Psychologists, article 4980.40, students must complete an additional one to ten units, depending on the students' designed official program of study. The program is grounded in family systems theories and practice and is additionally designed to prepare for program review for Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE). The program is not currently accredited by COAMFTE.

Included within the course requirements are the clinical experiences of Practicum and Traineeship. Through the practicum and traineeship courses, students must complete a minimum of 500 direct clinical hours of experience with individuals, couples, and families. Two hundred fifty hours of experience must be relational hours with couples and families. Of the 500 clinical hours, 100 may consist of alternative relevant experience, as approved by the student's adviser.

## Education

Students must have a minimum of 100 hours of supervision, consisting of both individual and group supervision. Fifty of the supervision hours must be via videotaped or audio taped supervision methods. Twenty-five of the 50 supervision hours must be specifically via live or videotaped supervision methods. All students must purchase professional liability insurance in order to participate in the clinical experience component of the program.

Admitted students who did not major in psychology or child development as undergraduates, must demonstrate completion of upper division undergraduate coursework in four of the following areas prior to beginning the concentration coursework: psychology of personality, abnormal psychology, human sexuality, human development, cultural anthropology, sociology of the family, or ethnic studies. Alternate coursework may be substituted with the approval of the student's program adviser. If students have not completed these prerequisites prior to program admission, they may fulfill one of these course areas by enrollment in the following prerequisite course, based on availability:

1. Program prerequisite:  
CSP 610A Determinants of Human Behavior: Personality (3)
2. Common Core (6 units):  
ED 690 Methods of Inquiry (3)  
CSP 600 Cross-Cultural Counseling Communication Skills (2)  
CSP 600L Cross-Cultural Counseling Prepracticum (1) Cr/NC
3. Foundations (9 units):  
CSP 601 Theoretical Foundations of Counseling and Marriage and Family Therapy (3)  
CSP 610C Determinants of Human Behavior: Development (3)  
CSP 615 Seminar in Multicultural Dimensions in Counseling (3)
4. Theory, Research, and Techniques (minimum 21 units):  
CSP 609 Family Life Cycle Development (3)  
CSP 625 Theories of Marriage and Family Therapy I (3)  
CSP 625L Marriage and Family Therapy Theories in Practice I (1)  
CSP 626 Theories of Marriage and Family Therapy II (3)  
CSP 626L Marriage and Family Therapy Theories in Practice II (1)  
CSP 640 Testing and Assessment for Marriage and Family Therapists (2)  
CSP 662A Counseling Interventions with Children and Adolescents (3)  
CSP 670 Theory and Process of Group Counseling (3)  
CSP 686 Seminar: Gender and Ethnicity in Marriage and Family Therapy (2)  
CSP 692 Seminar in Couples in Therapy (2)  
CSP 693 Special Topics in Families and Larger Social Systems (1)
5. Integration and Application of Theory, Research, and Techniques (minimum 9 units).  
CSP 755 Practicum I: Marriage and Family Therapy (3) Cr/NC  
CSP 765 Practicum II: Marriage and Family Therapy (1-10) Cr/NC  
CSP 785 Marriage and Family Therapy Traineeship (1-3) Cr/NC

All students must minimally complete CSP 755, 765, and three units of CSP 785. Students' pacing of their clinical experience will vary. Therefore, students will register for additional units of CSP 785 as needed to insure oversight and supervision of all clinical hours of experience.

6. Additional requirements for the specialization (minimum 9 units):  
CSP 606A Mental Health Law (1)  
CSP 607A Ethical and Professional Issues in Mental Health Practice (2)

- |         |   |
|---------|---|
| CSP 618 | Contexts of Psychopathology (3)                           |
| CSP 635 | Sexuality and Intimacy in Couple and Family Therapy (2)   |
| CSP 687 | Family Treatment of Substance Abuse (1)                   |
| CSP 688 | Family Systems Assessment of Child Abuse (1)              |
| CSP 691 | Violence in Couples' Relationships (1)                    |
| CSP 694 | Psychopharmacology for Marriage and Family Therapists (2) |

7. Research (3-6 units):  
CSP 710A Professional Seminar (3)  
CSP 710B Professional Seminar (3)

**OR**

- |          |                     |
|----------|---------------------|
| CSP 799A | Thesis (3) Cr/NC/CP |
|----------|---------------------|

CSP 710A and CSP 710B form the capstone experience of the program. Students are required to complete a master's project as part of the requirements of CSP 710A. In CSP 710B, students complete a theory and integration paper. All students complete a comprehensive examination during their final semester of the program. In special circumstances, a student may elect to take the thesis option.

8. Electives (0-3 units)  
CSP 689 Family Counseling in the Schools (1)

or as selected in consultation with the adviser.

Adherence to the Laws and Regulations Relating to the Practice of Marriage and Family Therapy issued by the Board of Behavioral Sciences, the Code of Ethics of the American Association for Marriage and Family Therapy, and the Code of Ethics of the California Association of Marriage and Family Therapists is mandatory. Students who knowingly or unknowingly violate any part of the laws or ethical code may be dismissed from the program without further qualification regardless of coursework completed or other academic achievement. Copies of the Codes of Ethics and information on the Laws and Regulations accompany the Marriage and Family Therapy Program manual distributed at the new student orientation.

In addition to the requirement of maintaining a 3.0 GPA, students are reviewed for readiness to begin the clinical training sequence of the program. Students are evaluated regularly for skill development and adherence to legal and ethical standards.

Upon graduation, students apply with the Board of Behavioral Sciences, the California licensing board, for Intern Registration to continue eligibility for licensure. To qualify for marriage and family therapy licensure, students complete a qualifying graduate program, a total of 3,000 hours of clinical experience, and successfully complete a Board of Behavioral Sciences administered written and oral examination.

For additional written materials and information related to marriage and family therapy educational requirements leading to California Marriage and Family Therapy licensure, membership in marriage and family therapy professional organizations, and objectives related to pursuit of COAMFTE program accreditation, contact the Department of Counseling and School Psychology or the director at (619) 594-7455 (<http://edweb.sdsu.edu/csp>).

### Concentration in School Counseling

The Master of Science in counseling with a concentration in school counseling includes coursework and experiences designed to meet the competencies required for the California Pupil Personnel Services Credential (**Credential Code: 00802**). This credential authorizes the holder to function as a counselor in grades K through 12. Additional information may be obtained from the Department of Counseling and School Psychology or the director of the school counseling concentration. The sequence of the degree must be planned in consultation with the program director. The M.S. and credential has a minimum of 60 units of 500-, 600-, and 700- numbered courses, including:

1. Prerequisites:
  - a. Admission to the University and the Department of Counseling and School Psychology for concentrated study in school counseling.

- b. Related undergraduate coursework in anthropology, child development, cultural studies, education, ethnic studies, psychology, and sociology is recommended.
  - c. California Basic Educational Skills Test (CBEST) scores must be reported to the department prior to beginning this sequence of study. A photocopy will suffice.
  - d. The student must apply for the Certificate of Clearance prior to beginning the sequence of study. Consult the Credentials Processing Center, BA-250.
2. Common Core (6 units):
    - ED 690 Methods of Inquiry (3)
    - CSP 600 Cross-Cultural Counseling Communication Skills (2)
    - CSP 600L Cross-Cultural Counseling Prepracticum (1) Cr/NC
  3. Foundations (minimum 6 units):
    - CSP 610A Determinants of Human Behavior: Personality (3)
    - CSP 610B Determinants of Human Behavior: Social and Cultural (3)
    - CSP 610C Determinants of Human Behavior: Development (3)
    - CSP 610D Determinants of Human Behavior: School Learning (3)
    - CSP 615 Seminar in Multicultural Dimensions in Counseling (3)
  4. Theory, Research, and Techniques (21 units selected in consultation with adviser):
    - CSP 601 Theoretical Foundations of Counseling and Marriage and Family Therapy (3)
    - CSP 622A Ecosystems Assessment–Intervention I: Students (3)
    - CSP 622B Ecosystems Assessment–Intervention II: Schools (3)
    - CSP 623 Ecobehavioral Assessment–Intervention (3)
    - CSP 641 Psychometrics in Counseling and School Psychology (1)
    - CSP 645 Career Development (1)
    - CSP 662B Counseling Interventions with Children and Adolescents (3)
    - CSP 670 Theory and Process of Group Counseling (3)
    - CSP 680 Theory and Process of Consultation (3)
    - CSP 689 Family Counseling in the Schools (1)
    - CSP 762 Prevention, Crisis Intervention and Conflict Resolution in Schools (3)
  5. Integration and Application of Theory, Research, and Techniques (minimum 9 units selected in consultation with adviser):
    - CSP 730 Fieldwork in Counseling: School Counseling (3) Cr/NC
    - CSP 740 Practicum (1-6) Cr/NC
  6. Additional requirements for concentration (minimum 3 units selected in consultation with adviser):
    - CSP 620 Guidance Services in Public Education (3)
    - CSP 745 Program Development and Evaluation in Pupil Services (3)
    - CSP 689 Family Counseling in the Schools (1)
  7. Research (minimum 3 units selected in consultation with adviser):
    - CSP 710A Professional Seminar (3) **OR**
    - CSP 799A Thesis (3) Cr/NC/CP

Students must receive a grade of B- or better (Cr for credit/no credit graded courses) in every course to document attainment of the competencies required for the Pupil Personnel Services Credential. Students not meeting this requirement must immediately consult the department chair or the director of the school counseling concentration. In addition, three grades of B- or lower (including NC) are grounds for dismissal from the program regardless of the student's overall GPA.

Adherence to the ethical principles of the American School Counselor Association is mandatory. Students who knowingly or unknowingly violate any part of the ethical code may be dismissed from the program without further qualification regardless of coursework or other academic achievement. A copy of the ethical principles is included in the student handbook distributed at orientation.

In addition to the required courses and experiences, the student must pass all components of the CBEST to be eligible for the credential.

Students already holding a master's degree in counseling or in a related area may apply for non-degree credential preparation in school counseling. This option is offered by the department when space and funding are available. These students must follow the regular application procedures and requirements. An individualized program of study may be designed on approval of the school counseling committee. To pursue the non-degree credential preparation, contact the school counseling program director.

### Concentration in School Psychology

The Master of Science in counseling with a concentration in school psychology (**Major Code: 08261**) includes coursework and experiences for the development of competencies required for the California credential in school psychology (**Credential Code: 00804**). The credential authorizes the holder to function as a school psychologist from preschool through high school settings. Additional information may be obtained from the office of the Department of Counseling and School Psychology or the director of the school psychology concentration. The student should design the sequencing of the degree program in consultation with the adviser, and must complete a minimum of 62 units of 500-, 600-, and 700-numbered courses, including:

1. Prerequisites:
  - a. Admission to the University and the Department of Counseling and School Psychology for concentrated study in school psychology.
  - b. Related undergraduate coursework in child development, culture studies, education, and/or psychology strongly recommended.
  - c. California Basic Educational Skills Test (CBEST) scores must be reported to the department prior to beginning this sequence of study. A photocopy will suffice.
  - d. The student must apply for a Certificate of Clearance prior to beginning the sequence of study. Consult the Credentials Processing Center, BA-250.
2. Common Core (6 units):
  - ED 690 Methods of Inquiry (3)
  - CSP 600 Cross-Cultural Counseling Communication Skills (2)
  - CSP 600L Cross-Cultural Counseling Prepracticum (1) Cr/NC
3. Foundations (minimum 12 units):
  - CSP 610C Determinants of Human Behavior: Development (3)
  - CSP 610D Determinants of Human Behavior: School Learning (3)
  - CSP 610E Determinants of Human Behavior: Biological (3)

Three units from the following selected in consultation with adviser:

  - CSP 610B Determinants of Human Behavior: Development: Social and Cultural (3)
  - CSP 615 Seminar in Multicultural Dimensions in Counseling (3)
4. Theory, Research, and Techniques (minimum 12 units selected in consultation with adviser):
  - CSP 622A Ecosystems Assessment–Intervention I: Students (3)
  - CSP 622B Ecosystems Assessment–Intervention II: Schools (3)

CSP 623	Ecobehavioral Assessment–Intervention (3)
CSP 640	Testing and Assessment for Marriage and Family Therapists (2) [Formerly offered as CSP 640, Theory and Process of Appraisal (3)]
CSP 641	Psychometrics in Counseling and School Psychology (1)
CSP 662B	Counseling Interventions with Children and Adolescents (3)
CSP 680	Theory and Process of Consultation (3)
CSP 762	Prevention, Crisis Intervention and Conflict Resolution in Schools (3)

5. Integration and Application of Theory, Research, and Techniques (minimum 10 units selected in consultation with adviser):

CSP 730	Fieldwork in Counseling (2-6) Cr/NC
CSP 740	Practicum (1-6) Cr/NC
CSP 752	Seminar and Practicum: School Psychology (3-6) Cr/NC

6. Additional requirements for concentration (minimum 11 units selected in consultation with adviser):

CSP 621	Introduction to School Psychology (3)
CSP 642A	Individualized Appraisal of Learning Characteristics (4)
CSP 642B	Individualized Appraisal of Learning Characteristics (4)
CSP 643A	Psychoeducational Evaluation Techniques: Psychological Processing (1) Cr/NC
CSP 643B	Psychoeducational Evaluation Techniques: English – Learners (1) Cr/NC
CSP 643C	Psychoeducational Evaluation Techniques: Spanish – Speakers (proficiency required) (1) Cr/NC
CSP 644	Academic Assessment – Intervention (3)
CSP 744	Seminar in Cognitive Assessment – Intervention (3)
CSP 746	Dynamic Assessment and Mediated Interventions (3)

7. Research (minimum 6 units selected in consultation with adviser):

CSP 710A or 710B	Professional Seminar (3)
CSP 745	Program Development and Evaluation in Pupil Services (3)
CSP 760	Advanced Seminar in School Psychology (3)
CSP 770	Advanced Seminar in Counseling (3)
CSP 799A	Thesis (3) Cr/NC/RP

In addition to the courses required for the Master of Science in counseling with a concentration in school psychology, the following courses are required for the California School Psychology Credential:

CSP 780.	Internship (2-12) Cr/NC
<b>AND</b> one of the following selected in consultation with adviser:	
SPED 500	Human Exceptionality (3)
SPED 527	Special Education in a Pluralistic Society (3)
SPED 650A	Special Topics in Special Education: Consultant Skills/Multidisciplinary Teams (3)
SPED 651	Legislation, Leadership, and Management for Special Education Services (3)

Students must maintain the university minimum 3.0 grade point average. Students must earn a grade of B- or better (Cr for credit/no credit graded courses) in every course to document attainment of the competencies required for the school psychology credential. Students not meeting this requirement must immediately consult with the adviser or the director of the school psychology concentration. In addition, three grades of B- or lower (including NC) are grounds for dismissal from the program regardless of a student's overall GPA.

Adherence to the National Association of School Psychologists Principles for Professional Ethics is a mandatory requirement. Students who knowingly or unknowingly violate any part of the ethical code may be dismissed from the program without further qualification regardless of coursework or other academic achievement. A copy of the ethical principles is distributed to students at orientation.

In addition to the required courses and experiences, the student must (a) receive the recommendation of the school psychology faculty and (b) pass all components of the CBEST for eligibility for the credential.

The school psychology program, including degree and credentials requirements, may be completed in four to six year plans. Students must maintain residency throughout their tenure in the program unless specifically granted a formal leave of absence. The final year, Counseling and School Psychology 780 (Internship) is a full-time experience.

Students already holding a master's or doctoral degree in counseling, psychology, or a related area may apply for non-degree credential preparation in school psychology. These students must follow the regular application procedures and requirements. After admission to the program, an individualized program of study may be designed on approval of the school psychology faculty.

After receiving the school psychology credential and completing two years of post-internship, full-time service as a school psychologist in the public schools, the school psychologist is eligible to take the standardized examination for licensure as an educational psychologist in California.

**Selecting a Concentration**

Students intending to pursue one of the three defined concentrations should consult with the director of the concentration regarding application or declaration procedures. Students must declare their intent prior to filing the official program of study.

### Section III. Teaching and Service Credentials

The College of Education offers programs which lead to teaching, specialist, and services credentials. The School of Teacher Education (STE) offers programs for the SB 2042 preliminary credential. The Department of Policy Studies in Language and Cross-Cultural Education (PLC) offers programs for the SB 2042 preliminary BCLAD credential. 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 Office of Advising and Recruitment, BA-259.

The College of Education has obtained approval for programs leading to the following credentials:

#### Approved Credential Program    School Service Authorized

- |  |   |
|--|---|
| 1. Multiple Subject*<br>(SB 2042)  | Teach in self-contained classrooms and provide Specially Designed Academic Instruction in English (SDAIE) and English Language Development (ELD), kindergarten through twelfth grade.   |
| 2. Multiple Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) emphasis: Spanish**   | Teach in self-contained classrooms and in primary language and English, English Language Development (ELD), and Specially Designed Academic Instruction in English (SDAIE).             |
| 3. Single Subject*<br>(SB 2042)  | Teach single subject area in grades K-12 and provide Specially Designed Academic Instruction in English (SDAIE) and English Language Development (ELD).                                 |
| 4. Single Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) emphasis: Spanish**   | Teach single subject area in primary language and English in grades K-12 and provide Specially Designed Academic Instruction in English (SDAIE) and English Language Development (ELD). |
| 5. Special Education:<br>Education Specialist Credential for the Deaf and Hard of Hearing (School of Speech, Language, and Hearing Sciences)<br>Early Childhood Special Education<br>Mild/Moderate Disabilities<br>Moderate/Severe Disabilities<br>Physical and Health Impairments | Teach special education students in the programs designated by each education specialist credential.  |

\* See School of Teacher Education, BA-255, (619) 594-6131 for more information.

\*\* See Department of Policy Studies in Language and Cross-Cultural Development, BA-248, (619) 594-5155 for more information.

#### Education Specialist Credentials\* Specialist Credentials

Reading/Language Arts

#### Service Credentials

Administrative Services

Clinical – Rehabilitative Services (School of Speech, Language and Hearing Sciences)

Health – School Nurse Services (School of Nursing)

Pupil Personnel Services:

Child Welfare and Attendance (School Social Work)

School Counseling (Department of Counseling and School Psychology)

School Psychology (Department of Counseling and School Psychology)

School Social Work (School of Social Work)

#### Specialist Certificates

Bilingual Cross-Cultural Language and Academic Development (BCLAD)

Cross-Cultural Language and Academic Development (CLAD)

Developing Gifted Potential

Early Childhood Special Education

Resource Specialist of Competence

Supported Employment and Transition Specialist

Teaching the Emotionally Disturbed/Behaviorally Disoriented

\* See Department of Special Education, NE-70, (619) 594-6665 for more information.

### Information Applicable to Multiple Subject and Single Subject (SB 2042/BCLAD) Credentials

Departmental admission to Multiple Subject or Single Subject (SB 2042) credential program (including BCLAD) does not constitute admission to the university. Candidates who are entering the university for the first time, or who have graduated or who are graduating, and are planning to re-enroll for the credential program must file a separate application for admission to the university during the regular university application period.

#### Students Who Seek to Complete a Credential

Teachers with Preliminary RYAN Multiple Subject or Single Subject credentials who are working toward Professional Clear certification may have individual programs designed to meet their needs and interest areas. Arrangements for evaluation of college credit and program design can be made through the Credentials Processing Center, BA-250, (619) 594-5964.

A student transferring into San Diego State University to complete requirements for either the Preliminary Multiple Subject or Single Subject credential must complete a minimum of six units of professional education coursework in residence at SDSU in order to be recommended for certification regardless of the extent of education work completed at other institutions. The student will also be held responsible for successful completion of the Teaching Performance Assessment (TPA).

#### Evaluation of Credits

After an interval of five years, courses in education are reevaluated and subject to reduction in credit in light of new requirements and changes in educational procedures. All courses taken either at this University or elsewhere must be approved by an official adviser in order to be credited toward meeting credential requirements or pattern requirements for a degree.

### GPA Requirements For Continuation in Multiple Subject/Single Subject Credential Programs

A grade point average of 3.0 must be maintained each semester to permit a student to continue any Multiple Subject or Single Subject credential program.

### Supplementary Authorizations

With completion of additional units in certain curriculum areas, both BCLAD Single and Multiple Subject teachers can be granted supplementary authorizations to teach in generalized areas in middle and junior high schools (e.g., Introductory English). Single subject teaching credential candidates can also be granted supplementary authorizations to teach in specialized areas K-12 (e.g., psychology). Information on requirements for these supplementary authorizations is available through the Credentials Processing Center, BA-250.

## Multiple Subject (SB 2042) Credential (Elementary Education)

(Credential Code: 00200)

### Multiple Subject–Preliminary Credential

Persons interested in teaching in the traditional elementary school will typically pursue the Multiple Subject credential which authorizes teaching service in self-contained classrooms in preschools, grades K-12, and in classes organized primarily for adults (classrooms in which one teacher is responsible for all the subjects commonly taught). Recommendation for this credential requires:

1. A baccalaureate or higher degree.
2. Completion of an approved program of professional education, including student teaching and coursework in reading methods with a grade point average of 3.0 or higher.
3. Basic skills competency as demonstrated through passing scores on the California Basic Educational Skills Test (CBEST).
4. Demonstrated subject matter competency through completion of an approved waiver program (Liberal Studies) or passing scores on the CSET in Multiple Subjects (must have scores taken within five years prior to recommendation).
5. Successful completion of the Teaching Performance Assessment (TPA).
6. Passing scores on the Reading Instruction Competence Assessment (RICA).
7. Demonstrated knowledge of the principles and provisions of the United States Constitution through successful completion of a three-unit collegiate-level course or examination. Courses are listed in General Catalog section on "Graduation Requirements," IV. American Institutions Requirement.
8. Knowledge of health education, including substance abuse and nutrition: Community Health Education 101 or 920, or Health and Human Services 296, and verification of CPR competency.
9. Demonstrated knowledge of the needs of and methods of providing educational opportunities to individuals with exceptional needs: Special Education 450 or 496.
10. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470.

*NOTE: According to SB 2042 legislation, teachers will be able to earn Professional Clear Credentials upon successful completion of induction programs sponsored by their employers and approved by the California Commission on Teacher Credentialing.*

### Admission Standards and Qualifications for the Multiple Subject Credential Program

Candidates for the Multiple Subject Credential Program must satisfy the standards and qualifications listed below and submit complete application packets to the School of Teacher Education, BA-255. Contact the School of Teacher Education for application dates.

Completed application packets will include items verifying satisfaction of the following:

1. **CBEST Examination.** Students must pass the California Basic Educational Skills Test (CBEST) **prior to admission** to the Multiple Subject credential program. Registration information and materials for the CBEST are available in the lobby of the Education building. Candidates are urged to take this examination as early as possible. Candidates are required to submit a photocopy of the individual score reports.
2. **Subject Matter Competency.** Students must verify completion of subject matter competency in diversified subjects commonly taught in self-contained classrooms prior to admission to the Multiple Subject Credential Program. This may be done through successful completion of the Liberal Studies major, Emphasis in Education or its equivalent at another California teacher-training institution or passing scores on the CSET in Multiple Subjects. Test scores submitted for verification of subject matter competency are valid for five years from the date of the examination and must be valid at the time of recommendation for the credential. Registration information and materials for the CSET are available in the lobby of the Education building.
3. **Prerequisite Courses.** The following courses must be completed with a grade of credit, "C," or better prior to admission to the program, but may be in progress at the time of application, or taken in the term immediately prior to the program start date. Proof of enrollment is required to be considered for admission. Individuals who are not SDSU students may enroll in these courses through Open University with the College of Extended Studies (619) 594-5152.
  - a. **Education 451, "Introduction to Multicultural Education."** This course must have been taken within five years of program application.
  - b. **Mathematics 210, "Number Systems in Elementary Mathematics."** This course must have been taken within five years of program application. In lieu of Mathematics 210, candidates may substitute any calculus course taken at a college or university within the past five years with a grade of credit, "C," or better.
  - c. **Special Education 450 and Health and Human Services 296** are prerequisites for applicants.
4. **Grade Point Average.** Candidates must have attained a grade point average of at least 2.67 in all baccalaureate and postbaccalaureate coursework or a grade point average of at least 2.85 in the last 60 semester units attempted. Candidates are required to submit official transcripts from all colleges and universities attended and unofficial transcripts for SDSU coursework for GPA calculations.
5. **Letters of Recommendation.** Candidates must submit two letters of recommendation from individuals who know the candidate well (but are not related by blood or marriage) and who can comment directly on factors such as the candidate's qualifications for a teaching career in a multicultural setting, work or educational experiences, experience teaching or supervising students or other groups of individuals, personal character, and/or potential for success as a teacher. The signed letters may be hand carried and do not need to be confidential or in sealed envelopes, but must be on letterhead stationery (name, address, and phone number of sender included.) If the letters are not on letterhead, the name, address, and phone number of the sender must be typed on the letter.

6. **TB Clearance.** Evidence of a negative tuberculosis test (these tests are valid for four years and must be in effect during the time that candidates are enrolled in the credential program). Clearance statements may be secured from Health Services, private physicians or HMO's, or public health agencies.
7. **California Certificate of Clearance.** This certificate represents a background clearance and check conducted by the State Department of Justice and Federal Bureau of Investigation. Turnaround time for the clearance can take as long as eight months. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. In lieu of the actual Certificate of Clearance or copy of a valid credential, candidates may submit their clearance application packets and fees concurrently with program applications.
8. **Early Field Experience.** Candidate must successfully complete a minimum of 30 hours of observation and participation in a "regular" classroom in public elementary schools. This documented through the Early Field Experience Guide – Multiple Subject available in the SDSU Bookstore in the book stacks under "Teacher Education" or for mail delivery by calling (619) 594-7535. The guide is also available for downloading from the School of Teacher Education Web site at:  
<http://edweb.sdsu.edu/ste/teach.htm>.  
Either the original or a photocopy of the Early Field Experience Guide must be turned in as part of the application to the credential program.
9. **Personal Narrative.** The narrative should address the following items:
  - a. The candidate's interest in and motivation for a teaching career in a multicultural setting;
  - b. The candidate's personal background and experience in working with children in multicultural settings;
  - c. Other experiences personally considered important in the teacher preparation process;
  - d. Any abilities, knowledge, skills, or experience that will enhance the candidate's effectiveness as a teacher (e.g., ability to speak another language, play a musical instrument, use technologies, or experience working with individuals with disabilities or special needs).

Further information on the personal narrative is available in the School of Teacher Education, BA-255.
10. **Appeals Process.** Candidates who do not meet all the admission requirements may petition the Multiple Subject Admissions and Retention Committee for individual consideration; petition forms must be submitted concurrently with the application packets.

In addition to the minimum admissions standards identified above, the Multiple Subject Admissions and Retention Committee also may consider qualifications such as previous teaching experience, relevant working experience with children, and second language ability. Due to the number of applicants, application to the program does not ensure admission.

*NOTE: Appointments for discussion of individual concerns relative to the credential program may be made with the Multiple Subject Credential Program Adviser during the academic year through the School of Teacher Education, BA-255, (619) 594-6131. All candidates are urged to attend one of the regularly scheduled group advising sessions prior to making an individual appointment.*

### Program Description

The Multiple Subject Teacher Preparation Program is offered in a variety of formats called "blocks" including traditional full-time blocks over two semesters, a seven-month accelerated block, and a three or four semester part-time block. Full-time student teaching is required

of all candidates according to state law. Our programs combine coursework and student teaching to link theory and practice. The curriculum emphasizes the preparation of reflective practitioners to meet the needs of culturally and linguistically diverse children. Most blocks are based at local elementary schools where we have established partnerships with schools and teachers. In these blocks, student teachers take their university coursework on-site at the elementary school and student teach at that school or in neighboring schools. Each student completes student teaching in two different grade levels; one assignment is at the primary level (in grades K-3) and another is at the intermediate level (in grades 4-6).

All students enrolled in the Multiple Subject Teacher Preparation Program will take the following courses. The scheduling and sequence of the courses vary with individual block offerings.

#### Multiple Subject Required Courses

Course Number	Title	Units
TE 902	Classroom Management Skills . . . . .	1
TE 910A	Teaching Mathematics in the Elementary School . . .	3
TE 910B	Teaching Social Studies in the Elementary School . .	3
TE 910C	Teaching Science in the Elementary School . . . . .	3
TE 923	Psychological Foundations of Education . . . . .	3
TE 930	Teaching Reading and Language Arts in the Elementary School . . . . .	6
TE 960	Basic Student Teaching Seminar . . . . .	1
TE 961	Advanced Student Teaching Seminar . . . . .	1
TE 965	Basic Student Teaching in Elementary Schools . . . .	8
TE 966	Advanced Student Teaching in Elementary Schools .	8
EDTECH 470	Technologies for Teaching . . . . .	2
PLC 915A	Teaching in the Content Areas: ELD/SDAIE . . . . .	3
Total		42

Other requirements for issuance of the preliminary credential include the following:

**CPR Requirement:** All candidates for the preliminary credential are required to verify current training in cardiopulmonary resuscitation (CPR). Verification of the CPR training is made through submission of a photocopy of the card issued by the training agency. While many agencies provide CPR training, verification must be made at levels identified by the American Heart Association (AHA) or the American Red Cross (ARC). Candidates pursuing training through agencies other than these will be required to verify the level of training relative to either the AHA or ARC standards either from the data provided directly on their card or on a supplementary letter on letterhead stationery from their training agency (no phone call verifications).

**Second Language Requirement:** All candidates are required to have experience learning a second language. This may be taken prior to or concurrently with the credential program. Most candidates will satisfy this requirement through completion of six semester units of college-level foreign (same) language; some will have satisfied the requirement through the completion of three years of secondary school (grades 7 through 12) of the same foreign language. Another option is a combination of two years of secondary school foreign language and one semester (3 units) of college level foreign language. Grades of credit, "C," or better must be earned in second language courses, whether taken at the secondary school or collegiate-level study. Candidates satisfying the language through secondary school study will be required to submit an official middle, junior or senior high school transcript to verify their coursework.

For other options for satisfying the second language requirement, contact the School of Teacher Education.

## Multiple Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) Emphasis Credential: Spanish

(Credential Code: 00200)

The Multiple Subject Bilingual Cross-Cultural Language and Academic Development credential (BCLAD) Spanish emphasis is available to students interested in teaching in a bilingual credential 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.

With the passage of Proposition 227, requiring all students in public schools be taught in English unless a school has received a waiver, the Policy Studies Department and the College of Education remains committed to the training of teachers for the BCLAD credentials. The BCLAD credentials meet all of the requirements of the CLAD credential. The BCLAD credential remains as the most desirable credential in California. Furthermore, the University is committed with developing leaders in cultural, economic, educational, scientific, social, and technical fields, as well as addressing the linguistic diversity of school communities. The University is primarily responsive to the people of California, as well as to the needs of the regional, national, and international communities it serves.

Candidates who will pursue this credential need to specify “**Multiple Subject BCLAD/Spanish emphasis**” in the application for graduate admission to SDSU (Code: 00200). Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Policy Studies in Language and Cross-Cultural Education Department (department applications are available from the SDSU Bookstore).

1. Two sets of official transcripts in sealed envelopes from each issuing institution;
2. Complete department application (copy of scores for CBEST/ Spanish Proficiency Examination/CSET or Portfolio, TB test results, letters of recommendation, early field experience, character and identification clearance, autobiography/goals and philosophy).

Mail or deliver your complete department admissions package to:  
 Policy Studies in Language and Cross-Cultural  
 Education Department  
 San Diego State University  
 San Diego, CA 92182-1152

### Standards for Admission

1. **CBEST.** Students must pass the California Basic Educational Skills Test prior to admission to the BCLAD credential program. This examination is required by the Commission on Teacher Credentialing. Booklets containing registration forms and test information are available from the Office of Testing, Research and Assessment in SS-2549, (619) 594-5216. Call the PLC department for additional information on the CBEST.
2. **Subject Matter Competency.** Students must verify completion of subject matter competency in diversified subjects commonly taught in self-contained classrooms prior to admission to the Multiple Subject Credential Program. To be admitted to the BCLAD multiple subject credential program, a candidate shall have achieved a passing score on the California Subject Examination for Teachers (CSET) that is required for the credential sought. Registration information and materials for the CBEST are available in BA-259.

3. **Prerequisite Courses.** The following courses must be completed with a grade of “C” or better prior to admission to the program, but may be in progress at the time of application or taken in the term immediately prior to the program start date.

<i>Liberal Studies Majors.</i>	<i>Units</i>
PLC 401 or 515 . . . . .	3
ED 451 . . . . .	3
LING 550 or PLC 915A . . . . .	3
<i>Non Liberal Studies Majors (must take the above and below prerequisites).</i>	
ENS 241A, 241B . . . . .	2
LING 420* or 520. . . . .	3
LING 452* . . . . .	3
MATH 210** or 211 or 313 . . . . .	3
Art 100 or 101 or 387; Music 102 or 343; THEA 100 or 120 or 310 or 315 . . . . .	3

\* Linguistics 420 and 452 are requirements for the Liberal Studies major.  
 \*\* With approval of the mathematics adviser, any of the following mathematics courses may be substituted for Mathematics 210: Mathematics 121, 150, 312.

4. **Grade Point Average.** Candidates must have cumulative grade point averages (GPAs) within the upper one-half of undergraduate students in the candidates' majors. GPAs vary according to discipline and graduating institution. GPA requirements are available in the Policy Studies in Language and Cross-Cultural Education Department (PLC), BA-248. Candidates are required to submit official transcripts from all colleges and universities attended and unofficial SDSU transcripts for GPA calculations.
5. **Letter of Recommendation.** Two professional references and one letter of recommendation must be submitted attesting to the applicants following characteristics: (a) attitude, aptitude and ability to teach children; (b) personality and character; (c) academic ability. At least one letter should be from an elementary school teacher the student has worked with and the others may be from faculty and administrators.
6. **Tuberculin Clearance.** Evidence of a negative tuberculosis test (these tests are valid for four years and must be in effect during the time that candidates are enrolled in the credential program). Clearance statements may be secured from Health Services, private physicians or HMOs, or public health agencies.
7. **Early Field Experience.** Applicants must provide evidence of a minimum of 60 hours of experience with students in typical elementary classroom settings within the last five years. Evidence must be documented.
8. **Oral English and Written Statement of Professional Goals and Philosophy.** Have an interview with the admissions and retention committee of the PLC Department.
9. **California Certificate of Clearance.** This certificate represents a background clearance and check conducted by the State Department of Justice and Federal Bureau of Investigation. Turn-around time for the clearance can take as long as eight months. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. In lieu of the actual Certificate of Clearance or copy of a credential, candidates may submit their clearance application packets and fees to the Credentials Processing Center, BA-250.
10. **Credential Advising Appointment.** Each applicant must meet with a faculty adviser to plan an appropriate program, which includes a minimum of 31 units as defined by the Commission on Teacher Credentialing. Make appointment in BA-248, telephone (619) 594-5155.

11. **Language and Culture Examination.** All candidates must pass the PLC Department Spanish Language Proficiency and Cultural Awareness Examination prior to entering the credential program. Please call (619) 594-3218.
12. **Reading Instruction Competence Assessment (RICA).** California Education Code Section 44283 requires that candidates for the preliminary or clear credential multiple subject pass this RICA requirement. The purpose of this assessment is to ensure that the candidate possess the knowledge and skills important for the provision of effective reading instruction to students. The RICA requirement applies to candidates who did not complete all credential requirements prior to October 1, 1998. Candidates must have passed the RICA in order to be able to file for the credential.
13. **Appeals Process.** Candidates who do not meet all the admission requirements may petition the PLC Department Admissions and Retention Committee for individual consideration; petition forms must be submitted concurrently with the application packets.
14. **Application.** Applicants should complete application procedures the semester prior to beginning the credential program. Call the department for Policy Studies application deadline.

In addition to the minimum admissions standards identified above, the PLC Department Admissions and Retention Committee may also consider qualifications such as previous teaching experience and relevant working experience with children. Due to the number of applicants, application to the program does not ensure admission.

Program	Units
PLC 901 Professional Portfolio I (Cr/NC) . . . . .	1
PLC 902 Professional Portfolio II (Cr/NC) . . . . .	1
PLC 910 Teaching Mathematics to Bilingual Elementary Students . . . . .	3
PLC 911 Teaching Social Studies to Bilingual Students . . . . .	3
PLC 912 Teaching Science to Bilingual Students . . . . .	3
PLC 923 Psychological Foundations of Education and Bilingual Students . . . . .	3
PLC 931 Skills in Teaching Reading to Bilingual Elementary Students . . . . .	3
PLC 932 Teaching Spanish Language Arts to Bilingual Elementary Students . . . . .	3
PLC 960 Student Teaching Seminar for Bilingual Elementary Students . . . . .	6
PLC 961 Student Teaching for Bilingual Elementary Students . . . . .	8
PLC 962 Student Teaching for Elementary Bilingual Students II . . . . .	8
EDTEC 470 Technologies for Teaching . . . . .	3
SPED 450 Classroom Adaptations for Special Populations . . . . .	2

**Preliminary Credential Requirements**

1. A bachelor's degree (or higher) with any major other than education.
2. Completion of an approved program of professional education. (See Department of Policy Studies in Language and Cross-Cultural Education for further information.)
3. Passage of PRAXIS Multiple Subject/CSET or approved waiver program (Liberal Studies major, Emphasis in Education).
4. Passage of the Spanish Language Proficiency and Cultural Awareness Examination.
5. Demonstrated knowledge of principles and provisions of United States Constitution through successful completion of three-unit college level course or examination. Courses are listed in General Catalog section on "Graduation Requirements," IV. American Institutions Requirement.

6. Passage of California Basic Educational Skills Test (CBEST).
7. Passage of Reading Instruction Competence Assessment (RICA) Test.
8. Completion of an approved fifth year program (a minimum of 30 upper division or graduate-level postbaccalaureate units).
9. Demonstrated knowledge of the needs of and methods of providing educational opportunities to individuals with exceptional needs; Special Education 450 or 496.
10. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy); Educational Technology 470.
11. Knowledge of health education in California, including substance abuse and nutrition: Community Health Education 101 or 920, or Health and Human Services 296, and verification of CPR competency.

*NOTE: According to SB 2042 legislation, teachers will be able to earn Professional Clear Credentials upon successful completion of induction programs sponsored by their employers and approved by the California Commission on Teacher Credentialing.*

**Single Subject (SB 2042) Credential  
(Secondary Education)**

(Credential Code: 00100)

**Single Subject–Preliminary Credential**

Persons interested in teaching in the traditional secondary school will typically pursue the Single Subject credential which authorizes teaching service in departmentalized, subject matter classrooms in preschools, grades K-12, and in classes organized primarily for adults (classes where instruction is provided in only one subject). Candidates must verify subject matter competency in one of the following subject fields:

**ACCEPTABLE SINGLE SUBJECT CREDENTIAL  
AREAS AND APPLICABLE MAJORS**

- Art:** Art
- English:** Communication, Comparative Literature, English, Journalism, Linguistics, Theatre
- Foreign Languages:** Classics (Latin), Spanish
- Science:** Biology, Chemistry, Geological Sciences, Physics
- Mathematics:** Mathematics
- Music:** Music
- Physical Education:** Kinesiology (Specialization in Physical Education)
- Social Science:** Social Science

Recommendation for this credential requires:

1. A baccalaureate or higher degree.
2. Completion of an approved program of professional education, including student teaching with a grade point average of 3.0 or higher and coursework in reading methods.
3. Basic skills competency as demonstrated through passing scores on the California Basic Educational Skills Test (CBEST).
4. Demonstrated subject matter competency through completion of an approved waiver program in one of the California Single Subject areas, through a combination of coursework and competency examinations, or through PRAXIS/SSAT/CSET examinations. Candidates should check with the School of Teacher Education, BA-255, to clarify the appropriate means for satisfaction of the subject matter competency requirement in their subject matter area(s). Competency must be verified and assessed by a designated departmental adviser regardless of the means of establishing knowledge proficiency.

5. Demonstrated knowledge of the principles and provisions of the United States Constitution through successful completion of a three-unit collegiate-level course or examination. (Courses are listed in the section of this catalog on "Graduation Requirements," IV. American Institutions Requirement, C.2. United States Constitution.)
6. Knowledge of health education, including substance abuse and nutrition, Community Health Education 101 or 920, or Health and Human Services 296, and verification of CPR competency.
7. Demonstrated knowledge of the needs of and methods of providing educational opportunities to individuals with exceptional needs: Special Education 450/496.
8. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): EDTEC 470.

*NOTE: According to SB 2042 legislation, teachers will be able to earn Professional Clear Credentials upon successful completion of induction programs sponsored by their employers and approved by the California Commission on Teacher Credentialing.*

### Admission Standards and Qualifications for the Single Subject Credential Program

Candidates for the Single Subject Credential Program must satisfy the standards and qualifications listed below and submit complete application packets to the School of Teacher Education, BA-255. Contact the School of Teacher Education for application dates. Early submission of completed application packets is encouraged to facilitate enrollment and preference in block placement. Applicants submitting materials late in the term may be considered on a "space available basis" only.

Completed application packets will include items verifying satisfaction of the following:

1. **CBEST Examination.** Students must pass the California Basic Educational Skills Test (CBEST) prior to admission to the Single Subject Credential Program. Candidates are urged to take this examination as early as possible. Candidates are required to submit a photocopy of the individual score reports.
2. **Subject Matter Competency.** Students must verify competency in a specified single subject area through a university assessment process which consists of reviewing coursework for completion of an approved teaching major or its equivalent at San Diego State University or another approved California teacher-training institution, passing scores on the appropriate PRAXIS/SSAT/CSET examinations, or a combination of coursework and examination scores. Competency will be assessed and verified by subject matter departments at SDSU. Requirements for the various single subject majors are listed with the academic majors in the General Catalog. Approved waiver programs from other California universities are acceptable. Test scores submitted for verification of subject matter competency are valid for five years from the date of the examination. Information and registration materials for all current examinations are available in the lobby of the Education building.
3. **Prerequisite Course.** This course or approved equivalent must be completed with grades of "C," "Cr," or higher no more than five years prior to admission to the Single Subject Credential Program. This course may be in progress at the time of program application.

#### **Education 451, "Introduction to Multicultural Education."**

This course provides an introduction to ethnicity, language, and culture in education, particularly the ways in which those factors differentially affect educational outcomes for children. The course assists in preparing teacher applicants to work with students from diverse backgrounds

by examining both societal and personal belief systems and the ways that those beliefs are expressed in public school classrooms.

4. **Grade Point Average.** Candidates must have attained a grade point average of at least 2.67 in all baccalaureate and postbaccalaureate coursework or a grade point average of at least 2.85 in the last 60 semester units attempted. Candidates are required to submit official transcripts from all colleges and universities attended and unofficial copies of transcripts for SDSU coursework for GPA calculations.
5. **Letters of Recommendation.** Candidates must submit two letters of recommendation from individuals who know the candidate well (but are not related by blood or marriage) and who can comment directly on factors such as the candidate's qualifications for a teaching career in a multicultural setting, work or educational experiences, experience teaching or supervising students or other groups of individuals, personal character, and/or potential for success as a teacher. The signed letters may be hand carried and do not need to be confidential or in sealed envelopes, but must be on letterhead stationery (name, address, and phone number of sender included.) If the letters are not on letterhead, the name, address, and phone number of the sender must be typed on the letter.
6. **TB Clearance.** Evidence of a negative tuberculosis test (these tests are valid for four years and must be in effect during the time that candidates are enrolled in the credential program). Clearance statements may be secured from Health Services, private physicians or HMO's, or public health agencies.
7. **California Certificate of Clearance.** This certificate represents a background clearance and check conducted by the State Department of Justice and Federal Bureau of Investigation. Turn-around time for the clearance can take as long as eight months. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. In lieu of the actual Certificate of Clearance or copy of a valid credential, candidates may submit their clearance application packets and fees concurrently with program applications.
8. **Early Field Experience.** Candidate must successfully complete a minimum of 30 hours of observation and participation in a "regular" classroom in public secondary schools. This documented through the Early Field Experience Guide – Single Subject available in the SDSU Bookstore in the book stacks under "Teacher Education" or for mail delivery by calling (619) 594-7535. The guide is also available for downloading from the School of Teacher Education Web site at:  
<http://edweb.sdsu.edu/ste/teach.htm>.  
Either the original or a photocopy of the Early Field Experience Guide must be turned in as part of the application to the credential program.
9. **Personal Narrative.** The narrative should address the following items:
  - a. The candidate's personal background and experience working with children in multicultural settings;
  - b. The candidate's other experiences personally considered important in the teacher preparation process;
  - c. The candidate's interest in and motivation for a teaching career in a multicultural setting and;
  - d. Any abilities, knowledge, skills, or experience that will enhance the candidate's effectiveness as a teacher (e.g., ability to speak another language, use technologies, or experience working with individuals with disabilities or special needs).

Further information on the personal narrative is available in the School of Teacher Education, BA-255.

**10. Appeals Process.** Candidates who do not meet all the admission requirements may petition the Single Subject Admissions and Retention Committee for individual consideration; petition forms must be submitted concurrently with the application packets.

In addition to the minimum admissions standards identified above, the Single Subject Admissions and Retention Committee may also consider qualifications such as previous teaching experience, relevant working experience with children, and second language ability. A personal interview may also be necessary. Due to the number of applicants, application to the program does not ensure admission.

*NOTE: Appointments for discussion of individual concerns relative to the credential program may be made with the Single Subject Credential Program Adviser during the academic year through the School of Teacher Education, BA-255, (619) 594-6131. All candidates are urged to attend one of the regularly scheduled group advising sessions prior to making an individual appointment.*

**Program Description**

The Single Subject Credential Program is offered in “block” format either on a full-time basis over two semesters or on a part-time (three to six semester) basis. Full-time student teaching is required of all candidates according to State law. Examinations and/or coursework prerequisite to program admission, if not completed within undergraduate studies, may extend the total time commitment for credential issuance by one or more semesters. The second semester student teaching assignment represents a commitment of three periods a day in a local public school with the possible addition of an administrative assignment at the same site. Students may be required to remain with their placement for the public school semester, which can be three to four weeks longer than the University term.

The part-time courses are generally offered in the late afternoon and early evening. Student teaching assignments do require a day-time commitment and will be scheduled according to individual need in consultation with the program coordinator, Pat Bjornson, (619) 594-7117, ED-102, e-mail: [bjornson@mail.sdsu.edu](mailto:bjornson@mail.sdsu.edu).

Our programs combine coursework and student teaching to link theory and practice. The curriculum emphasizes the preparation of reflective practitioners to meet the needs of culturally and linguistically diverse children. Each student completes student teaching in two different grade levels; one assignment is at the middle school level (in grades 7/8) and another is at the high school level (in grades 9-12).

All students enrolled in the Single Subject Teacher Preparation Program will take the following courses. The scheduling and sequence of the courses vary with individual block offerings.

**Single Subject Required Courses**

Course Number	Title	Units
TE 903	Secondary School Student Teaching Seminar . . . . .	2 (1 unit content methods, 1 unit seminar)
TE 914	Teaching and Learning in the Content Area: Major . . . . .	3
TE 922	Behavioral and Psychological Aspects of Teaching . . . . .	3-4
TE 933	Teaching Reading in the Secondary School . . . . .	3
TE 954	Humanistic and Social Aspects of Teaching . . . . .	4
TE 963	Secondary School Student Teaching I . . . . .	4
TE 964	Secondary School Student Teaching II . . . . .	12
EDTECH 470	Technologies for Teaching . . . . .	3
PLC 915B	Teaching in the Content Areas: ELD/SDAIE . . . . .	3
Total		37-38

Other requirements for issuance of the preliminary credential include the following:

**CPR Requirement:** All candidates for the preliminary credential are required to verify current training in cardiopulmonary resuscitation (CPR). Verification of the CPR training is made through submission of a photocopy of the card issued by the training agency. While many

agencies provide CPR training, verification must be made at levels identified by the American Heart Association (AHA) or the American Red Cross (ARC). Candidates pursuing training through agencies other than these will be required to verify the level of training relative to either the AHA or ARC standards either from the data provided directly on their card or on a supplementary letter on letterhead stationary from their training agency (no phone call verifications).

**Second Language Requirement:** All candidates are required to have experience learning a second language. This may be taken prior to or concurrently with the credential program. Most candidates will satisfy this requirement through completion of six semester units of college-level foreign (same) language; some will have satisfied the requirement through the completion of three years of secondary school (grades 7 through 12) of the same foreign language. Another option is a combination of two years of secondary school foreign language and one semester (3 units) of college level foreign language. Grades of credit, “C,” or better must be earned in second language courses, whether taken at the secondary school or collegiate-level study. Candidates satisfying the language through secondary school study will be required to submit an official middle, junior or senior high school transcript to verify their coursework.

For other options for satisfying the second language requirement, contact the School of Teacher Education.

**Single Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) Emphasis Credential: Spanish**

**(Credential Code: 00100)**

The Single Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) Spanish Emphasis is available for students interested in teaching in a bilingual credential secondary school classroom. This credential authorizes the holder to teach in any self-contained bilingual or regular classroom in which one teacher is responsible for teaching the given subject area.

Candidates who will pursue this credential need to specify “**Single Subject BCLAD/Spanish emphasis**” in the application for graduate admission to SDSU (Code: 00100). Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Policy Studies in Language and Cross-Cultural Education Department (department applications are available from the SDSU Bookstore).

- Two sets of official transcripts in sealed envelopes from each issuing institution;
- Complete department application (copy of scores for CBEST/ Spanish Proficiency Examination/PRAXIS-SSAT or adviser’s recommendation, TB test results, letters of recommendation, early field experience, character and identification clearance, autobiography/goals and philosophy).

Mail or deliver your complete department admissions package to:  
 Policy Studies in Language and Cross-Cultural  
 Education Department  
 San Diego State University  
 San Diego, CA 92182-1152

**Standards for Admission**

- CBEST.** Students must pass the California Basic Educational Skills Test (CBEST) prior to admission to the Single Subject Bilingual Emphasis credential program. This examination is required by the Commission on Teacher Credentialing. Booklets containing registration forms and test information are available from the Office of Testing, Research and Assessment in SS-2549, (619) 594-5216. Call the PLC department for additional information on CBEST.

2. **Subject Matter Competency.** Students must verify competency in a specified single subject area through a university assessment process which consists of reviewing coursework for completion of an approved teaching major or its equivalent at San Diego State University or another approved California teacher-training institution or through California Subject Examinations for Teachers (CSET). Competency will be assessed and verified by subject matter departments at SDSU. Requirements for the various single subject majors are listed with the academic majors in the General Catalog. Test scores submitted for verification of subject matter competency are valid for five years from the date of the examination. Information and registration materials for the current PRAXIS/SSAT/CSET examinations are available in the lobby of the Education building.
3. **Prerequisite Courses:** The following courses must be completed with a grade of "C" or better prior to admission to the program, but may be in progress at the time of application or taken in the term immediately prior to the program start date.
 

ED 451	Introduction to Multicultural Education . . . . .	3 units
LING 420	Linguistics and English . . . . .	3 units
PLC 400	The Secondary School and Bilingual Education . . . . .	3 units
PLC 401	Theories and Practices in Multilingual Education . . . . .	3 units
4. **Grade Point Average.** Candidates must have attained a grade point average of at least 2.67 in all baccalaureate and postbaccalaureate coursework or a grade point average of at least 2.85 in the last 60 units attempted. Candidates are required to submit official transcripts from all colleges and universities attended and unofficial SDSU transcripts for GPA calculations.
5. **Letter of Recommendation.** Two professional references and one letter 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. Letter of recommendation should be from a school teacher with whom the student has worked and the others may be from faculty and administrators.
6. **Tuberculin Clearance.** Evidence of a negative tuberculosis test (these tests are valid for four years and must be in effect during the time that candidates are enrolled in the credential program). Clearance statements may be secured from Health Services, private physicians or HMOs, or public health agencies.
7. **Early Field Experience.** Applicants must provide evidence of a minimum of 45 hours of experience with adolescent students in typical classroom settings within the last five years. Evidence must be documented.
8. **Oral English and Written Statement of Professional Goals and Philosophy.** Have an interview with the admissions and retention committee of the PLC Department.
9. **California Certificate of Clearance.** This certificate represents a background clearance and check conducted by the State Department of Justice and Federal Bureau of Investigation. Turnaround time for the clearance can take as long as eight months. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. Submit clearance application packet and fees to the Credentials Processing Center, BA-250.

10. **Credential Advising Appointment.** Each applicant must meet with a faculty adviser to plan an appropriate program, which includes a minimum of 31 units as defined by the Commission on Teacher Credentialing. Appointments can be made in BA-248, (619) 594-5155.
11. **Language and Culture Examination.** All candidates must pass the PLC Department Spanish Language Proficiency and Cultural Awareness Examination prior to entering the credential program. Please call (619) 594-3218.
12. **Appeals Process.** Candidates who do not meet all the admission requirements may petition the PLC Department Admissions and Retention Committee for individual consideration; petition forms must be submitted concurrently with the application packets.
13. **Application.** Applicants should complete application procedures the semester prior to beginning the credential program. Call the department for PLC application deadline.

In addition to the minimum admissions standards identified above, the PLC Department Admissions and Retention Committee may also consider qualifications such as previous teaching experience and relevant working experience with children. Due to the number of applicants, application to the program does not ensure admission.

	<b>Program</b>	<b>Units</b>
<b>Prerequisites</b>		
ED 451	Introduction to Multicultural Education . . . . .	3
PLC 400	The Secondary School and Bilingual Education . . . . .	3
PLC 401	Theories and Practices in Multilingual Education . . . . .	3
OR		
PLC 415	Fieldwork in Bilingual Community Context . . . . .	3
LING 420	Linguistics and English . . . . .	3
<b>First Semester</b>		
PLC 924	Behavioral and Psychological Aspects of Teaching in the Bilingual Classroom . . . . .	3
PLC 933	Skills in Teaching Reading to Bilingual Secondary Students . . . . .	3
PLC 953	Language Development in Bilingual Secondary Classrooms . . . . .	3
PLC 954	Humanistic and Social Aspects of Teaching in the Bilingual Classroom . . . . .	3
PLC 963	Student Teaching for Bilingual Secondary Students I . . . . .	4
SPED 450	Classroom Adaptations for Special Populations . . . . .	2
TE 914	Teaching and Learning in the Content Area: Major . . . . .	3
<b>Second Semester</b>		
PLC 901	Professional Portfolio I (Cr/NC) . . . . .	1
PLC 903	Bilingual Secondary Student Teaching Seminar . . . . .	3
PLC 915B	Teaching and Learning in the Content Area: English Language Development/Specially Designed Academic Instruction . . . . .	3
PLC 964	Student Teaching for Bilingual Secondary Students II . . . . .	9-12
EDTEC 470	Technologies for Teaching . . . . .	3

**Preliminary Credential Requirements**

1. A bachelor's degree with one of the approved single subject majors listed in the School of Teacher Education single subject teaching credential catalog section. Credentials can be granted only in the designated single subject credential areas.
2. Completion of an approved program of professional education. (See Department of Policy Studies in Language and Cross-Cultural Education for further information about the approved programs.)
3. Major Adviser's Recommendation. Passage of subject matter examination(s) or waiver thereof through completion of one of the approved single subject credential majors listed below with a written recommendation from the Ryan major adviser.

Demonstrated subject matter competency through completion of approved waiver program in one of the California single subject areas, is through a combination of coursework and competency examinations, or through PRAXIS/SSAT/CSET examinations. Candidates should check with the Policy Studies in Language and Cross-Cultural Education Department (PLC), BA-248, to clarify the appropriate means for satisfaction of the subject matter competency requirement.

4. Passage of the Spanish Language Proficiency and Cultural Awareness Examination.
5. Demonstrated knowledge of principles and provisions of United States Constitution through successful completion of three-unit college level course or examination. Courses are listed in General Catalog section on "Graduation Requirements," IV. American Institutions Requirement.
6. Passage of California Basic Educational Skills Test (CBEST).
7. Completion of an approved fifth year program (a minimum of 30 upper division or graduate-level postbaccalaureate units).
8. Demonstrated knowledge of the needs of and methods of providing educational opportunities to individuals with exceptional needs, or Health and Human Services 296, Special Education 450 or 496.
9. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470.
10. Knowledge of health education in California, including substance abuse and nutrition, Community Health Education 101 or 920, or Health and Human Services 296, and verification of current CPR competency.

Undergraduate students in their final semester prior to obtaining a baccalaureate degree may sign up for concurrent postbaccalaureate credit as explained in the bulletin.

*NOTE: According to SB 2042 legislation, teachers will be able to earn Professional Clear Credentials upon successful completion of induction programs sponsored by their employers and approved by the California Commission on Teacher Credentialing.*

**BCLAD Specialist Credential\***

**(Credential Code: 00440)**

The BCLAD Specialist Credential will prepare teachers to be mentors, curriculum, and staff developers. Teachers will acquire skills in being reflective practitioners, facilitators of critical inquiry and cultural mediators linked with the school community through action research. The credential leads to the Policy Studies in Language and Cross-Cultural Education M.A. Option 1.

\* Pending approval of California Commission on Teacher Credentialing.

Prerequisites: CLAD or B/CLAD credential or certificate; minimum three years teaching experience; admission to program.

**Program**

24 units of coursework and a comprehensive examination to include:

ED 690	Methods of Inquiry . . . . .	3
PLC 553	Language Assessment and Evaluation in Multicultural Settings . . . . .	3
PLC 600	Foundations of Democratic Schooling . . . . .	3
PLC 603	Community and Schools in a Diverse Society . . . . .	3
PLC 612	Educational Ethnography in Multicultural Settings . . . . .	3
PLC 613	Organizational Strategies and Professional Development for the Multicultural School Community . . . . .	3
PLC 650	Bilingual/Cross-Cultural Curriculum Development and Practice . . . . .	3
PLC 686	Seminar in Multicultural Education . . . . .	3

OR  
Three units of electives with consent of adviser.

\* Pending approval of California Commission on Teacher Credentialing.

**CLAD or BCLAD Credential Program in Mexico**

In consortium with seven other California State Universities and through the auspices of the CSU International Programs Office, SDSU offers a Multiple Subject BCLAD credential that combines professional educational coursework conducted in California and Querétaro, Mexico, with the experience of cultural and linguistic immersion in the Mexican milieu. The program is designed and coordinated by the CSU International Teacher Education Council (ITEC), which provides oversight, direction, and institutional coordination of the program.

After a brief orientation at SDSU the end of June each year, candidates begin their opening session in Mexico with intensive language study. They complete a majority of their coursework and student teaching in Querétaro, including experiences in both public and indigenous schools. The final semester, beginning in April of each year, is completed in San Diego with coursework in California frameworks and student teaching in local bilingual schools.

Candidates must be admitted to the local CSU campus BCLAD credential program in all areas except for language. Language proficiency can be at the low intermediate to fully proficient level at admission. Students are eligible for all financial aid that would be available were they to participate in an on-campus program. Cost of the program, including all university fees, room, and board is approximately \$12,000. Contact Cristina Alfaro (calfaro@mail.sdsu.edu) (619) 594-2916 or the Policy Studies in Language and Cross-Cultural Education Department (PLC) office (619) 594-5155 for more information.

**Reading/Language Arts Specialist Credential**

**(Credential Code: 00410)**

San Diego State University offers a program leading to a Reading/Language Arts Specialist Credential. This credential authorizes the holder to function as a reading specialist in grades K through 12.

**Requirements for Admission**

1. A valid California teaching credential applicable within the range of grades Kindergarten to 12.
2. A minimum of one year of full-time K-12 teaching experience or the equivalent within the range of grades Kindergarten to 12.
3. Submission of GRE scores.
4. Admission and planning interviews with an adviser.

**Core Program (30 Units)**

	<b>Units</b>
TE 530 Children's/Adolescents' Literature . . . . .	3
TE 631 Seminar in Language Arts . . . . .	3
TE 633 Leadership in Literacy Education. . . . .	1
TE 634 Seminar in Research Investigations in Reading and Language Arts. . . . .	4
TE 635 Assessment of Reading and Language Arts . . . . .	3
TE 636 Advanced Assessment of Reading and Language Arts . . . . .	3
TE 637 Instructional Strategies for Reading and Language Arts . . . . .	4
TE 638 Topics in Reading Education (or approved elective) . . . .	4
TE 639 Literacy and Language . . . . .	3
TE 736 Field Experience as a Reading Specialist . . . . .	2

**Additional Requirements**

1. To be eligible to apply for the credential, the candidate must have a minimum of three years of full-time K-12 teaching experience within the range of grades Kindergarten to 12.
2. Satisfactory completion of a comprehensive examination covering the program coursework.

**Admission Procedures**

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the program advisers:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) Department application (paper only);
- (4) Personal statement;
- (5) Three letters of reference on official letterhead.

Mail or deliver your complete admissions package to:

School of Teacher Education  
(Attention: Pamela J. Ross)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1153

**Education Specialist Credentials in Special Education**

San Diego State University offers programs leading to the following Education Specialist Credentials in Special Education authorized by the California Commission on Teacher Credentialing: Mild/Moderate Disabilities, Moderate/Severe Disabilities, Physical and Health Impairments, and Early Childhood Special Education. These credentials authorize the holders to teach students with designated disabilities in a variety of settings. These credentials require completion of Preliminary Level I requirements followed by completion of the Professional Level II requirements within five years of employment in an authorized setting. The Department also offers the Early Childhood Special Education Certificate which authorizes holders of other specialist credentials to work with children and their families from birth through pre-kindergarten. There are some common requirements between the Education Specialist credential programs and the Master of Arts degree. Once admitted, students must maintain a GPA of 3.0 and must successfully complete all practicum experiences. Only grades of C or better will count toward a degree, a credential, or a certificate.

**Requirements for Admission**

Candidates for any of the Education Specialist Credentials in Special Education must satisfy the standards and qualifications listed below and submit complete application packets to the Department of Special Education (NE 70) within designated application periods.

Information about applications for Program Admission is available from the Office of Advising and Recruitment, BA-259.

Completed departmental application packets will include items verifying satisfaction of the following:

1. **CBEST Examination.** Students must pass the California Basic Educational Skills Test (CBEST) prior to admission to any of the programs that lead to an Education Specialist Credential in Special Education. Information may be obtained from the Office of Testing, Research and Assessment, SS-2549. Candidates are urged to take this examination as early as possible. Candidates are required to submit a photocopy of the individual score reports.
2. **Subject Matter Competence.** Students must verify completion of subject matter competence for either the multiple subjects credential or for a single subjects credential. For multiple subjects, subject matter competency in diversified subjects commonly taught in self-contained classrooms may be verified through a) completion of the Liberal Studies major, Emphasis in Education or its equivalent at another California teacher-training institution, or b) a passing score on the CSET: Multiple Subjects or Single Subjects Examination.

For single subjects, subject matter competence may be verified through a) completion of coursework for an approved teaching major at SDSU or its equivalent at another California teacher training institution or b) a passing score on the appropriate PRAXIS/SSAT/CSET examination. Requirements for the various single subject majors are listed with the academic majors in the General Catalog.

Registration information and materials for the PRAXIS/SSAT/CSET are available through the Office of Advising and Recruitment, BA-259. Test scores submitted for verification of subject matter competency are valid for five years from the date of the examination and must be valid at the time of recommendation for the credential.

For students applying for the Specialist Credential in Early Childhood Special Education, an appropriate major such as Child Development, Developmental Psychology, or Liberal Studies is required.

3. Demonstrated knowledge of the principles and provisions of the United States Constitution through successful completion of a three-unit collegiate-level course or examination. Courses are listed in General Catalog section on "Graduation Requirements," IV. American Institutions Requirement.
4. **Prerequisite Courses.**
  - a. Education 451 or Special Education 527.
  - b. Special Education 500, 501, 502, and courses applicable to the credential area selected from Special Education 524, 525, and 528.
5. **Grade Point Average.** Students must have a cumulative grade point average (GPA) of 2.85 or above in the last 60 semester (90 quarter) units attempted. Candidates are required to submit official transcripts from all colleges and universities attended and unofficial SDSU transcripts for GPA calculation.
6. **Tuberculin Clearance.** Evidence of a negative tuberculosis test (these tests are valid for four years and must be in effect during the time that candidates are enrolled in the credential program). Clearance statements may be secured from Health Services, private physicians or HMOs, or public health agencies.
7. **California Certificate of Clearance.** This certificate represents a background clearance and check conducted by the State Department of Justice and Federal Bureau of Investigation. Turnaround time for the clearance can take as long as eight months for traditional finger printing. Therefore, applicants are advised to use Livescan. Possessors of K-12 California credentials may satisfy this requirement by submitting

copies of those certificates. In lieu of the actual Certificate of Clearance or copy of a credential, candidates may submit their clearance application packets and fees to the Credentials Processing Center, BA-250.

8. **Program Application.** Applicants must complete the departmental application form indicating the Specialist Credential program to which they are applying.
9. **Letters of Recommendation.** Two letters of recommendation from people who know you well (not relatives), especially those who have knowledge of your work with children in school or related settings. These letters must attest to your aptitude and suitability for the teaching profession.
10. **Candidate Statement.** A candidate statement (500 word maximum) that addresses your background of experiences that have contributed to your desire to be a special education teacher as well as the personal and professional factors that you consider to be most important if one is to become an effective and caring special educator.

Mail or deliver your complete departmental admissions package to:  
 Department of Special Education  
 San Diego State University  
 5500 Campanile Drive  
 San Diego, CA 92108-1170

Students must also apply for graduate/postbaccalaureate admission, electronically submitting the University application available at <http://www.csumentor.edu>.

### Level I Specialist Credential Programs

1. Core courses: Special Education 505\*, 553, 560, 662, 970, 980.
2. Specialization courses:
  - a. **Mild/Moderate Disabilities:** Teacher Education 910A (2 units), 930 (3 units); Special Education 534, 570, 647, 648, 970A, 980A, and 470 (for part-time students).
  - b. **Moderate/Severe Disabilities:** Teacher Education 910A (2 units), 930 (3 units); Special Education 510, 526, 535, 570, 635, 645, 647, 970B, 980B, and 470 (for part-time students).
  - c. **Physical and Health Impairments:** Teacher Education 910A (2 units), 930 (3 units); Special Education 510, 526, 534, 570, 647, 648, 970C, 980C, and 470 (for part-time students).
  - d. **Early Childhood Special Education:** Special Education 510, 526, 570, 635, 643A, 643B, 980D (Infant/Toddler), 980D (Pre-school), and 470 (for part-time students).

\* Not required for Early Childhood Special Education.

### Level II Specialist Credential Programs Requirements for Admission

Candidates for any of the Level II Education Specialist Credentials in Special Education must meet the following requirements:

1. **University Standards.** Students must satisfy University standards and qualifications for admission to postbaccalaureate standing.
2. **Level I Credential.** Students must hold or be eligible for a Preliminary Level I Education Specialist Credential or hold a valid out-of-state credential in a special education category comparable to a California Commission-approved Preliminary Level I program authorizing special education service. Level I or out-of-state credentials must be in the area of study for which students are seeking a Level II credential.
3. **Employment.** Students must be employed as a special education teacher in an early childhood or K-12 setting and submit a Verification of Employment form from the district in which they are employed.

### Program

1. Prerequisite: Special Education 975. (1 unit)
2. Core courses: Special Education 605 (1 unit) and 985 (1 unit). (2 units)
3. Specialization courses:
  - a. **Mild/Moderate Disabilities:** Special Education 634, 651, 653, and special emphasis elective (3 units) in consultation with adviser. (11 units)
  - b. **Moderate/Severe Disabilities:** Special Education 651, 654, and special emphasis electives (3-6 units) in consultation with adviser. (9-12 units)
  - c. **Physical and Health Impairments:** Special Education 634, 643A or 643B, 653, 660. (12 units).
  - d. **Early Childhood Special Education:** Special Education 655, and special emphasis electives (3-6 units) in consultation with adviser. (6-9 units)
4. **Knowledge of health education, including substance abuse and nutrition:** Community Health Education 101 or 920, or Health and Human Services 296, and verification of CPR competency.
5. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470. Students who complete their Level I credential at SDSU will meet this requirement with Special Education 560.

### Reading Recovery® Teacher Leader

The Reading Recovery® Teacher Leader training program is to prepare qualified individuals to implement reading recovery in their own districts or regions. Teacher leader candidates are selected by their districts to participate in the year-long coursework that prepares them to provide reading recovery training to teachers in their districts, based on their potential as leaders and their educational backgrounds. Each teacher leader candidate must hold a master's degree which qualifies them to teach reading recovery courses in their districts for university credit. A faculty member in the College of Education is responsible for providing coursework and supervision of teacher leader candidates.

Courses required in the program include two semesters each of clinical work, theoretical foundations, and leadership courses. Teacher leaders learn how to assess young children's literacy progress and to use reading recovery teaching procedures to help the at-risk children learn to read and write. Teacher leaders examine the theoretical foundations of early literacy acquisition, reading recovery and early intervention, including theories specifically relevant to working with diverse children with reading difficulties. They study various aspects of the teacher leader role in the classroom and in established sites through apprenticeships with experienced teacher leaders in the field; explore issues of program implementation and systemic changes stemming from the implementation of reading recovery in districts and; consider implications of all of their knowledge and expertise as it directly relates to the effective training of reading recovery teachers.

Partnerships between San Diego State University and the districts that teacher leaders represent are established through the Reading Recovery® Teacher Leader training program. Subsequent to the training year, the program provides on-going support and professional development to teacher leaders they have trained.

The Reading Recovery® Teacher Leader training program at San Diego State University mirrors training at the other 25 university training centers in the United States. Reading recovery was first introduced at Ohio State University 15 years ago. Other universities that participate in the program include Purdue University, New York University, University of Connecticut, and Georgia State University. University trainers have a close network through which they meet on a regular basis to shape and update coursework based on current research.

## Section IV. Certificate Programs

### Community College Teaching Certificate

The purpose of this certificate program is to prepare students to teach in community colleges within the transfer, developmental, vocational, and adult education areas. The program provides students with experiences in curriculum development and evaluation, instructional techniques, methods to meet adult learning needs, and a practical internship in a local community college.

This is an advanced academic certificate at the postbaccalaureate level. Admission requirements are a bachelor's degree from a regionally accredited institution of higher education, with at least a 2.85 GPA in the last 60 units.

Students must complete the following courses with a minimum grade of B in each course and Cr in ARP 760. Courses in the certificate program may be applied to a master's degree if applicable.

- ARP 611 Program Development and Evaluation in Postsecondary Education (3)
- ARP 631 Seminar in Teaching in Postsecondary Education (3)
- ARP 730 Seminar in Adult Learning (3)
- ARP 760 Internship in Educational Leadership (3) Cr/NC/RP

For further information, contact Dr. William E. Piland, Department of Administration, Rehabilitation and Postsecondary Education.

### Cultural and Community Trauma Studies Certificate Program (Offered only in Extension)

The Cultural and Community Trauma Studies Certificate Program provides a 15 unit program. There are nine required and six elective units. The purpose of the program is to provide training for persons already providing trauma response services and mental health professionals, especially school counselors, school support personnel, and other mental health workers who desire to develop the theoretical knowledge necessary to delineate types of trauma, develop intervention strategies, to be aware of differing cultural responses and needs, to know community resources, and to demonstrate the practical skills necessary to provide effective and knowledgeable service. This training will especially develop or enhance awareness, knowledge, and skills not only in fundamental trauma studies, but also in the area of cultural and community differences, community resiliency, and community resources.

Prerequisites for admission include:

1. Successful completion of undergraduate degree in social sciences or the helping professions.
2. Successful completion of application and interview process.
3. A minimum of one year of experience in the field or registration in a graduate program in a mental health field.
4. Approval of director of certificate program.

Course Requirements (15 units):

Core Courses:

- CSP 611 Seminar in Determinants of Human Behavior: Trauma (3)
- CSP 646 Seminar in Models and Methods of Intervening: Trauma (3)
- CSP 661 Seminar in Critical Incident and Crisis Interventions (3)

Elective Courses (Minimum 6 units required):

- CSP 616 Trauma Seminar in Alternative, Indigenous, and Community Healing Modalities (3)
- CSP 665 Seminar in Traumatized Children and Families (3)

- CSP 697 Special Topics in Trauma Studies (1)  
(Minimum 3 units required; maximum credit three units with different subject matter.)
- CSP 731 Trauma Studies Field Supervision (3) Cr/NC  
(Must take place at an approved site.)

With the consent of the director, students may take up to nine units without being enrolled in the certificate program.

Students whose undergraduate degree is not in a social science or helping profession can petition to be admitted into the program. Admission will be determined on a case-by-case basis.

### Developing Gifted Potential Certificate

The purpose of this certificate program is to provide teachers and other education professionals with specialized preparation for supporting talent development and providing effective educational services to gifted and talented individuals in a diverse society. The certificate is designed to provide knowledge and skills to (a) encourage the development and expression of high potential, particularly among students currently underrepresented in formal programs for the gifted and (b) provide effective instruction to individuals formally identified as gifted and talented. Hence the program is designed for professionals working in regular and special classrooms settings.

Successful applicants must have completed a bachelor's degree from an accredited institution. A minimum grade point average of 3.0 must be maintained in certificate coursework with no less than a grade of "C" in any course.

Required courses (15 units): Special Education 508, 644, 649, 658, 771. All courses completed with a grade of "B" or better are applicable to the Master of Arts degree in Education with a Concentration in Special Education and a Specialization in Gifted. For further information, contact the Department of Special Education.

### Distance Education Certificate

This certificate program will provide necessary skills to in-service managers, instructors, instructional designers, evaluators, local site coordinators, and other professionals working in distance education systems and programs in higher education, K-12, business, and government, including personnel in law enforcement, and the military. Students who complete the certificate program and meet all other criteria may apply to be admitted to the M.A. program in educational technology. For application or further information, see the program adviser in the Department of Educational Technology.

**Prerequisites:** A bachelor's degree from an accredited institution with a grade point average of at least 2.85 (when A equals 4) in the last 60 semester (90 quarter) units attempted. A satisfactory score on the verbal and quantitative sections of the GRE General Test (combined score of 950). At least three years of experience in distance, open or extended education, training, HRD or a related field. Mastery in telecommuting and learning new information technology applications.

Required courses (12 units):

- EDTEC 550 Introduction to Distance Education (3)
- EDTEC 640 Psychology of Technology-Based Learning (3)
- EDTEC 650 Distance Education (3)
- EDTEC 684 Management of Educational Technology (3)

Electives: (3 units) to be selected from the following with approval of program adviser:

- EDTEC 544 Instructional Design (3)
- EDTEC 644 Advanced Instructional Design (3)
- EDTEC 653 Cyberculture and Learning Systems (3)
- EDTEC 670 Exploratory Learning Through Simulation and Games (3)
- EDTEC 671 Learning Environment Design (3)
- EDTEC 685 Informational and Instructional Technologies for Organizations (3)

## Early Childhood Special Education Certificate Program

The Early Childhood Special Education Certificate is authorized by the California Commission on Teacher Credentialing. It is designed for individuals who have completed Level II coursework in Mild/Moderate or Moderate/Severe disabilities. Completion of the certificate extends their authorization from birth through 22. Individuals credentialed in other areas such as Deaf and Hard-of-Hearing, Physical and Health Impairments, and Visual Impairments are authorized to serve birth through 22, but may add the certificate for professional growth reasons if desired.

1. Prerequisite: Completion of Level II coursework in one of the Education Specialist credentials and background in early childhood development with focus on infants, toddlers, and preschoolers.
2. Certificate coursework: Special Education 526, 528, 635, 643A, 643B, 980D (Infant/Toddler), 980D (Preschool). (19-21 units)

## Resource Specialist Certificate of Competence

No new students are being admitted to this program during the 2004-2005 academic year. Contact Special Education Department.

The Department of Special Education offers coursework leading to the California Resource Specialist Certificate. This certificate authorizes the holder to function as a Resource Specialist in special education settings. To be recommended for this certificate by San Diego State University, the candidate must hold a valid Learning Handicapped, Severely Handicapped, or Physically Handicapped credential, have completed three years of teaching in regular and special education settings, and must have satisfied the competencies specified in the four Resource Specialist courses: Special Education 645 or 648, 651, 652, 653.

## Rehabilitation Administration Certificate

This certificate program provides the student with administrative knowledge and skills to develop and supervise rehabilitation programs and services, in collaboration with consumers, in a variety of organizational settings. This academic certificate is designed for individuals who currently function or aspire to function as program coordinators and administrators in state rehabilitation agencies, community rehabilitation programs, disability management programs, and other programs and/or organizations involved in serving consumers with disabilities.

This is an advanced academic certificate at the postbaccalaureate level. Admission requirements are a bachelor's degree in rehabilitation or a related field and relevant work experience in a rehabilitation organization or program. The certificate is intended to focus on diversity among consumer populations and service delivery systems within the student's area of career interest. A focus on disability management is available. A master's degree in rehabilitation counseling, as well as leadership experience in rehabilitation is strongly encouraged. Relevant career or academic training experience may be substituted in lieu of the above admission criteria at the discretion of the program director. A bachelor's degree is required.

This 21-unit certificate includes the following courses:

- ARP 710A Seminar in Rehabilitation (3)
- ARP 745 Internship in Rehabilitation (3-9)
- With the approval of the Program Adviser, 12 units selected from:
  - ARP 610 Educational Leadership (3)
  - ARP 680 Seminar in Administration, Rehabilitation and Postsecondary Education (2-6)
  - ARP 710B Seminar in Rehabilitation (3)
  - ARP 720 Educational Human Resource Development in Postsecondary Education (3)
  - ARP 740 Advanced Seminar in Administration, Rehabilitation and Postsecondary Education (3)
  - ARP 747 Educational Leadership in a Diverse Society (3)
  - ARP 755 Governance and Policy Development in Postsecondary Learning Organizations (3)
  - ARP 798 Special Study (1-6) Cr/NC/RP

Contact the Director of the Rehabilitation Program at (619) 594-6406 (V/TTY) for further information.

Students must maintain a minimum grade point average of 3.0 in all certificate coursework with no less than a grade of "C" in any course. Only three units of coursework with a grade of "C" will count towards a certificate. Maximum of three units of coursework repeatable. Courses in the certificate program may be applied to a master's degree if applicable.

## Bilingual (Spanish) Special Education Certificate

No new students are being admitted to this program during the 2004-2005 academic year. Contact Special Education Department.

This certificate program provides specialized preparation for teachers of learning handicapped children whose primary language is Spanish.

Prerequisites for admission include the following:

1. Completion of, or admission to, the departmental program for the Specialist Credential in Special Education (Learning Handicapped).
2. Special Education 527.
3. Spanish language proficiency at the S-3 (FSI 3) level.
4. Knowledge of the target culture and bilingual teaching strategies. Will satisfy prerequisites for Policy Studies in Language and Cross-Cultural Education 602. Proficiency may be demonstrated by passing the "Test of Culture and Teaching" used by the College of Education bilingual emphasis programs.

Certificate program requirements include the following: Policy Studies in Language and Cross-Cultural Education 553, 602, three units of special education selected with the approval of the department chair, and demonstration of competence in teaching learning handicapped students whose primary language is Spanish.

A grade point average of 3.0 must be obtained in the four courses. Contact the Department of Special Education for further information.

## Cross-Cultural Language and Academic Development (CLAD) Certificate

The Cross-Cultural Language and Academic Development (CLAD) Certificate provides an interdisciplinary approach in linguistics and policy studies to prepare credentialed teachers in theory and application of English Language Development (ELD) and Specially Designed Academic Instruction in English (SDAIE) methodology for linguistically diverse students in grades K-12.

- A. Prerequisites: Linguistics 420 or 520.
- B. Certificate Requirements:
  - 1. Twelve units including: Policy Studies in Language and Cross-Cultural Studies 601, 602; Linguistics 552; Policy Studies in Language and Cross-Cultural Studies 651 or Linguistics 550.
  - 2. Six units of foreign language at the college level or equivalent.
  - 3. Completion of program with a 3.0 grade point average.
- C. Candidates who hold valid basic K-12 teaching credentials will also be able to apply directly to the Commission on Teacher Credentialing for the state's CLAD Certificate for public school service.

Apply in the Policy Studies Department, BA-248 or call (619) 594-5155 for more information.

## Bilingual Cross-Cultural Language and Academic Development (BCLAD) Certificate

This experimental certificate program meets California Commission on Teaching Credentialing (CTC) competencies for the BCLAD (Spanish/English) Certificate through 12 units of coursework conducted in California and Mexico. It addresses the following three domains:

- 1. Methodology for Primary Language Instruction
- 2. The Culture of Emphasis
- 3. The Language of Emphasis

### Admission Criteria

Candidates must have an intermediate level of proficiency in Spanish and their CLAD credential/certificate to qualify, plus two letters of recommendation from school or district based personnel. Candidates will be administered a Spanish proficiency pre-and post-examination utilized by Long Beach State University and approved for their B/CLAD credential program.

### Coursework

- 1. Methodology for Primary Language Instruction:
  - PLC 652 Multicultural Methods and Curriculum in Language Arts . . . . . 3 units
- 2. The Culture of Emphasis: Latin America:
  - PLC 686 Seminar in Multicultural Education: Culture of Latin America . . . . . 3 units
- 3. Practicum/Field Experience: Hands on experience with primary language teaching in Mexico and California:
  - PLC 686 Seminar in Multicultural Education: Field Experience Seminar in Effective Bilingual Culture in California and Mexico . . . . . 3 units
- 4. Spanish Language Development, Language of Emphasis:
  - PLC 415 Fieldwork in Bilingual Community Context. . . . . 3 units

## Certificate

- 1. Completion of 12 units with a 3.0 grade point average.
- 2. Candidates who hold valid K-12 teaching credentials will be able to apply to the Commission on Teacher Credentialing for the State of California BCLAD certificate for public school service. Apply in the Policy Studies Department (BA-248) or call (619) 594-5155 for additional information.

## Instructional Software Design Certificate

The purpose of this certificate is to prepare specialists who can develop or assist in the development of software to meet specific instructional, training or management needs. There are two competency areas incorporated in the certificate: instructional design and educational computing. Students must complete a minimum of 18 units with a 3.0 (B) grade point average and no less than a "C" in any course. For application or further information, see the director of the program in the Department of Educational Technology.

**Prerequisites:** A bachelor's degree from an accredited institution with a grade point average of at least 2.85 (when A equals 4) in the last 60 semester (90 quarter) units attempted. A satisfactory score on the verbal and quantitative sections of the GRE General Test.

Required Courses (18 units):

- EDTEC 540 Educational Technology (3)
- EDTEC 541 Web-Based Multimedia Development (3)
- EDTEC 544 Instructional Design (3)
- EDTEC 561 Advanced Web-Based Multimedia Development (3)
- EDTEC 671 Learning Environment Design (3)

Electives (3) To be selected with the approval of the program director.

## Instructional Technology Certificate

Refer to General Catalog.

## Supported Employment and Transition Specialist Certificate

The purpose of this certificate is to prepare specialists who can develop and implement programs in supported employment and adult community living for youth and young adults with disabilities. A student may elect to emphasize programs for people with either moderate and mild or severe and multiple disabilities. Students must complete a minimum of 21 units with a 3.0 (B) grade point average. Students are able to develop additional competencies in instructional interventions, living options, community networking, and assistive technologies.

**Prerequisites:** A bachelor's degree from an accredited institution with a grade point average of at least 2.85 (when A equals 4) in the last 60 semester (90 quarter) units attempted. Introductory disability coursework and experience.

Required courses (9 units)

- SPED 501 Typical and Atypical Learning Processes (3) or
- SPED 664 Issues Affecting Employment of Individuals with Severe Handicaps (3) or
- ARP 684 Rehabilitation Foundations (3)
- ARP 687 Placement Practices with Individuals with Disabilities (3)
- SPED 771 Directed Internship: Special Education (3) Cr/NC or
- ARP 743 Fieldwork in Rehabilitation (3) Cr/NC or
- CSP 730 Fieldwork in Counseling (3) Cr/NC

Twelve units of adviser approved Special Education; Administration, Rehabilitation or Postsecondary Education; or Counseling and School Psychology coursework.

Dr. Caren L. Sax, the program adviser in the Department of Administration, Rehabilitation and Postsecondary Education, will meet with each certificate student to design an individualized program of study based on the student's educational background and professional experience. Students may enroll in certificate program and master's degree program concurrently.

### Teaching the Emotionally Disturbed/Behaviorally Disordered Certificate

No new students are being admitted to this program during the 2004-2005 academic year. Contact Special Education Department.

This certificate provides specialized preparation for teachers of children with severe emotional disturbance who have been labeled as severely emotionally disturbed/behaviorally disordered in the school setting, including those children labeled as seriously emotionally disturbed.

Prerequisites to admission to the certificate program include the following:

1. Completion of the departmental program for the Specialist Credential in Special Education (Learning Handicapped or Severely Handicapped).
2. A graduate grade point average of 3.0.
3. Interview with program faculty.

Program requirements for the Certificate in Teaching the Emotionally Disturbed/Behaviorally Disordered include the following: Special Education 529, 634, 647, 648, 677, 771 (3 units, with approval of adviser), and demonstrated competence in teaching emotionally disturbed/behaviorally disordered students.

A grade point average of 3.0 is required for certificate coursework. Contact the Department of Special Education for further information.

### Workforce Education and Lifelong Learning Certificate

The Workforce Education and Lifelong Learning Certificate offers advanced study and field-based research opportunities for educators interested in assuming leadership roles in the development of education and training programs for non-college bound youth and adults. Employment opportunities include positions as training specialists, instructional developers, program administrators, and instructors in community colleges, adult education programs, and job training programs.

Improving the knowledge and skills of families and workers is one of the most important challenges facing American education. Economists note that even if school reform could be rapidly accomplished, it would have minimal influence on productivity, literacy, or quality of life in the work place during the next 20 years because out-of-school youth and adults are not subject to school reform, and they will constitute the vast majority of the American workforce well in this century.

Successful applicants must have completed a bachelor's degree from an accredited institution and demonstrate a record of excellence in working with youth or adults in schools, agencies, or employer-sponsored education and training programs. A minimum grade point average of 3.0 must be maintained in certificate coursework.

Required courses (12 units):

- |           |   |
|-----------|---|
| EDTEC 544 | Instructional Design (3)  |
| ARP 565   | Psychological Foundations of Adult and Vocational Education (3) |
| ARP 631   | Seminar in Teaching in Postsecondary Education (3)              |
| ARP 730   | Seminar in Adult Learning (3)                                   |

Electives: Three units selected with approval of the certificate program director. For further information, please contact Dr. William Piland, the program director in the Department of Administration, Rehabilitation and Postsecondary Education.

## Courses Acceptable on Master's and Doctoral Degree Programs in Education (ED)

### UPPER DIVISION COURSE

#### ED 516. Foundations of Bilingual Education (1)

Prerequisite: Credit or concurrent registration in Education 451.  
Overview of models of bilingual education programs for language minority students.

### GRADUATE COURSES

Students without classified graduate standing are not admitted to 600- and 700-numbered courses in Education.

Twelve units of professional education are prerequisite for enrollment in all graduate courses.

### GENERAL

#### ED 690. Methods of Inquiry (3)

Procedures for gathering, analyzing, and synthesizing information; reviewing the literature; designing studies. Section selection to be made with department graduate adviser.

#### ED 696. Selected Topics in Community Influences on Learning and Curriculum Planning (1-3)

Prerequisite: Teaching experience.

Intensive study in specific areas of education. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit six units of any 596 or 696 offered by the College of Education applicable to a master's degree.

#### ED 791A. Evaluation Techniques (3)

Prerequisites: Education 690 and advancement to candidacy for the master's degree.

Theory and practice of instructional program and product evaluation.

#### ED 791B-791C. Practicum: Evaluation (1-3)

791B: One lecture. 791C: Independent study.

Prerequisites: Education 791A and advancement to candidacy for the Master of Arts degree in education. Concurrent registration in Education 791B and 791C.

Supervised experience in conducting a program or product evaluation, strategy selection, procedures, reporting methods, culminating in a written project.

#### ED 795A-795B. Seminar (3-3)

Prerequisites: Education 690 and advancement to candidacy for the Master of Arts degree in education.

An intensive study in selected areas of education culminating in a written project. Limited to students following Plan B for the Master of Arts degree in education.

#### ED 797. Research (1-3) Cr/NC/RP

Prerequisites: Education 690 and advancement to candidacy for the master's degree.

Research in one of the fields of education. Maximum credit six units applicable to a master's degree.

#### ED 799A. Thesis (3) Cr/NC/RP

Prerequisites: An officially appointed thesis committee and advancement to candidacy for the master's degree.

Preparation of a project or thesis for the master's degree.

#### ED 799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

#### ED 799C. Comprehensive Examination Extension (0) Cr/NC

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

### DOCTORAL COURSES

#### ED 801. Seminar on Social and Cultural Foundations of Multicultural Education (3-4)

Prerequisite: Admission to the doctoral program or consent of the graduate coordinator. Students are required to have a background in the social sciences or humanities relevant to such educational issues as social behavior and minority cultures.

Social and cultural parameters that have contributed to the shaping of American society and affected developments in education in the last two decades. Emphasis on the impact on multicultural education and human social behavior in pluralistic societies.

#### ED 804. Bilingual Education: Models and Current Research Trends (3-4)

Prerequisites: Education 801, a background in sociolinguistics or social anthropology and admission to the doctoral program or consent of graduate coordinator.

Analysis of existing models of bilingual education based on previously identified needs of linguistic minority students. Demonstrated needs from current research in classrooms by ethnographers. Significance of linguistic/cultural competencies for academic performance and validity of existing impact studies.

#### ED 806. Ethnically Diverse Learners: Public Policy and Classroom Practice (3-4)

Prerequisites: Education 801 and admission to the doctoral program or consent of the graduate coordinator. Background in psychological foundations of education and educational policy is required.

National, state, and school policy directed at providing the minority learner with equal educational opportunity. Discussion of legislation for desegregation, bilingual education, school implementation cases and classroom practices as these relate to equal educational opportunity.

#### ED 810. Seminar in Curriculum and Technology (3)

Prerequisite: Admission to doctoral program.

Curriculum and learning technologies. Technologies for teaching, learning collaboration, and assessment for diverse population. Legislation, theory, and best practices associated with technology-based instruction and information; critical appraisal of independent learning products and emergent delivery systems.

#### ED 811. Disability in Society: Issues in Practice and Policy (3-4)

Prerequisite: Admission to the doctoral program or consent of the graduate coordinator.

Issues relating to individuals with disabilities in society. Current and historical practices in education and treatment and impact of public policy on service systems. Maximum credit four units.

#### ED 814. Seminar in Curricular Change Processes (3)

Prerequisite: Education 810.

Description and analysis of curricular change processes in educational organizations. Emphasis on process of planned change and elements necessary for implementing and managing curricular change.

#### ED 820. Advanced Educational Statistics (3-4)

Prerequisites: Education 690, Teacher Education 646, or equivalent graduate level course and consent of graduate coordinator.

Theory and practice of statistical inference for research in education. Probability and sampling theory, data collection and organization, computer applications in educational research, statistical significance testing and prediction, use of statistical computer program libraries.

**ED 822. Seminar in Analysis and Issues in Race and Ethnic Relations (3)**

Prerequisite: Education 801.

Analysis of race and ethnic relations in education from a theoretical, research and action based perspective. Conceptual framework of race, ethnicity and prejudice theory needed for policies and strategies of reform in education to address unequal race relations.

**ED 823. Seminar in Action Oriented Policy Research in Multicultural Contexts (3)**

Prerequisite: Education 801.

Multidimensional ways to resolve social problems. Development of community based issues, analysis, research and implementation.

**ED 824. Seminar in Institutional Change in Multicultural Contexts (3)**

Prerequisite: Education 801.

Sociocultural dynamics of urban context, approaches for assessing institutional effectiveness, and strategies for developing and implementing educational innovations. Conceptual understanding of educational and social innovations that address multicultural context of school communities.

**ED 825. Reading Research (3)**

Prerequisites: Master of Arts degree in reading or related language area, and two years of teaching experience.

Analysis of existing literature in reading research and its application to the field. Exploration of areas of research need.

**ED 827. Seminar in Communication and Cognition in Education (3)**

Prerequisite: Admission to doctoral program.

Roots of communication in a diverse society. Relationship between cognition and communication including mass media, as well as cross-cultural, and personal modes.

**ED 831. Seminar: Educational Technology Research and Development (3)**

Prerequisite: Admission to doctoral program.

Literature in educational technology research and its application. Issues relating to research in design and advances in theoretical foundations. Individual or collaborative research related to student's job responsibilities and/or career interests.

**ED 833. Cognition and Interactive Learning (3)**

One lecture and four hours of activity.

Prerequisites: Education 810 and 826.

Role of contemporary interactive media technologies in facilitating learning across varied populations. Interactions of mind and media as they enhance knowledge, perception, and action. Tools and environments for representing and transforming knowledge.

**ED 834. Design and Development of Technology-Based Learning Systems (3)**

One lecture and four hours of activity.

Prerequisites: Education 810 and Educational Technology 644.

Theories, frameworks, and strategies for designing educational products and technology-based learning systems. Development, assessment, and implementation of proposals and specifications for technology-based learning and performance improvement across diverse settings and learners.

**ED 835. Seminar in Research on Writing (3)**

Prerequisite: Admission to doctoral program.

Review of qualitative and quantitative research in writing. Examination of research on sociocultural influences on writing, school-based writing programs, technology and writing, assessment, writing and second-language learning, and creative and critical thinking in writing.

**ED 840. Seminar in Literary Research (3)**

Prerequisites: Completion of master's degree in education and admission to doctoral program.

Analytic investigation of issues in literacy. Faculty members will present research on contemporary issues in literacy. Topics to include basic processes of literacy, instruction and curriculum in literacy, assessment and policy in literacy.

**ED 850. Seminar in Inquiry and Research in Education (3)**

Prerequisite: Completion of 48 units in doctoral program.

Inquiry and empirical research in educational settings within public schools, postsecondary institutions, and public and private sector educational organizations, culminating in a dissertation proposal.

**ED 851. Seminar in Qualitative Methods of Inquiry (3)**

Prerequisites: A master's level course in research methods and admission to doctoral program.

Theory and methods of qualitative research and evaluation. Computer applications in qualitative research. Match methodology to research settings in education; design a research or evaluation proposal; collect and analyze data; and present results of qualitative.

**ED 890. Advanced Seminar: Processes of Reading (3)**

Prerequisite: Admission to doctoral program or consent of graduate coordinator and Education 825.

Linguistic, cognitive, and affective factors that influence a reader while processing texts. Models of reading process, discourse analysis of written text, and models of reading instruction.

**ED 895. Seminar (1-8)**

Prerequisite: Admission to the doctoral program or consent of the graduate coordinator.

Investigation of a particular topic or issue, emphasis on empirical research in education. See Class Schedule for specific content. Maximum credit eight units applicable to an advanced degree.

**ED 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Independent investigation in the general field of the dissertation.

**ED 899. Doctoral Dissertation (3-15) Cr/NC/RP**

Prerequisites: An officially constituted dissertation committee and advancement to candidacy.

Preparation of the dissertation for the doctoral program. Enrollment is required during the term in which the dissertation is approved.

**OFFERED ONLY IN EXTENSION**

**ED 997. Special Topics in Education (1-3)  
(Offered only in Extension)**

Prerequisite: Consent of instructor.

Designed to meet the needs of teachers who wish to develop or continue the study of a current topic. May be repeated with new content.

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# Administration, Rehabilitation and Postsecondary Education

In the College of Education

OFFICE: 3590 Camino del Rio North, San Diego, CA 92108-1716  
TELEPHONE: (619) 594-6115

## Faculty

Fred R. McFarlane, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education, Chair of Department

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Ron Jacobs, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education

Caren L. Sax, Ed.D., Associate Professor of Administration, Rehabilitation and Postsecondary Education

Marjorie F. Olney, Ph.D., Assistant Professor of Administration, Rehabilitation and Postsecondary Education

## Courses Acceptable on Master's Degree Programs in Education (ARP)

### UPPER DIVISION COURSES

#### ARP 565. Psychological Foundations of Adult and Vocational Education (3) I, II, S

Prerequisite: Administration, Rehabilitation and Postsecondary Education 380 or 381.

Learning processes of adult and vocational education students in relationship to theories of learning and methods of teaching.

#### ARP 568. Adult and Vocational Education in Contemporary Society (3)

Prerequisite: Administration, Rehabilitation and Postsecondary Education 565.

Contemporary adult and vocational education in the U.S. Learning opportunities and environments, instructional delivery systems, and adult learning models.

#### ARP 596. Topics in Administration, Rehabilitation and Postsecondary Education (1-3)

Selected problems in administration, rehabilitation and postsecondary education. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### GRADUATE COURSES

#### ARP 605. Postsecondary Education (3)

Philosophy, history, aims, scope, functions, outcomes, principles, and challenges of postsecondary education. Emphasizes teaching and administrative leadership in postsecondary education institutions.

#### ARP 607. Applications of Rehabilitation Technology (3)

Prerequisite: Admission to rehabilitation counseling program or consent of instructor.

Provide rehabilitation professionals with knowledge and skills to assess assistive technology needs of individuals with disabilities and match those needs with appropriate adaptations, equipment, and/or

resources to expand employment and related quality of life opportunities. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 585.)

#### ARP 610. Educational Leadership (3)

Concepts and techniques of leadership, analysis of the factors and practice in the procedures of individual and group leadership as applied to educational and related environments.

#### ARP 611. Program Development and Evaluation in Postsecondary Education (3)

Prerequisite: Administration, Rehabilitation and Postsecondary Education 605 or appropriate experience.

Process of program development, change, improvement and evaluation for postsecondary education. Covers instructional programs, curriculum development, and student services programming. Includes designing instructional strategies to meet student learning needs.

#### ARP 620. Student Affairs in Higher Education (3)

Historical roots, diversity of institutions and students; philosophical foundations of the field, guiding values, key legal principles and theoretical bases; functional areas within student affairs, their evolution, purpose, professional associations, standards, and current issues.

#### ARP 621. Theoretical Foundations of Student Affairs (3)

Prerequisite: Administration, Rehabilitation and Postsecondary Education 620.

Major theoretical foundations of student affairs, including student personnel point of view, student development, and student learning imperative.

#### ARP 622. Communication and Group Process in Student Affairs Leadership (3)

Prerequisites: Administration, Rehabilitation and Postsecondary Education 610, 621.

Four major domains of communication and leadership: interpersonal, intrapersonal, small group, and organizational dynamics. Addresses assessment of techniques and intervention strategies for each domain.

#### ARP 623. Seminar: Critical Leadership Issues in Student Affairs (3)

Prerequisites: Administration, Rehabilitation and Postsecondary Education 610, 621.

Current topics and issues critical to effective leadership in student affairs, academic mission of postsecondary education and creating a supportive learning environment for students.

#### ARP 631. Seminar in Teaching in Postsecondary Education (3)

Prerequisite: Administration, Rehabilitation and Postsecondary Education 611 or appropriate experience.

Teaching process at postsecondary education level addressing syllabus construction, lesson planning, using technology in teaching, and infusing multicultural education into courses. Assessing student learning through authentic evaluation techniques.

### **ARP 645A-645B. Assessment in Rehabilitation (3-3)**

Four lectures and six hours of laboratory.

Prerequisite: Admission to graduate program in rehabilitation counseling.

Rehabilitation assessment, labor market information, and career planning implications. Current assessment approaches, counseling, and career theories related to individuals with disabilities. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 645.)

### **ARP 648. Group Dynamics in Rehabilitation (3)**

Prerequisite: Admission to graduate program in rehabilitation counseling.

Theory, dynamics, process and leadership function as applied to group work in rehabilitation. Development and application of group leadership skills/techniques for adjustment, support, skill training, self-directed groups, organizational problem solving and team-building groups in rehabilitation.

### **ARP 660. Theory and Process of Counseling in Rehabilitation (3)**

Counseling process theories, approaches to and techniques for counseling, and research concerning counseling effectiveness. Not open to students with credit in Counseling and School Psychology 660 or 667.

### **ARP 680. Seminar in Administration, Rehabilitation and Postsecondary Education (2-6)**

Prerequisite: Consent of instructor.

Study of administration, rehabilitation, or postsecondary education in a specialized field, such as a postsecondary institution, and subject fields, or designated services. Field experience when appropriate. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **ARP 684. Rehabilitation Foundations (3)**

Background and legislation related to vocational rehabilitation, consumer services, role and function of rehabilitation counselor as a professional. Orientation to community rehabilitation agencies. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 584.)

### **ARP 685A-685B. Medical and Psychological Aspects of Disability (3-3)**

Prerequisite: Open to rehabilitation graduate students and practitioners.

Interface of the individual and the environment covering disabilities from the perspective of each disability viewed in terms of functional capacities and rehabilitative services needed.

### **ARP 687. Placement Practices with Individuals with Disabilities (3)**

Two lectures and three hours of laboratory.

Prerequisite: Admission to rehabilitation counseling program.

Determination of employment and community integration needs of individuals with disabilities. Theories and techniques are presented through case study methods. Strategies focus on continuous surveys and readings focus on employment needs and opportunities for individuals with disabilities.

### **ARP 696. Advanced Topics in Administration, Rehabilitation and Postsecondary Education (1-3)**

Prerequisite: Twelve units in administration, rehabilitation and postsecondary education.

Intensive study in specific areas of administration, rehabilitation and postsecondary education. May be repeated with new content. See Class Schedule for specific content. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### **ARP 710A-710B. Seminar in Rehabilitation (3-3)**

Prerequisite: Completion of at least 24 units leading to Master of Science in rehabilitation counseling or enrollment in Rehabilitation Administration Certificate.

Selected topics with emphasis in research in rehabilitation counseling. See Class Schedule for specific content.

### **ARP 720. Human Resource Development in Postsecondary Education (3)**

Prerequisite: Consent of instructor.

Human resource development including selection and evaluation of staff, contract management, and staff development. Personnel managerial styles, staff leadership, and motivation techniques as to morale and productivity. Analysis of educational personnel systems and employee programs.

### **ARP 727. Emerging Issues in Postsecondary Educational Leadership (3)**

Prerequisite: Consent of instructor.

Identification and analysis of emerging local, national, and international issues impacting education.

### **ARP 730. Seminar in Adult Learning (3)**

Prerequisite: Administration, Rehabilitation and Postsecondary Education 611.

Patterns and implications of life-long learning. Emphasizes adult learning principles and styles, effects of adult development changes on learning, and teaching techniques in adult education programs.

### **ARP 740. Advanced Seminar in Administration, Rehabilitation and Postsecondary Education (3)**

Prerequisite: Consent of instructor.

Study of a selected area in administration, rehabilitation or postsecondary education, such as educational law, finance, supervision, personnel procedures, etc. May be repeated with new content. See Class Schedule for specific content. Maximum credit nine units applicable to a master's degree.

### **ARP 743. Fieldwork in Rehabilitation (3-6) Cr/NC**

Prerequisite: Admission to graduate program in rehabilitation counseling.

Orientation to the rehabilitation process including organizational goals, operating strategies, responsibilities and ethics, employee role expectations in partnership with consumers and service providers. Maximum credit six units applicable to a Master of Science degree in rehabilitation counseling.

### **ARP 744. Practicum in Rehabilitation (3-12) Cr/NC**

Prerequisite: Admission to graduate program in rehabilitation counseling.

Clinical supervision within rehabilitation systems as it relates to outreach and referral, career development, counseling, and caseload management. Maximum credit 12 units applicable to a Master of Science degree in rehabilitation counseling.

### **ARP 745. Internship in Rehabilitation (3-9) Cr/NC**

Prerequisite: Completion of at least 24 units leading to Master of Science in rehabilitation counseling.

Supervised internship in rehabilitation setting which involves application of rehabilitation counseling experiences. Maximum credit of nine units applicable to a Master of Science degree in rehabilitation counseling.

### **ARP 746. Seminar in Rehabilitation with Consumers Who Are Deaf and Hard of Hearing (3)**

Prerequisite: Consent of instructor.

Characteristics and needs of deaf and hard of hearing consumers. Procedures for collaborating with consumers to develop effective rehabilitation plans, supported employment, independent living and cross-cultural counseling through American sign language.

### **ARP 747. Educational Leadership in a Diverse Society (3)**

Prerequisite: Consent of instructor.

Current theory and practice in meeting needs of diverse learners. Leadership and administration of educational organizations as political, complex systems requiring consensus-building dynamics in a multicultural society.

## ***Administration, Rehabilitation and Postsecondary Education***

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### **ARP 755. Governance and Policy Development in Postsecondary Learning Organizations (3)**

Prerequisite: Consent of instructor.

Development of educational policy and impact of politics in governance and administration; control functions of federal, state, and local agencies; influence of lay citizens and special interest groups; roles of judiciary, employee organizations and students.

### **ARP 760. Internship in Educational Leadership (2-6) Cr/NC/RP**

Prerequisite: Consent of instructor.

Internship for prospective educational leaders. Released time may be required. May be repeated. Maximum credit 12 units applicable to the Professional Administrative Services Credential.

### **ARP 798. Special Study (1-6) Cr/NC/RP**

Prerequisite: Consent of instructor; to be arranged with department chair and instructor. May involve fieldwork.

Individual study. Maximum credit six units applicable to a master's degree.

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# Counseling and School Psychology

In the College of Education

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## Faculty

Carol A. Robinson-Zañartu, Ph.D., Professor of Counseling and School Psychology, Chair of Department  
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María Nieto Senour, Ph.D., Professor of Counseling and School Psychology  
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Linda L. Terry-Guyer, Ed.D., Associate Professor of Counseling and School Psychology  
Tonika D. Green, Ph.D., Assistant Professor of Counseling and School Psychology  
Pilar Hernandez, Ph.D., Assistant Professor of Counseling and School Psychology  
Brent A. Taylor, Ph.D., Assistant Professor of Counseling and School Psychology

## Courses Acceptable on Master's Degree Programs in Counseling (CSP)

### UPPER DIVISION COURSE

#### **CSP 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.

### GRADUATE COURSES

#### **CSP 600. Cross-Cultural Counseling Communication Skills (2)**

Prerequisite: Concurrent registration in Counseling and School Psychology 600L.

Concepts underlying effective cross-cultural counseling practice and interpersonal communication. Development of skills basic to practice of counseling, consultation, and marriage-family therapy.

#### **CSP 600L. Cross-Cultural Counseling Prepracticum (1) Cr/NC**

Three hours of practicum.

Prerequisite: Credit or concurrent registration in Counseling and School Psychology 600.

Development of self-understanding. Cross-cultural communication skills needed for becoming an effective counselor. May be repeated with new content. Maximum credit three units applicable to a master's degree in counseling.

#### **CSP 601. Theoretical Foundations of Counseling and Marriage and Family Therapy (3)**

Prerequisites: Counseling and School Psychology 600 and 600L.

Counseling and marriage and family therapy theories and their impact on the practices of counselors, school psychologists, marriage-family therapists and their clients. Approaches and applications for counseling and therapy. Research on counseling and marriage and family therapy. (Formerly numbered Counseling and School Psychology 660.)

#### **CSP 606. Mental Health Law (1)**

Prerequisites: Counseling and School Psychology 600 and 600L.

Essentials of mental health law including cultural values and principles underpinning law, how law works, and sets of laws and regulations central to counseling and marriage and family therapy practice. (Formerly numbered Counseling and School Psychology 605.)

**A.** Marriage and Family Therapy **B.** Community-Based Block

#### **CSP 607. Ethical and Professional Issues in Mental Health Practice (2)**

Prerequisites: Counseling and School Psychology 600 and 600L.

Ethical and professional issues of counseling and marriage and family therapy practice, research, and training. Examination of discipline Code of Ethics. Issues of confidentiality, competence, multiple relationships, clinical practices, and modalities. (Formerly numbered Counseling and School Psychology 605.)

**A.** Marriage and Family Therapy **B.** Community-Based Block

#### **CSP 609. Family Life Cycle Development (3)**

Prerequisites: Counseling and School Psychology 600 and 600L.

Family development examined within sociocultural and temporal contexts. Addresses predictable and crisis transitions and implications for family therapy treatment. (Formerly numbered Counseling and School Psychology 684.)

#### **CSP 610. Determinants of Human Behavior (3)**

Implications of theory and research in behavioral sciences for the understanding of human behavior.

**A.** Personality **D.** School Learning  
**B.** Social and Cultural **E.** Biological  
**C.** Development

#### **CSP 611. Seminar in Determinants of Human Behavior: Trauma (3) (Offered only in Extension)**

Prerequisite: Bachelor's degree.

Historical and philosophical origins of current theories and practices. Types of trauma affecting children, communities of color, elderly, crime victims, and others. Implications for treatment considered.

#### **CSP 615. Seminar in Multicultural Dimensions in Counseling (3)**

Issues, insights and techniques for improving effectiveness in working with culturally diverse populations.

#### **CSP 616. Seminar in Alternative, Indigenous, and Community Healing Modalities: Trauma (3) (Offered only in Extension)**

Prerequisite: Bachelor's degree.

Different healing modalities reflecting different world views. Indigenous, modern, and non-western alternative theories, practices, and techniques.

### **CSP 618. Contexts of Psychopathology (3)**

Prerequisite: Counseling and School Psychology 601.

Descriptions of mental health disorders within biological, individual, familial, and larger social contexts. Focus on *Diagnosis and Statistical Manual of Mental Disorders* classification system and relationship to family functioning. (Formerly numbered Counseling and School Psychology 585B.)

### **CSP 620. Guidance Services in Public Education (3)**

Historical, philosophical and legal bases of pupil personnel services; staff roles and relationships in a variety of organizational patterns.

### **CSP 621. Introduction to School Psychology (3)**

Introduction to school psychology: roles (assessing, counseling, consulting); skills (innovative techniques, consultation); and issues (modifying the system, multicultural impact).

### **CSP 622A. Ecosystems Assessment – Intervention I: Students (3)**

Prerequisites: Counseling and School Psychology 600 and 600L. Concurrent registration in Counseling and School Psychology 740.

Ecosystemic theory and models for assessment – intervention services to individual students in multicultural schools. Ecological data-gathering methods (e.g. record reviews, interviews, observation). Community, school, family and cultural influences on student's situation. Evaluation of intervention effectiveness. (Formerly offered as Counseling and School Psychology 710A, Seminar: Ecosystems.)

### **CSP 622B. Ecosystems Assessment – Intervention II: Schools (3)**

Prerequisites: Counseling and School Psychology 600, 600L, 622A. Concurrent registration in Counseling and School Psychology 740.

Ecosystemic models and methods for assessment, intervention, and delivery of support services to multicultural schools. Roles of school psychologists and counselors facilitating teaching-learning. Evaluating needs and outcomes with implications for interventions, programs, and school practices. (Formerly offered as Counseling and School Psychology 710B, Professional Seminar: Ecosystems.)

### **CSP 623. Ecobehavioral Assessment – Intervention (3)**

Prerequisites: Counseling and School Psychology 622B. Concurrent registration in Counseling and School Psychology 730 or 740.

Theory and concepts underlying ecobehavioral assessment – intervention in multicultural schools. Functional assessment of individual student behavior in contexts of classroom and culture. Development of behavior support plans in collaboration with teachers. Implementing and evaluating ecobehavioral consultation.

### **CSP 625. Theories of Marriage and Family Therapy I (3)**

Prerequisite: Counseling and School Psychology 601.

Historical and empirical foundations of marriage and family therapy. Classic systemic theoretical models of practice from vantage point of assessment. Related change strategies and techniques. (Formerly numbered Counseling and School Psychology 685.)

### **CSP 625L. Marriage and Family Therapy Theories in Practice I (1)**

Prerequisites: Counseling and School Psychology 601. Concurrent registration in Counseling and School Psychology 625.

Application of marriage and family therapy theories introduced in Counseling and School Psychology 625 to therapy practice through simulation and skill-building activities.

### **CSP 626. Theories of Marriage and Family Therapy II (3)**

Prerequisites: Counseling and School Psychology 625 and 625L.

Contemporary marriage and family therapy theories including: post-modern ideas, such as narrative therapy and collaborative language systems, integrative and evidence-based approaches; alternative approaches to family therapy, such as coaching and mediation.

### **CSP 626L. Marriage and Family Therapies in Practice II (1)**

Prerequisites: Counseling and School Psychology 625, 625L. Concurrent registration in Counseling and School Psychology 626.

Application of postmodern theories and integrative theories in practice through simulation and skill-building activities.

### **CSP 635. Sexuality and Intimacy in Couple and Family Therapy (2)**

Prerequisites: Counseling and School Psychology 625, 625L.

Approaches to understanding sexual functioning and intimacy through multicultural, historical, and relational clinical theory frameworks. Specific sexual issues presented in therapy, treatment planning, and intervention. Fulfills marriage and family therapy licensure requirement.

### **CSP 640. Testing and Assessment for Marriage and Family Therapists (2)**

Prerequisite: Education 690.

Theory and application of individual and relationship assessment instruments in marriage and family therapy practice. Test development processes. Cultural factors in testing and interpretation. Current uses of tests in mental health, educational, and legal institutions. (Formerly offered as Counseling and School Psychology 640, Theories and Process of Appraisal, 3 units.)

### **CSP 641. Psychometrics in Counseling and School Psychology (1)**

Prerequisite: Education 690.

Psychometric underpinnings of standardized testing. Application of group achievement testing, behavior rating scales, and self-concept tests in counseling and psychological services in multicultural schools. Includes current issues (e.g. impact of high-stakes testing on services, legal mandates, ethical issues).

### **CSP 642A-642B. Individualized Appraisal of Learning Characteristics (4-4)**

Three lectures and three hours of laboratory.

Prerequisite: Counseling and School Psychology 640. Counseling and School Psychology 642A is prerequisite to 642B.

Administration and interpretation of instruments and techniques for assessing learning characteristics of children from multicultural settings. 642A: Individualized intellectual assessment of school-aged children. 642B: Scholastic status, learning aptitudes, social maturity, interpersonal relations and behavioral adjustment.

### **CSP 643. Psychoeducational Evaluation Techniques (1) Cr/NC**

Prerequisite: Counseling and School Psychology 641.

Theories and concepts underlying psychoeducational evaluation in multicultural schools. Administration and interpretation of instruments and techniques for psychoeducational evaluation of children and adolescents.

**A.** Psychological Processing

**B.** English – Learners

**C.** Spanish – Speakers (proficiency required)

### **CSP 644. Academic Assessment – Intervention (3)**

Prerequisites: Counseling and School Psychology 622A and 641. Concurrent registration in Counseling and School Psychology 730 or 740.

Current concepts of prevention and intervention strategies for students placed at risk for academic difficulties in multicultural schools. Skills in assessment of academic achievement (standardized and authentic), linked to empirically supported intervention strategies, evaluation of intervention effectiveness.

### **CSP 645. Career Development (1)**

Prerequisites: Counseling and School Psychology 620 and admission to school counseling program.

Theories, methods, and models of career assessment and comprehensive career development programs in K-12 multicultural school settings. Role of counselor as developer and coordinator of activities, resources, and school-to-work opportunities.

**CSP 646. Seminar in Models and Methods of Intervening: Trauma (3) (Offered only in Extension)**

Prerequisites: Counseling and School Psychology 611 and 661.

Theory and research on post-traumatic stress disorder (PTSD) and effectiveness of short-term and long-term intervention models. Contemporary non-western and alternative western approaches and their effectiveness with children and families.

**CSP 661. Seminar in Critical Incident and Crisis Interventions (3) (Offered only in Extension)**

Prerequisite: Bachelor's degree.

Helping skills for managing mental well-being in crisis and critical incident situations; develop practical skills for working in traumatic emergency situations; learn suicide prevention, intervention, and follow-up.

**CSP 662. Counseling Interventions with Children and Adolescents (3)**

Prerequisites: Counseling and School Psychology 601 and 610C.

Counseling theories, processes and approaches appropriate to children and adolescents in multicultural school and community settings. Application of theories and research for individual, group, family and larger systems interventions.

- A. Marriage and Family Therapy
- B. School Counseling and School Psychology

**CSP 665. Seminar in Traumatized Children and Families (3) (Offered only in Extension)**

Prerequisite: Bachelor's degree.

Differences between normal and traumatized patterns of grief; traumatizing experiences for children and impact on family. Culturally relevant, research supported interventions, and community resources.

**CSP 670. Theory and Process of Group Counseling (3)**

Prerequisites: Counseling and School Psychology 600 and 600L.

Group process, theories of group interaction, and group leadership techniques with children, adolescents, adults, couples, and families.

**CSP 680. Theory and Process of Consultation (3)**

Prerequisites: Counseling and School Psychology 600 and 600L.

Consultation theory, process, and research for counselors and school psychologists. Emphasis on mental health and problem-solving consultation in multicultural education and mental health settings.

**CSP 686. Seminar: Gender and Ethnicity in Family Therapy (2)**

Prerequisites: Counseling and School Psychology 625 and 740.

Integration of gender and cultural factors into family systems therapy theory and practice.

**CSP 687. Family Treatment of Substance Abuse (1)**

Prerequisite: Counseling and School Psychology 625.

Systemic models of intervention for families and couples presenting problems related to substance abuse. Includes treatment issues of interdependence, power, intimacy, generational patterns, addiction, and relapse. Fulfills marriage and family therapy licensure requirement.

**CSP 688. Family Systems Assessment of Child Abuse (1)**

Prerequisite: Counseling and School Psychology 625.

Examines child abuse assessment within individual, family socio-cultural, developmental and systemic frameworks. Treatment goals, issues and strategies derived from family systems therapies. Fulfills marriage and family therapy licensure requirement.

**CSP 689. Family Counseling in the Schools (1)**

Prerequisite: Counseling and School Psychology 600 and 600L.

Roles and approaches of family counselor in working with schools for children's school-based problems. Family systems theory and practice applied to family-school interface, cultural interaction, specific symptomology, and professional and ethical issues.

**CSP 691. Violence in Couples' Relationships (1)**

Prerequisite: Counseling and School Psychology 625.

Sociocultural, developmental, family and individual contexts of violence in couples' relationships. Assessment with a focus on systemic ideas and practices. Legal, ethical, and person-of-the-therapist influences on assessment. Fulfills marriage and family therapy licensure requirement.

**CSP 692. Seminar in Couples in Therapy (2)**

Prerequisites: Counseling and School Psychology 609 and 625.

Explores and applies theory and practice of therapy with couples in premarital, marital, non-marital, divorce, recoupling, and remarriage situations. Intra and intercultural issues and gender factors in coupling. Discussion of specific problems such as infidelity or depression.

**CSP 693. Special Topics in Families and Larger Social Systems (1)**

Prerequisites: Counseling and School Psychology 625 and 625L.

Variable topics addressing issues of relationships between families and larger social systems relationships in marriage and family therapy. Examples include: home-based family therapy, immigrants and refugees in therapy, cultural trauma, larger systems change, spirituality, technology and therapy. May be repeated with new content. Maximum credit six units.

**CSP 694. Psychopharmacology for Marriage and Family Therapists (2)**

Prerequisite: Counseling and School Psychology 618.

Medical, cultural, systemic perspectives on use of psychopharmacology in marriage and family therapy practice. Overview of most commonly used drugs in psychotherapeutic treatment. Fulfills marriage and family therapy licensure requirement.

**CSP 696. Selected Topics in Counseling and School Psychology (1-3)**

Prerequisite: Consent of instructor.

Intensive study in specific areas of counseling and school psychology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**CSP 697. Special Topics in Trauma Studies (1) (Offered only in Extension)**

Prerequisite: Bachelor's degree.

Variable topics, addressing issues of trauma and special populations. Examples include: Grief and loss in refugee children; children and families as victims of crime; intergenerational trauma and Jewish holocaust survivors; Native American transgenerational traumatic stress and emergent interventions; African American behavioral change model. Maximum credit three units.

**CSP 710A-710B. Professional Seminar (3-3)**

Prerequisites: Education 690. Six units from Counseling and School Psychology 601, 640, and 670. Counseling and School Psychology 710A and 740 are prerequisite to 710B.

Study of selected areas in counseling or school psychology culminating in a written project with emphasis on counseling as a profession. May be repeated with new content. See Class Schedule for specific content. Maximum credit nine units applicable to a master's degree.

**CSP 730. Fieldwork in Counseling (2-6) Cr/NC**

Prerequisite: Counseling and School Psychology 601 or 662 or 670.

Application of concepts and procedures of counseling or school psychology services in appropriate school or agency setting. Daily observation and practice. Weekly seminar sessions with university staff. Application to take the course must be made early during the preceding semester. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree in counseling.

### **CSP 731. Trauma Studies Field Supervision (1-3) Cr/NC (Offered only in Extension)**

Prerequisites: Counseling and School Psychology 611, 646, 661, and consent of program director.

Application of concepts and procedures of interventions and/or referral in appropriate school or agency setting. Observation and practice under supervision. Weekly consultation with university staff.

### **CSP 740. Practicum (1-6) Cr/NC**

Prerequisite: Counseling and School Psychology 601.

Supervised experience in counseling or school psychology. May be repeated with new content. See Class Schedule for specific content. Maximum credit nine units applicable to a master's degree in counseling.

### **CSP 741. Practicum: Group Counseling (3) Cr/NC**

Prerequisite: Counseling and School Psychology 670.

Supervised experience in group counseling and career planning. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **CSP 744. Cognitive Assessment – Intervention (3)**

Prerequisites: Counseling and School Psychology 641 and 644.

Theories underlying cognitive assessment. Implications for school learning. Collaborative consultation with teachers regarding instructional and academic interventions in multicultural schools. Administration and interpretation of cognitive assessment techniques used by school psychologists. Design, implementation, and evaluation of interventions. Effective report writing.

### **CSP 745. Program Development and Evaluation in Pupil Services (3)**

Prerequisites: Counseling and School Psychology 620, 730, and Education 690.

Development, management, and evaluation of pupil services in schools. Analysis of models and practice in planning.

### **CSP 746. Dynamic Assessment and Mediated Interventions (3)**

Three hours of clinical practice.

Prerequisites: Counseling and School Psychology 610D and 744.

Advanced theoretical and practical study of human learning and thinking. Application of paradigms of dynamic assessment, cognitive modifiability, mediated learning, and interventions to assessment-based interventions for learning. Skills to identify cognitive functions and mediating interactions.

### **CSP 750. Advanced Seminar and Practicum: Individual Counseling (3-6) Cr/NC**

Prerequisite: Counseling and School Psychology 740.

Supervised experience in individual counseling and study of problems, issues, and research. May be repeated. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree in counseling.

### **CSP 752. Seminar and Practicum: School Psychology (3-6) Cr/NC**

Nine hours of practicum for three units.

Prerequisites: Counseling and School Psychology 730, credit or concurrent registration in Counseling and School Psychology 642A-642B.

School psychology in multicultural school settings; implications for standard and innovative school psychology practices.

### **CSP 755. Practicum I: Marriage and Family Therapy (3) Cr/NC**

Prerequisites: Counseling and School Psychology 625 and 625L.

Supervised experience in relationship and family therapy under live supervision. Application of assessment methods and basic techniques. Clinical hours may be counted toward 500 clinical hours and marriage and family licensure eligibility requirement. May be repeated for additional clinical training experience. Maximum credit three units applicable to a master's degree.

### **CSP 760. Advanced Seminar in School Psychology (3)**

Prerequisites: Counseling and School Psychology 621, 710A, and 752.

Study of selected areas in school psychology which culminates in a written project with emphases on research, problems and/or issues. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **CSP 762. Prevention, Crisis Intervention, and Conflict Resolution in Schools (3)**

Prerequisites: Counseling and School Psychology 622B and 662.

Examination, design, implementation, and evaluation of wellness, prevention, intervention, and other mental health programs at individual, group, and system levels in schools. Focus on roles for school support personnel in promoting wellness and resiliency and intervening in school settings.

### **CSP 765. Practicum II: Marriage and Family Therapy (3) Cr/NC**

Prerequisite: Counseling and School Psychology 755.

Advanced supervised experience in relationship and family therapy under live supervision. Advanced techniques and treatment planning. Clinical hours may be counted toward 500 clinical hours and marriage and family licensure eligibility requirement. May be repeated with additional clinical training experience. Maximum credit three units applicable to a master's degree.

### **CSP 770. Advanced Seminar in Counseling (3)**

Prerequisite: Advancement to candidacy or counseling experience.

Selected areas in counseling culminating in a written project with emphasis on research, problems, and issues. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **CSP 780. Internship (2-12) Cr/NC**

Prerequisite: Counseling and School Psychology 730.

Supervised internship experience in counseling or school psychology activities. Application to take the course must be made early during the preceding semester. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum credit 24 units applicable to the specialization in school psychology.

### **CSP 785. Marriage and Family Therapy Traineeship (1-10) Cr/NC**

Prerequisite: Counseling and School Psychology 755.

Community-based clinical marriage and family therapy experience, with AAMFT approved supervisor or equivalent. Individual and group supervision at site and on campus. Clinical hours may be counted toward 500 clinical hours and marriage and family therapy licensure eligibility requirement. May be repeated with new content. Maximum credit ten units.

### **CSP 798. Special Study (1-6) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree. May involve fieldwork.

### **CSP 799A. Thesis (3) Cr/NC/RP**

Prerequisite: An officially appointed thesis committee and advancement to candidacy.

Preparation of a thesis for the Master of Science degree in counseling.

### **CSP 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

### **CSP 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Educational Leadership

In the College of Education

**OFFICE: North Education 166**  
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## Faculty

Larry E. Frase, Ed.D., Professor of Educational Leadership,  
Chair of Department  
Raymond F. Latta, Ph.D., Professor of Educational Leadership,  
Emeritus  
Ian R. Pumpian, Ph.D., Professor of Educational Leadership  
William A. Streshley, Ph.D., Professor of Educational Leadership,  
Emeritus  
Margaret R. Basom, Ph.D., Associate Professor of Educational  
Leadership  
Carolyn J. Downey, Ph.D., Associate Professor of Educational  
Leadership  
Diane M. Yerkes, Ed.D., Associate Professor of Educational  
Leadership, Emeritus  
Lionel R. Meno, Ed.D., Adjunct Faculty of Educational Leadership,  
Dean of the College of Education

## Courses Acceptable on Master's Degree Programs in Education (EDL)

### UPPER DIVISION COURSE

#### **EDL 596. Topics in Educational Leadership (1-3)**

Selected problems in educational leadership. 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

#### **EDL 600. Principles of Educational Administration (3)**

Prerequisites: Admission to Preliminary Administrative Services Credential program; classified graduate standing; Educational Leadership 610, 630, 652, 655, or approval of department.

Educational administration and leadership as a profession. Related organizational concepts and management theories. Principles and competencies for leadership and administrative practice as each relates to the aspiring school administrator. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 600.)

#### **EDL 610. Educational Leadership in PreK-12 Educational Organizations (3)**

Prerequisites: Admission to Preliminary Administrative Services Credential program and classified graduate standing.

Concepts and techniques of leadership, analysis of factors and practice in procedures of individual and group leadership as applied to preK-12 educational environments. (Formerly offered as Administration, Rehabilitation and Postsecondary Education 610.)

#### **EDL 630. Curriculum Design and Management (3)**

Prerequisites: Admission to Preliminary Administrative Services Credential program and classified graduate standing.

Administrator's role in curriculum leadership and management in elementary, middle, and secondary school; emphasis on interrelationships within levels; supervision of curricular and supervisory personnel; use of research in curriculum development and implementation. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 630.)

#### **EDL 652. Seminar in Instructional Improvement and Evaluation (3)**

Prerequisites: Admission to Preliminary Administrative Services Credential program; classified graduate standing; Educational Leadership 610, 630, or approval of department.

Improvement of instruction through application of principles and practices in assessment of teaching competency; development of teaching profiles; leadership skills in working with teachers to improve performance. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 652.)

#### **EDL 655. Administering Educational Organizations (3)**

Prerequisites: Admission to Preliminary Administrative Services Credential program; classified graduate standing; Educational Leadership 610, 630, 652, or approval of department.

Principles and practices in the administration and leadership of elementary, middle, junior high, and secondary schools and other educational organizations. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 655.)

#### **EDL 660. Field Experience in Educational Leadership (1-6) Cr/NC/RP**

Prerequisites: Nine units of required coursework in educational leadership; classified graduate standing in the educational administration program.

Supervised field experience in schools or other educational settings. Monthly sessions with university faculty. Application to take this course must be made during preceding semester. Maximum credit 10 units of which 4 units are applicable to a master's degree. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 660.)

#### **EDL 680. Seminar in PreK-12 Educational Administration (2-6)**

Prerequisite: Consent of instructor.

Educational administration in preK-12 schools and school districts. Field experience when appropriate. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. (Formerly offered as Administration, Rehabilitation and Postsecondary Education 680.)

#### **EDL 696. Advanced Topics in Educational Leadership (1-3)**

Prerequisite: Twelve units in educational leadership.

Intensive study in specific areas of educational leadership. May be repeated with new content. See Class Schedule for specific content. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

#### **EDL 707. Educational Law and Finance (3)**

Prerequisites: Completion of a graduate degree and approval of department.

Legal and financial aspects of educational administration including implications for policy formulation in the areas of personnel, instruction, and resource management. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 707.)

### **EDL 720. Human Resource Development in PreK-12 Educational Organizations (3)**

Prerequisites: Completion of a graduate degree and approval of department.

Human resource management in preK-12 educational administration including selection and evaluation of staff, contract management, and staff development. Personnel managerial styles, staff leadership, and motivation techniques as to morale and productivity. Analysis of educational personnel systems and employee assistance programs. (Formerly offered as Administration, Rehabilitation and Postsecondary Education 720.)

### **EDL 727. Emerging Issues in Educational Leadership (3)**

Prerequisites: Completion of a graduate degree and approval of department.

Identification and analysis of emerging local, national, and international issues impacting preK-12 educational organizations. (Formerly offered as Administration, Rehabilitation and Postsecondary Education 727.)

### **EDL 740. Advanced Seminar in PreK-12 Educational Leadership and Administration (3)**

Prerequisite: Consent of instructor.

Study of a selected area in preK-12 administration in educational organizations, such as educational law, finance, supervision, personnel procedures, etc. May be repeated with new content. See Class Schedule for specific content. Maximum credit nine units applicable to a master's degree. (Formerly offered as Administration, Rehabilitation and Postsecondary Education 740.)

### **EDL 747. Leadership in Diverse PreK-12 Educational Organizations (3)**

Prerequisites: Completion of a graduate degree and approval of department.

Current theory and practice in meeting needs of diverse learners. Leadership and administration of preK-12 educational organizations as political, complex systems requiring consensus-building dynamics in a multicultural society. (Formerly offered as Administration, Rehabilitation and Postsecondary Education 747.)

### **EDL 755. Governance and Policy Development in PreK-12 Learning Organizations (3)**

Prerequisites: Completion of a graduate degree and approval of department.

Development of preK-12 educational policy and impact of politics in governance and administration; control functions of federal, state, and local agencies; influence of lay citizens and special interest groups; roles of judiciary, employee organizations and students. (Formerly offered as Administration, Rehabilitation and Postsecondary Education 755.)

### **EDL 760. Internship in PreK-12 Educational Organizations (2-6) Cr/NC/RP**

Prerequisite: Consent of instructor.

Internship for prospective preK-12 educational administrators. Application to take this course must be made in the preceding semester by preregistration with the credential program coordinator. Released time may be required. May be repeated. Maximum credit 12 units applicable to the Professional Administrative Services Credential. (Formerly offered as Administration, Rehabilitation and Postsecondary Education 760.)

### **EDL 798. Special Study (1-6) Cr/NC/RP**

Prerequisite: Consent of staff; to be arranged with department chair and instructor. May involve fieldwork.

Individual study. Maximum credit six units applicable to a master's degree.

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# Educational Technology

In the College of Education

**OFFICE: North Education 280**

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## Faculty

Donn C. Ritchie, Ph.D., Professor of Educational Technology,  
Chair of Department

Brockenbrough S. Allen, Ph.D., Professor of Educational Technology

Bernard J. Dodge, Ph.D., Professor of Educational Technology

Allison Rossett, Ed.D., Professor of Educational Technology

Farhad Saba, Ph.D., Professor of Educational Technology

Marcie J. Bober, Ph.D., Associate Professor of Educational  
Technology

Robert P. Hoffman, Ph.D., Associate Professor of Educational  
Technology

Philip Molebash, Ph.D., Assistant Professor of Educational  
Technology

Minjuan Wang, Ph.D., Assistant Professor of Educational Technology

## Courses Acceptable on Master's Degree Program in Education (EDTEC)

### UPPER DIVISION COURSES

#### **EDTEC 532. Production of Instructional Materials (3) I, II**

Six hours of activity.

Instructional media production for professionals in organizational settings such as hospitals, law offices, accounting firms, publishing companies. Use of web pages, video, presentation software, and data analysis tools for training. Not open to students in educational technology degree and certificate programs or to students with credit in Educational Technology 541.

#### **EDTEC 540. Educational Technology (3) I, II, S**

Six hours of activity.

Rationale, foundations, theories, careers, trends, and issues in educational technology. Implications of educational technology for instruction and information in schools, government, and corporations.

#### **EDTEC 541. Web-Based Multimedia Development (3) I, II, S**

One lecture and six hours of laboratory.

Prerequisite: Basic computer literacy.

Systems, aesthetic, and learning theories applied to design of web-based educational multimedia. Planning and prototyping digital media. Not open to students with credit in Educational Technology 532.

#### **EDTEC 544. Instructional Design (3) I, II**

One lecture and six hours of laboratory.

Prerequisites: Educational Technology 540 and 541. Meet department Writing Skills Requirement or complete Rhetoric and Writing Studies 503W with a grade of B+ or better.

Systematic design of products for education and training. Use of cognitive task analysis to determine instructional content. Development of instructional goals and product specifications. Rapid prototyping of instructional products.

#### **EDTEC 550. Introduction to Distance Education (3)**

Two lectures and three hours of laboratory.

Prerequisites: Educational Technology 540, 541, 544, or equivalent experience in the field.

Terminology, concepts, instructional strategies, and technologies of distance education. Designing, facilitating, and managing courses at a distance. Overview of social issues, historical perspectives, and current trends. Analyzing distant learner profiles, needs, and skills. Telecommunicating, instructing, interacting, and providing feedback.

#### **EDTEC 561. Advanced Web-Based Multimedia Development (3) I, II, S**

Six hours of activity.

Prerequisites: Educational Technology 540 and 541.

Two- and three-dimensional graphics, visualization, animation, digital video, sound, and virtual reality techniques. Research-based guidelines, design languages applied to development of interactive web-based learning systems.

#### **EDTEC 570. Advanced Teaching with Technologies (3) I, II**

Prerequisite: Educational Technology 470 or equivalent work experience.

Design of constructivist lessons and units using Internet resources. Use of visual organizing tools and databases for instruction and assessment. Tools for professional knowledge base organization and electronic portfolios.

#### **EDTEC 572. Technology for Course Delivery (3) I, II, S**

One lecture and six hours of laboratory.

Prerequisites: Educational Technology 540 and 541.

Use of technology to support planning, presenting and managing instructor-led courses.

#### **EDTEC 596. Topics in Educational Technology (1-3) I**

Selected problems in educational technology. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### GRADUATE COURSES

#### **EDTEC 640. Psychology of Technology-Based Learning (3)**

Six hours of activity.

Prerequisite: Educational Technology 544.

Principles of human learning and cognition applied to design and use of technology-based learning systems. Development of research-based guidelines for designing educational products and services.

#### **EDTEC 644. Advanced Instructional Design (3)**

Two lectures and three hours of laboratory.

Prerequisites recommended: Educational Technology 540 and 544.

Roles and theories associated with instructional design. Problem solving on current design issues. Needs assessment and product development for community based clients.

### **EDTEC 650. Distance Education (3)**

Two lectures and three hours of laboratory.

Prerequisites: Educational Technology 550 and 561. Recommended: Educational Technology 572.

Theories and models of tele-education at home, place of work and school. Design, development, and evaluation of instructor-led and learner-directed tele-lessons for integrated electronic dissemination systems. Social, economic and organizational context of learning at a distance.

### **EDTEC 653. Cyberculture and Learning Systems (3)**

One lecture and six hours of laboratory.

Prerequisite: Educational Technology 561.

Narrative, dramatic, artistic, and musical structures in design and analysis of dynamic learning systems.

### **EDTEC 670. Exploratory Learning Through Simulation and Games (3)**

One lecture and six hours of laboratory.

Prerequisites: Educational Technology 540 and 541.

Design, evaluation and use of simulations and games for education and training. Instructional applications of computer-based simulations, interactive fiction, board games and role play.

### **EDTEC 671. Learning Environment Design (3)**

One lecture and six hours of laboratory.

Prerequisites: Educational Technology 544 and 561.

Advanced design of reusable learning objects; usability testing; learning management systems; interface design.

### **EDTEC 684. Management of Educational Technology (3)**

Six hours of activity.

Prerequisite recommended: Educational Technology 544.

Research reviewed and findings related to current practices. Management of instructional design and training projects and programs. Role of educational technology and training in organizations. Recent trends evaluated.

### **EDTEC 685. Informational and Instructional Technologies for Organizations (3)**

Six hours of workshop and activities.

Prerequisites: Educational Technology 540 and 541.

Organizational and informational systems that support instructional products and services. Individual, team, and organizational analyses. Incentives, feedback, coaching, job-aids, selection, knowledge management, and other performance improvement strategies.

### **EDTEC 700. Seminar in Educational Technology (1-3)**

Prerequisite: Educational Technology 540.

Selected areas, topics in educational technology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **EDTEC 775. Directed Internship in Educational Technology (2-6) Cr/NC**

Prerequisite recommended: Educational Technology 644.

Supervised internship in an educational or training setting. Application to take course must be made during preceding semester.

### **EDTEC 798. Special Study (1-6) Cr/NC/RP**

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

Individual study. May involve fieldwork. Maximum credit six units applicable to a master's degree.

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# Policy Studies in Language and Cross-Cultural Education

**OFFICE: Business Administration 248**  
**TELEPHONE: (619) 594-5155**  
**FAX: (619) 594-1183**

In the College of Education

## Faculty

Alberto M. Ochoa, Ed.D., Professor of Policy Studies in Language and Cross-Cultural Education, Chair of Department

Ruben W. Espinosa, Ph.D., Professor of Policy Studies in Language and Cross-Cultural Education

Russell L. Young, Ph.D., Professor of Policy Studies in Language and Cross-Cultural Education

Evangelina B. Jones, Ph. D., Associate Professor of Policy Studies in Languages and Cross-Cultural Education

James L. Rodriguez, Ph.D., Associate Professor of Policy Studies in Languages and Cross-Cultural Education

My Luong Tran, Ph.D., Associate Professor of Policy Studies in Language and Cross-Cultural Education

Karen Cadiero-Kaplan, Ph.D., Assistant Professor of Policy Studies in Language and Cross-Cultural Education (Graduate Adviser)

Alberto J. Rodriguez, Ph.D., Assistant Professor of Policy Studies in Language and Cross-Cultural Education

Cristina Alfaro, Ph.D., Clinical Professor of Policy Studies in Languages and Cross-Cultural Education

Ernesto Sanz, M.A., Clinical Professor of Policy Studies in Languages and Cross-Cultural Education

Irene Villanueva, Ph.D., Visiting Professor

## Courses Acceptable on Master's Degree Programs in Education (PLC)

### UPPER DIVISION COURSES

#### **PLC 553. Language Assessment and Evaluation in Multicultural Settings (3)**

Theories and methods of assessment and evaluation of diverse student populations including authentic and traditional models. Procedures for identification, placement, and monitoring of linguistically diverse students. Theories, models, and methods for program evaluation, achievement, and decision making.

#### **PLC 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

#### **PLC 600. Foundations of Democratic Schooling (3)**

Prerequisite: Consent of instructor.

Analysis of relationships among ideology, culture, and power in educational context; key concepts in critical pedagogy applied to programs, curricula, and school restructuring.

#### **PLC 601. Language Policies and Practices (3)**

Prerequisite: Consent of instructor.

Formal and informal policies related to education of linguistically diverse students at micro/macro level and in school contexts; analysis of bilingual and cross-cultural issues in cognition and literacy. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 653.)

#### **PLC 602. Cross-Cultural Context of School Communities (3)**

Prerequisite: Policy Studies in Language and Cross-Cultural Education 601.

Cultural competence values and behaviors; status equalization; and sociolinguistic repertoire within learning situations. How organizational policies and practices and diversity impact individuals and institutions.

#### **PLC 603. Community and Schools in a Diverse Society (3)**

Prerequisite: Policy Studies in Language and Cross-Cultural Education 602.

Linguistic and cultural diversity of school and community. Development of community sociocultural scan; home and school collaboration; effects of home and school collaboration on achievement; responsibility of parent caretaker, stakeholder for student success.

#### **PLC 612. Educational Ethnography in Multicultural Settings (3)**

Prerequisite: Policy Studies in Language and Cross-Cultural Education 601.

Theories, models, and techniques of ethnographic research as applied to classroom and community in multicultural settings, focusing on linguistic, paralinguistic, sociolinguistic and proxemic behaviors of teachers and students.

#### **PLC 613. Organizational Strategies and Professional Development for the Multicultural School Community (3)**

Prerequisite: Policy Studies in Language and Cross-Cultural Education 601.

Leadership and change strategies for designing and implementing instructional programs, professional development approaches, effective organizational school climate that promotes a democratic society and schooling.

#### **PLC 650. Bilingual/Cross-Cultural Curriculum Development and Practice (3)**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 600 and 601.

Theories of teaching models and curricula for multicultural contexts. Role of teachers as mediators of culture, language use and codes of power to promote biliteracy. Advanced concepts in critical pedagogy.

### **PLC 651. Multicultural Methods and Curriculum in Content Areas (1-3)**

Prerequisite: Policy Studies in Language and Cross-Cultural Education 601.

Theories, methods, and curricular strategies for teaching content and cognition in and through English and other languages in multicultural settings. Meets CLAD certificate requirement.

### **PLC 652. Multicultural Methods and Curriculum in Language Arts (3)**

Prerequisite: Policy Studies in Language and Cross-Cultural Education 650.

Theories, methods, and curricular strategies for teaching language arts and cognition in and through English and other languages in multicultural settings.

### **PLC 686. Seminar in Multicultural Education (1-6)**

Prerequisite: Consent of instructor.

Topics dealing with current issues in multicultural education. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **PLC 798. Special Study (1-6) Cr/NC/RP**

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

Individual study. May involve fieldwork. Maximum credit six units applicable to a master's degree.

### **PLC 901. Professional Portfolio I (1) Cr/NC**

Prerequisite: Admission to B/CLAD multiple or single subject credential.

Development of classroom portfolios, professional development in bilingual school communities.

### **PLC 902. Professional Portfolio II (1) Cr/NC**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 901 and admission to B/CLAD multiple or single subject credential.

Portfolio development: Components on reflective teaching; models for teaching approaches, strategies, and methodologies in all subject areas.

### **PLC 903. Bilingual Secondary Student Teacher Seminar (1-3) Cr/NC**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 924, 954, and concurrent registration in Policy Studies in Language and Cross-Cultural Education 964.

Planning and organizing instruction for Spanish/English bilingual and nonbilingual student teaching assignments. Focus on role of the bilingual teacher and discipline specific methods in English, ESL, mathematics, science, social science, and foreign language. Course taught in Spanish and/or English.

### **PLC 910. Teaching Mathematics to Bilingual Students (1-3)**

Prerequisite: Admission to B/CLAD multiple subject credential program.

Underlying learning theories for teaching mathematical concepts, computation, and problem-solving skills to bilingual students. Taught in Spanish.

### **PLC 911. Teaching Social Studies to Bilingual Students (1-3)**

Prerequisite: Admission to B/CLAD multiple subject credential program.

Conceptual approaches for teaching bilingual social studies curriculum, incorporating sociocultural characteristics of multicultural community, social concepts, and community social issues. Taught in Spanish.

### **PLC 912. Teaching Science to Bilingual Students (1-3)**

Prerequisite: Natural Science 412A or 412C or 412D.

Strategies for development of process skills and concept acquisition. Methodology for teaching activity-oriented science class in English and Spanish. Taught in Spanish.

### **PLC 915. Teaching and Learning in the Content Area: English Language Development/SDAIE (1-3)**

Prerequisites: Education 451, Policy Studies in Language and Cross-Cultural Education 401, and admission to B/CLAD or CLAD single subject credential program.

Teaching strategies in content specific fields from second language acquisition perspective taken concurrently with student teaching. See Class Schedule for specific content. May be repeated with new content. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 914.)

A. Multiple Subjects

B. Single Subjects

### **PLC 923. Psychological Foundations of Education and Bilingual Students (3)**

Prerequisite: Admission to B/CLAD multiple subject credential program.

Major theories of learning and cognition as applied to bilingual students and their relation to child development, first and second language acquisition, and approaches to teaching in bilingual classroom. Taught in Spanish and English.

### **PLC 924. Behavioral and Psychological Aspects of Teaching in the Bilingual Classroom (1-4)**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 400; concurrent registration in Policy Studies in Language and Cross-Cultural Education 954 and 963; admission to the single subject bilingual emphasis program.

Bilingual learning theory as it affects adolescent growth, individualized instruction, classroom management and discipline, and methods of measuring and evaluating achievement. Taught in Spanish and English. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

### **PLC 931. Skills in Teaching Reading to Bilingual Elementary Students (1-3)**

Prerequisite: Admission to B/CLAD multiple subject credential program.

Teaching reading in English, including methods, strategies, assessment, materials, and techniques of transition for implementing reading programs in the bilingual classroom.

### **PLC 932. Teaching Spanish Language Arts to Bilingual Elementary Students (3)**

Prerequisite: Admission to B/CLAD multiple subject credential program.

Assessing language proficiency; selecting, designing, and evaluating learning experiences to develop Spanish and English language arts. Taught in Spanish.

### **PLC 933. Skills in Teaching Reading to Bilingual Secondary Students (3)**

Prerequisites: Upper division standing. Admission to single subject bilingual emphasis program.

Methods of teaching and diagnosing reading skills in Spanish and English, including ESL methods and individualized instruction. Transition skills. Taught in Spanish.

### **PLC 953. Language Development in Bilingual Secondary Classrooms (3)**

Prerequisite: Admission to B/CLAD single subject credential.

Political, sociocultural, and linguistic aspects of language development in bilingual secondary classrooms. Taught in English and Spanish.

**PLC 954. Classroom Organization for Democratic Teaching (1-4)**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 400; concurrent registration in Policy Studies in Language and Cross-Cultural Education 924 and 963; admission to the single subject bilingual emphasis program.

Classroom organization and democratic processes of education for secondary classrooms; skills and knowledge for bilingual teachers in maintaining effective environments for student learning in the areas of teaching, discipline, management, and curriculum.

**PLC 960. Student Teaching Seminar for Bilingual Elementary Students (1-3) Cr/NC**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 923 and admission to B/CLAD multiple subject credential program.

Bilingual instructional practices, classroom management, curricula discipline, micro-teaching in Spanish and English, legal liability, and daily problems encountered in the bilingual classroom. Taught in English and Spanish. Maximum credit six units.

**PLC 961. Student Teaching for Bilingual Elementary Students (1-12) Cr/NC**

Prerequisite: Admission to B/CLAD multiple subject credential program. Student must provide own transportation to student teaching site.

Field experience at two grade levels in a multicultural setting and a bilingual elementary classroom; student teacher assumes responsibility for planning and instruction for specified time to comply with State requirements. Maximum credit 12 units.

**PLC 962. Student Teaching for Elementary Bilingual Students II (1-12) Cr/NC**

Prerequisite: Policy Studies in Language and Cross-Cultural Education 961.

Field experience in a multicultural setting or a bilingual elementary classroom. Maximum credit 12 units.

**PLC 963. Student Teaching for Bilingual Secondary Students I (3-4) Cr/NC**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 400; concurrent registration in Policy Studies in Language and Cross-Cultural Education 924 and 954; admission to the single subject bilingual emphasis program. Students must provide own transportation to student teaching site.

On-site, part-time experience to implement bilingual teacher competencies introduced in Policy Studies in Language and Cross-Cultural Education 515, 924, and 954.

**PLC 964. Student Teaching for Bilingual Secondary Students II (9-12) Cr/NC**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 924 and 963; concurrent registration in Policy Studies in Language and Cross-Cultural Education 903. Students must provide own transportation to student teaching site.

On-site, full-day experience in State approved bilingual and nonbilingual classes to implement teacher competencies as developed in the total professional sequence. Maximum credit 12 units.

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# Special Education

In the College of Education

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## Faculty

Eugene C. Valles, Ph.D., Associate Professor of Special Education,  
Chair of Department

Patricia T. Cegelka, Ed.D., Professor of Special Education,

Anne W. Graves, Ph.D., Professor of Special Education

Laura J. Hall, Ph.D., Professor of Special Education

Margie K. Kitano, Ph.D., Professor of Special Education,  
Associate Dean of the College of Education

Rena B. Lewis, Ph.D., Professor of Special Education,  
Associate Dean for Faculty Development and Research of the  
College of Education

José Luis Alvarado, Ph.D., Assistant Professor of Special Education  
(Graduate Adviser)

John R. Johnson, Ph.D., Assistant Professor of Special Education

Angela S. McIntosh, M.A., Assistant Professor of Special Education

## Courses Acceptable on Master's Degree Programs in Education (SPED)

### UPPER DIVISION COURSES

#### SPED 500. Human Exceptionality (3) I, II, S

Historical, philosophical, and legal aspects of special education that affect identification and programming for diverse learners with exceptionalities. Characteristics of individuals with special needs and implications for adapting living and learning environments. Meets special education mainstreaming requirement for all basic teaching credentials.

#### SPED 501. Typical and Atypical Learning Processes (3)

Prerequisites: Credit or concurrent registration in Special Education 500; concurrent registration in Special Education 502.

Theory, research, and processes in learning in relation to individuals with disabilities. Foundations of learning, development, and intervention.

#### SPED 502. Field Experiences in General and Special Education (1)

Three hours of observation/ participation per week.

Prerequisites: Concurrent registration in Special Education 501.

Observation and participation in general and special education classrooms and related school activities for students with disabilities

#### SPED 505. Educational Services for Students with Serious Emotional Disturbance (1)

Prerequisite: Admission to credential program.

Educational needs and services for students with serious emotional disturbance. Classroom interventions and procedures.

#### SPED 508. Characteristics and Identification of Students Who are Gifted and Talented (3)

Historical and theoretical foundations, alternative and critical perspectives, characteristics and needs, identification models for a diverse society.

#### SPED 510. Adapting Communication Systems for Students with Severe Disabilities (1)

Prerequisites: Admission to credential program.

Adaptations of communications and communication systems for students with disabilities. Educational strategies that special education teachers can use to augment classroom communications. Alternative approaches to communication for students with moderate/severe disabilities.

#### SPED 524. Characteristics of Students with Mild/Moderate Disabilities (3) I

Prerequisite: Special Education 500.

Historical and philosophical perspectives of programs related to students with mild/moderate disabilities. Research on educational programs, curricular approaches, and characteristics.

#### SPED 525. Characteristics of Students with Moderate/Severe Disabilities (3) I

Prerequisite: Special Education 500.

Historical and philosophical perspectives of programs related to students with moderate/severe disabilities. Research on educational programs, curricular approaches, and characteristics with emphasis on services in context of school reform.

#### SPED 526. Characteristics and Education of Students with Physical, Health, and Sensory Impairments (3)

Prerequisite: Special Education 500.

Historical and philosophical perspectives, characteristics, needs, and supports for individuals with physical, health, and sensory impairments in educational, home, and community settings. Implications of health concerns for programming.

#### SPED 527. Special Education in a Pluralistic Society (3)

Prerequisite: Credit or concurrent registration in Special Education 500.

Historical and philosophical perspectives of cultural pluralism in special education and programs related to diverse students with disabilities. Research on curricular approaches and instructional needs. Sociocultural aspects related to disability, race, ethnicity, gender, and language.

#### SPED 528. Young Children with Disabilities and Their Families (3)

Prerequisite: Special Education 500.

Characteristics, needs, and educational programs and services for infants, toddlers, and preschoolers with disabilities and their families. Legislative requirements, models of service delivery, recommended practices, and family diversity.

#### SPED 529. Characteristics and Education of Students with Serious Emotional Disturbances (3) I

Prerequisites: Special Education 500 and 501.

Historical and philosophical perspectives of programs for students with emotional disturbances and behavior disorders, including review of research on student characteristics, educational programs, and curricular approaches.

#### SPED 534. Classroom Assessment of Students with Mild/Moderate Disabilities (3)

Prerequisite: Admission to credential program.

Classroom assessment in general and special education for students with mild/moderate disabilities. Curriculum-based data collection strategies. Influences of cultural and linguistic diversity, and implications for curricular and instructional adaptations.

#### SPED 553. Behavioral Strategies and Supports for Students with Disabilities (3)

Prerequisites: Special Education 500 and 501.

Positive behavioral supports for students with disabilities in general and special education settings. Current theories and programs in functional assessment and behavioral change. Applications in educational and community environments with diverse students.

**SPED 560. Applications of Technology for Individuals with Disabilities (3) I, II**

Prerequisite: Special Education 500.

Educational applications of current technologies for learners with disabilities. Selection, modification, and classroom use of technologies to improve or bypass physical, sensory, communicative, learning, and social limitations.

**SPED 570. Individualized Special Education Program Plans (1)**

Prerequisite: Concurrent registration in Special Education 980.

Components of individualized education program plans, individualized family service plans, and individualized transition plans. Goals, objectives, and outcomes for program planning. Legal and ethical considerations.

**SPED 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**

**SPED 605. Advanced Behavioral and Health Supports (1)**

Prerequisite: Admission to Level II credential or M.A. program in special education or related area.

Advanced approaches to dealing with behavioral crises and health issues in classroom, to include working with mental health specialists and school nurses.

**SPED 634. Assessment: Students with Mild/Moderate Disabilities (2)**

Prerequisites: Special Education 524 and 534.

Assessment for instructional decision making including alternative data collection strategies, models for analysis and synthesis of assessment information, influences of cultural and linguistic diversity, and implications for instruction.

**SPED 635. Assessment: Early Childhood Special Education and Moderate/Severe Disabilities (3)**

Prerequisite: Admission to credential program.

Models of assessment emphasizing observation and interviewing, performance-based approaches, transdisciplinary teaming, family-professional collaboration, and adaptations for specific disabilities, cultural, and linguistic diversity. Communicating and using assessment data for individualized program planning.

**SPED 643. Educational Programs and Services for Young Children with Disabilities (3)**

Prerequisite: Admission to credential program and concurrent registration in approved fieldwork.

Developing, implementing, and evaluating educational programs and services for young children with disabilities. Selecting and adapting curriculum and instructional approaches, collaborating with families from diverse cultural/linguistic backgrounds, and monitoring program effectiveness. Both Special Education 643A and 643B required. Maximum credit six units.

- A. Preschoolers
- B. Infants/Toddlers

**SPED 644. Working with Gifted and Talented Students and Their Families (3)**

Research-based instructional strategies to promote higher level and creative thinking; counseling approaches; services to families; issues in differentiating learning experiences.

**SPED 645. Issues in Curriculum and Instruction for Students with Severe Handicaps (3)**

Prerequisite: Special Education 525.

Design and implementation issues of instructional programs for students with severe handicaps; approaches which foster school and community integration and active family involvement will be analyzed.

**SPED 646. Educational Adaptation for Ethnolinguistically Diverse Students with Mild/Moderate Disabilities (3)**

Prerequisites: Special Education 527 and 634.

Data-based approaches to developing and selecting programs and establishing procedures for monitoring and evaluating progress of students with mild/moderate disabilities from diverse backgrounds.

**SPED 647. Special Education Adaptations of Basic Skills Instruction (3)**

Prerequisites: Admission to credential program and concurrent registration in Special Education 970.

Adaptations in curriculum and instruction in language development, reading, language arts, and mathematics for students with disabilities. Current research and practices related to linguistic, cultural, and ability differences.

**SPED 648. Advanced Special Education Adaptations (3)**

Prerequisites: Special Education 647 and concurrent registration in Special Education 980.

Advanced adaptations in curriculum and instruction in content areas, study skills, organizational strategies, and social and transition skills. English-as-a-second language approaches for students with disabilities. Research and practices related to linguistic, cultural, and ability differences.

**SPED 649. Curriculum Models for Students Who Are Gifted and Talented (3)**

Prerequisite: Credit or concurrent registration in Special Education 644.

Theory, research, and practice in curriculum design and program implementation for developing high potential.

**SPED 650. Special Topics in Special Education (1-4)**

Prerequisites: Special Education 500, 501.

Instructional sequences (mini-courses) focusing on a single topic or competency dealing with special education. Topics differ each semester to adjust to current literature in the field, training needs, and resource availability. Maximum combined credit of nine units for Special Education 650A, 650B, 650C, 650D applicable to a master's degree. Offered in four categories:

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>A. Consultant Skills/<br/>Multidisciplinary Teams</li> <li>B. Affective and Social<br/>Development</li> </ul> | <ul style="list-style-type: none"> <li>C. Specialized Assessment<br/>Techniques</li> <li>D. Instructional Programming</li> </ul> |
|--|--|

**SPED 651. Legislation, Leadership, and Management for Special Education Services (3)**

Prerequisite: Admission to Level II credential or M.A. program in special education or related area.

Implementation of laws, regulations, and compliance requirements in special education. Leadership approaches for managing school related services within a multidisciplinary context.

**SPED 652. Parent Education and Staff Development in Special Education (3)**

Prerequisites: Special Education 500 and 501, and 15 additional units of coursework in special education.

Issues relating to and development of skills for working with parents and school staff to develop skills and competencies needed to optimize the educational progress of students with handicaps.

**SPED 653. Advanced Instruction, Collaboration, and Consultation in Special Education (3)**

Prerequisites: Admission to Level II credential or M.A. program in special education or related area.

Advanced instruction, collaboration, consultation skills, and strategies for working with students, teachers, paraprofessionals, school personnel, other service providers, parents, and representatives from the community.

### **SPED 654. Adapting Curriculum for Community Involvement and Skill Generalization (3)**

Prerequisite: Admission to Level II credential or M.A. program.

Designing and adapting curriculum to promote generalization of skills of individuals with moderate/severe disabilities for involvement across settings with a focus on community activities and organizations.

### **SPED 655. Leadership and Management in Early Childhood Special Education (3)**

Prerequisite: Admission to Level II credential or M.A. program.

Program development and leadership in early childhood education with emphasis on recommended practices, legal and legislative issues, staff and parent development, funding, policy, and program evaluation.

### **SPED 658. Gifted Students from Diverse Backgrounds (3)**

Designing programs that consider culture, ethnicity, economic background, language, gender, disability, sexual orientation, and underachievement.

### **SPED 660. Teaching Students with Physical, Sensory, and Health Impairments (3)**

Prerequisite: Level 1 coursework in physical and health impairments (PH1).

Design, development, and delivery of instructional programs and services for students with PH1 including curricular and instructional adaptations. Implementation of assistive/adaptive technology and augmentative communication. Facilitating participation and access in environments including educational and cultural implications of PH1

### **SPED 662. Communication and Collaboration in Special Education (1)**

Prerequisite: Admission to credential program and credit or concurrent registration in Special Education 980.

Communication and collaboration skills for working with teachers and other professionals, paraprofessionals, parents, and representatives from the community. Listening and questioning techniques, interpersonal processes, family systems and needs, conflict resolution, decision-making models, and team functions.

### **SPED 664. Issues Affecting Employment of Individuals with Severe Handicaps (3)**

Prerequisite: Special Education 525.

Transition from school special education programs into supported employment and community living: research issues, applied practices, and innovative strategies for enhancing integrated adult options.

### **SPED 677. Educational Management of Severe Behavior Disorders (3)**

Prerequisite: Special Education 553.

Nature and educational treatment of severe behavioral problems in students with disabilities. Review of research on effectiveness of various interventions and development of skills needed to implement appropriate strategies to evaluate, manage and treat these behaviors.

### **SPED 681. Advanced Studies in Special Education (3)**

Prerequisite: Special Education 524 or 525 or 528.

Educational theories, philosophies, research findings, issues and trends in area of exceptionality. Application of research to solution of educational problems. May be taken in each area of exceptionality:

- A. Mild/Moderate Disabilities
- B. Moderate/Severe Disabilities and Early Childhood

### **SPED 696. Advanced Topics in Special Education (3)**

Prerequisite: Twelve units in special education.

Intensive study in specific areas of special education. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### **SPED 771. Directed Internship: Special Education (1-4) Cr/NC**

Prerequisite: Permission of graduate adviser. Application to be made during previous semester.

Extensive daily participation or teaching in public schools and preparation for teaching of exceptional individuals. May be repeated with new content. Maximum credit six units applicable to a master's degree.

### **SPED 798. Special Study (1-6) Cr/NC/RP**

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

Individual study. May involve fieldwork. Maximum credit six units applicable to a master's degree.

### **SPED 970. Practicum: Students with Disabilities in General and Special Education (2-4) Cr/NC**

Fifteen hours of observation/participation per week.

Prerequisites: Special Education 502 and consent of credential adviser.

Participation in general and special education programs for students with disabilities; supervised by a special educator. Integration and application of skills and knowledge gained in credential coursework. May be repeated in other specialties. Maximum credit four units applicable to each credential program. May be taken only once for credit.

- A. Mild/Moderate Disabilities
- B. Moderate/Severe Disabilities
- C. Physical/Health Impairments
- D. ECSE: Infant/Preschool

### **SPED 971. Internship Practicum: Students with Disabilities in General and Special Education (3-4) Cr/NC**

Two hours per unit.

Participation in general and special education internship programs for students with disabilities; supervised by a special educator. Integration and application of skills and knowledge gained in credential coursework including classroom organization, management, assessment, instruction, and legal requirements.

### **SPED 975. Professional Development Planning in Special Education (1) Cr/NC**

Prerequisite: Completion of Level I credential in special education.

Planning for professional development including demonstration of implementation of policies and practices appropriate for providing services to students with disabilities.

### **SPED 980. Advanced Practicum in Special Education (1-12) Cr/NC**

Prerequisite: Consent of credential adviser.

Culminating practicum for Education Specialist Credential (Level 1). Participation supervised by a special educator. May be repeated in other specialties.

- A. Mild/Moderate Disabilities
- B. Moderate/Severe Disabilities
- C. Physical/Health Impairments
- D. ECSE: Infant/Preschool

### **SPED 985. Professional Development: Reflections on Practice (1) Cr/NC**

Prerequisite: Completion or concurrent registration in Level II coursework.

Review of Level II: Professional Clear Induction Plans (PCIP); engage in reflective practice including goal setting; prepare portfolio with entries representing Level II courses and experiences.

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# Teacher Education

In the College of Education

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## Faculty

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Diane K. Masarik, Ph.D., Assistant Professor of Teacher Education  
Tan T. Phan, Ph.D., Assistant Professor of Teacher Education  
Donna L. Ross, Ph.D., Assistant Professor of Teacher Education

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## Courses Acceptable on Master's Degree Programs in Education (TE)

### UPPER DIVISION COURSES

#### TE 511. Assessment in Mathematics Education (3)

Techniques to assess and develop students' mathematical understanding. For use by elementary and secondary classroom teachers and mathematics education specialists.

#### TE 526. Teaching the Special Child in the Regular Classroom (2)

Prerequisite: Teaching credential or admission to multiple or single subject credential programs.

Knowledge, skills, and instructional programs for teaching handicapped students in the regular classroom. Meets the mainstreaming requirements for the California Multiple Subject credential (clear). Not open to students with credit in Special Education 550, Teaching the Special Child in the Regular Classroom.

#### TE 530. Children's/Adolescents' Literature (3) I, II

Survey of children's/adolescents' literature and its incorporation into the classroom curriculum.

#### TE 596. Topics in Teacher Education (1-3 or 6) RP\* I, II

Designed to meet the needs of individuals or groups of teachers who wish to develop or continue the study of some problem. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum six units of 596 and 696 applicable to a 30-unit master's degree.

\*Specified sections.

### GRADUATE COURSES

#### TE 600. Curriculum Development in Education (3)

Prerequisite: Consent of instructor.

Advanced study of the research in curriculum development, construction and evaluation.

#### TE 604. Advanced Problems in Instruction (3)

Prerequisites: Teaching experience and consent of instructor.

Scientific research and philosophical principles which underlie school instruction.

### **TE 605. Innovations in Instruction (1-3)**

Prerequisite: Teaching experience.

Exploration of innovative instructional practice in the public and private schools, with emphasis on innovative teaching strategies. An evaluation of the motivational effect and structural validity of promising instructional practices. See Class Schedule for specific content. Maximum credit three units applicable to a master's degree.

### **TE 607. Seminar in Research in Curricular Problems (1-3)**

Prerequisites: Consent of the Director of the School of Teacher Education and instructor.

Individual study by graduate students who have demonstrated exceptional ability. Maximum credit three units applicable to a master's degree.

### **TE 610A. Seminar in Mathematics Education – Elementary School (3)**

Prerequisite: Consent of instructor.

Factors affecting the elementary school mathematics curriculum; recent trends and current research in the teaching of elementary school mathematics.

### **TE 610C. Seminar in Science in Elementary Education (3)**

Prerequisite: Consent of instructor.

Advanced study of the problems of teaching science in the elementary school with emphasis on the literature of science education.

### **TE 626. Advanced Educational Psychology (3)**

Prerequisite: Teacher Education 923 or valid teaching credential.

Advanced study of the research in educational psychology and its application to learning and human growth.

### **TE 630. Seminar in Reading Education (3)**

Prerequisite: Education 690.

Advanced study of trends in reading instruction. Topics include developmental sequences in reading skills and abilities, reading in the content fields, individual differences and interests. Students will develop individual projects or problems.

### **TE 631. Seminar in Language Arts (3)**

Advanced study of problems in teaching language arts. The study of the scientific research and application in the field.

### **TE 633. Leadership in Literacy Education (1)**

Prerequisite: Concurrent registration in Teacher Education 736.

Planning, presenting, and evaluating professional development activities in literacy education for teachers at the K-12 level.

### **TE 634. Seminar in Research Investigations in Reading and Language Arts (4)**

Prerequisite: Consent of instructor.

Emphasis on interpreting, evaluating, conducting, and implementing findings of research and evaluation in reading and language arts.

### **TE 635. Assessment of Reading and Language Arts (3)**

Two lectures and two hours of activity.

Prerequisites: Valid teaching credential; course in methods and materials for teaching reading.

Theoretical knowledge and practical skill in assessing reading and language arts using both formal and informal measures focusing on grades K-3.

### **TE 636. Advanced Assessment of Reading and Language Arts (3)**

Prerequisites: Teacher Education 635; valid teaching credential; course in methods and materials for teaching reading.

Acquisition and assessment of personal literacy as supported throughout an individual's lifetime; supervised experience using assessment materials. Formal and informal literacy measures in grades 4-12.

### **TE 637. Instructional Strategies for Reading and Language Arts (4)**

Three lectures and two hours of activity.

Prerequisites: Teacher Education 635 and 636.

Supervised teaching experience utilizing instructional activities in individual and small group settings.

### **TE 638. Topics in Reading Education (1-6)**

Prerequisite: California Teaching Credential.

A variety of instructional sequences (mini-courses), each focusing on a single topic or competency dealing with reading instruction. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **TE 639. Literacy and Language (3)**

Prerequisite: Teacher Education 930 or 933.

Theories of literacy and methods for developing literacy in language, reading and writing. Instructional methods and assessment techniques for children and adults.

### **TE 640. Planning for Teaching and Assessment in Writing (3)**

Prerequisite: Teaching experience.

Comprehensive writing instruction in context of the interactive language arts. Development of plans for curriculum and instruction in diverse classrooms. Examination of multiple assessments and how they inform instruction in K-12 classrooms.

### **TE 646. Seminar in Educational Measurement (3)**

Problems in educational testing. Emphasis on construction, administration and validation of teacher-made tests.

### **TE 651. History of Social Studies Reform (3)**

Prerequisite: Graduate standing.

History and current status of social studies curricula in American schools, K-12. Emphasis on issues, controversies, competing philosophies, historical trends, and applications.

### **TE 652. Change in Education (3)**

Prerequisite: Valid teaching credential.

Examination of the process of change in education, analysis of recent major changes and study of techniques for effecting change.

### **TE 654. Issues in Social Studies Education (3)**

Prerequisite: Graduate standing.

Issues of theory, research, and practice in social studies including dilemmas of social studies definition and practice; theory and research in teaching history and social sciences; teachers, texts, and classroom discourse; technology; recent reform efforts; classroom applications.

### **TE 655. Sociocultural Foundations of American Education (2 or 3)**

Prerequisite: Admission to teacher education.

Historical and philosophical nature of American schools as it relates to equity, pedagogy, and curriculum. Issues of equity, race, culture, gender, ethnicity, sexual preference, and social issues as they impact the classroom.

### **TE 656. Struggle for American Curriculum (3)**

Prerequisite: Graduate standing.

History and current status of American education with focus on curriculum. Emphasis on issues, controversies, and alternative philosophies.

### **TE 657. Philosophy of Education (3)**

Advanced study of philosophical backgrounds of educational thought; a study of comparative philosophies, and an analysis of selected current trends and problems.

**TE 660. Early Literacy and Early Intervention in Reading Recovery® (3)**

Prerequisites: Admission to reading recovery program and concurrent registration in Teacher Education 662 and 664.

Theoretical foundations underlying various aspects of reading and writing processes, early reading difficulties, oral language development and acquisition, early research and subsequent development of reading recovery.

**TE 661. Theoretical Foundations of Literacy, Language, and Learning in Reading Recovery® (3)**

Prerequisites: Admission to reading recovery program and concurrent registration in Teacher Education 663 and 665.

Theories about teaching and learning, reading and writing process, language development, comprehension, issues of literacy and culture, phonemic and phonological awareness, and Clay's theory.

**TE 662. Clinical Foundations of Reading Recovery® I (3)**

Prerequisites: Admission to reading recovery program and concurrent registration in Teacher Education 660 and 664.

Develop expertise assessing and observing children, develop expertise in teaching children at risk of reading failure, and examine teacher leader role as teacher of reading recovery teachers.

**TE 663. Clinical Foundations of Reading Recovery® II (3)**

Prerequisites: Admission to reading recovery program, Teacher Education 662, and concurrent registration in Teacher Education 661 and 665.

Refinement of reading recovery teaching procedures based on theory and examination of teacher leader role as it pertains to teaching reading recovery teachers-in-training.

**TE 664. Practicum in Leadership for Reading Recovery® Teacher Leaders I (3)**

Prerequisites: Admission to reading recovery program and concurrent registration in Teacher Education 660 and 662.

Reading recovery as a system intervention to include multiple roles of teacher leader, teacher education, organization and implementation, guidelines and rationales of reading recovery, and educational change.

**TE 665. Practicum in Leadership for Reading Recovery® Teacher Leaders II (3)**

Prerequisites: Admission to reading recovery program, Teacher Education 664, and concurrent registration in Teacher Education 661, 663.

Reading recovery as a system intervention to include teacher education, organizational and implementation issues, guidelines and rationales of reading recovery, educational change, and role of teacher leader as researcher.

**TE 696. Selected Topics in Teacher Education (1-3)**

Prerequisite: Valid teaching credential.

Intensive study in specific areas of teacher education. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit six units of any 596 or 696 offered by the College of Education on a master's degree.

**TE 736. Field Experience as a Reading Specialist (2)**

Prerequisites: Eighteen units of core courses. Concurrent registration in Teacher Education 633.

Individually designed practicum for the reading specialist.

**TE 790. Seminar in Teacher Education (3)**

Prerequisite: Advancement to candidacy.

Intensive consideration of selected topics of current importance in teacher education. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**TE 798. Special Study (1-6) Cr/NC/RP**

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

Individual study. May involve fieldwork. Maximum credit six units applicable to a master's degree.

**TE 902. Classroom Management Skills (1)**

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.

**TE 903. Secondary School Student Teaching Seminar (1-3) Cr/NC**

Prerequisites: Teacher Education 922, 933, 954, 963. To be taken concurrently with Teacher Education 964.

To plan and organize instruction in relation to all competencies acquired and to be implemented in an on-site, full-time student teaching assignment. May be repeated with new content. See Class Schedule for specific content. Maximum credit three units.

**TE 910A. Teaching Mathematics in the Elementary School (1-3)**

Prerequisite: Admission to multiple subject credential program, education specialist credential program, or possession of a teaching credential.

Instructional methods for development of children's conceptual understanding, computational, and problem-solving skills in mathematics, including use and development of materials and programs.

**TE 910B. Teaching Social Studies in the Elementary School (1-3)**

Prerequisite: Admission to multiple subject credential program or possession of a teaching credential.

Developing curriculum, principles and materials of instruction, including instructional media and participation in elementary social studies education.

**TE 910C. Teaching Science in the Elementary School (1-3)**

Prerequisite: Admission to multiple subject credential program or possession of a teaching credential.

Developing research-based science curriculum, principles and materials of instruction, including instructional media and participation in elementary science education.

**TE 914. Teaching and Learning in the Content Area: Major (3)**

Prerequisite: Admission to teacher education credential program.

Teaching strategies in content specific fields of study taken concurrently with student teaching. May be repeated with new content. See Class Schedule for specific content.

**TE 922. Behavioral and Psychological Aspects of Teaching (1-4)**

Prerequisite: Admission to single subject credential program. To be taken concurrently with Teacher Education 954 and 963.

Teacher competencies as they relate to learning theories, adolescent growth, self-assessment, measurement and evaluation. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

**TE 923. Psychological Foundations of Education (1-3)**

Prerequisites: Psychology 101 and admission to multiple subject credential program.

Implementing learning process through interactive skills, using instructional principles to facilitate learning and changes in behavior and techniques used in assessing instruction and pupil growth.

### **TE 930. Teaching Reading and Language Arts in the Elementary School (1-6)**

Prerequisite: Admission to multiple subject credential program, education specialist credential program, or possession of a teaching credential.

Selecting, designing, and evaluating appropriate learning experiences to assure children's growth in reading and language arts. Includes nature of reading and language arts as a human behavior, various approaches, materials, and techniques used in teaching reading and language arts. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

### **TE 933. Teaching of Reading in the Secondary School (3)**

Teacher competencies as they relate to the teaching of reading/writing and diagnosing needs in the content areas. For students completing a credential at SDSU, this course must be taken concurrently with enrollment in first or second semester single subject credential program.

### **TE 950. Community Study Skills (1-2)**

Two to 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.

### **TE 954. Humanistic and Social Aspects of Teaching (1-4)**

Prerequisite: Admission to single subject credential program and concurrent registration in Teacher Education 922 and 963.

Teacher competencies as they relate to values, awareness, self-concept, rights and responsibilities. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

### **TE 960. Basic Student Teaching Seminar (1-2) Cr/NC**

Prerequisites: Admission to multiple subject credential program and concurrent registration in Teacher Education 965.

Discussion of immediate problems in student teaching with emphasis on children's growth and development.

### **TE 961. Advanced Student Teaching Seminar (1-2) Cr/NC**

Prerequisites: Satisfactory completion of Teacher Education 960, 965; and concurrent registration in Teacher Education 966.

Discussion of immediate problems in student teaching with emphasis on the influence of philosophical, social and cultural factors on learning.

### **TE 963. Secondary School Student Teaching I (1-6) Cr/NC/RP**

Prerequisite: Admission to single subject credential program. To be taken concurrently with Teacher Education 922 and 954. Teacher Education 933 is highly recommended to be taken at this time. Student must provide own transportation to student teaching site.

On-site, part-time experience to implement teacher competencies developed in Teacher Education 922 and 954. Maximum credit six units.

### **TE 964. Secondary School Student Teaching II (1-12) Cr/NC/RP**

Prerequisites: Teacher Education 922, 933, 954, 963. To be taken concurrently with Teacher Education 903. Student must provide own transportation to student teaching site.

On-site, full-day experience to implement teacher competencies as developed from the total professional sequence. Maximum credit twelve units.

### **TE 965. Basic Student Teaching in Elementary Schools (1-12) Cr/NC**

Prerequisites: Admission to multiple subject credential program and concurrent registration in Teacher Education 960.

Day-to-day teaching experiences including selected instructional activities for which a teacher in a classroom is normally responsible.

### **TE 966. Advanced Student Teaching in Elementary Schools (1-12) Cr/NC**

Prerequisites: Satisfactory completion of Teacher Education 960, 965, and concurrent registration in Teacher Education 961.

Teaching experiences including all the instructional activities for which a teacher in a classroom is normally responsible.

### **TE 967. Elementary School Student Teaching (15) Cr/NC (Offered at IVC only)**

Prerequisites: Admission to multiple subject credential program and concurrent registration in Teacher Education 960 and 961.

On-site, full-day teaching experiences. Two consecutive eight week assignments at two different broad levels of schooling. Each eight week assignment will provide typical responsibilities of teachers through a graduated series of experiences, such as class preparation, instruction of students, maintaining accurate student records, attending faculty meetings and parent conferences.

### **TE 968. Secondary School Student Teaching (15) Cr/NC (Offered at IVC only)**

Prerequisites: Admission to single subject credential program and concurrent registration in Teacher Education 903.

On-site, full-day teaching experiences. Two consecutive eight week assignments in single subject content area; one in junior high school and one in senior high school. Each eight week assignment will provide typical responsibilities of teachers through a graduated series of experiences, such as class preparation, instruction of students, maintaining accurate student records, attending faculty meetings and parent conferences.

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# Engineering

In the College of Engineering

**OFFICE: Engineering 203**  
**TELEPHONE: (619) 594-6061**  
**E-MAIL: info@engineering.sdsu.edu**

## Associateships

Graduate teaching associateships and graduate assistantships in engineering are available to a limited number of qualified students. Application forms and additional information may be secured from the chair of the appropriate department.

## General Information

The College of Engineering offers graduate study leading to the Ph.D. degree in engineering science/applied mechanics and Master of Science degrees in bioengineering, aerospace, civil, electrical, and mechanical engineering. The Ph.D. degree program is offered jointly with the University of California, San Diego. These curricula are designed to augment the student's undergraduate training by advanced study in one of the various fields of engineering. Recognizing the increasing importance in modern technology of the engineer-scientist team, San Diego State University has developed an academic program which offers to individuals holding a first degree in engineering, an opportunity to pursue advanced study in a specialized area of knowledge.

### Section I. Master's Degree Programs

## Master of Science Degree

### Admission to Graduate Study

All students must satisfy the general requirements for admission to the Graduate Division with classified graduate standing as described in Part Two of this bulletin. Candidates for admission to aerospace engineering, civil engineering, electrical engineering and mechanical engineering programs must have attained a grade point average of at least 2.85 (where A equals 4) in the last 60 semester (90 quarter) units of technical study attempted in the undergraduate degree program. In addition, applicants must have a bachelor's degree in a field of engineering appropriate to the field in which they desire to earn an advanced degree or in a field closely related thereto from an institution acceptable to the College of Engineering and the Graduate Division. If undergraduate preparation is deemed insufficient, the student will be required to take specified courses for the removal of the deficiency. Such courses may be in addition to the minimum of 30 units for the master's degree in engineering.

Students should contact their specific engineering department for GRE test requirements. Letters of recommendation for graduate study are helpful but optional. Such letters should accompany the completed application form.

In addition to submitting the University application available at <http://www.csumentor.edu>, the College of Engineering requires the following materials to be submitted as a complete package (refer to the appropriate department section for the address to submit the department admissions package as well as for additional information).

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores;
- (3) Personal statement of graduate program goals.

## Advancement to Candidacy

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

## Specific Requirements for the Master of Science Degrees

In addition to meeting the requirements for classified graduate standing as stated above, the student must satisfy the basic requirements for the master's degree as described in Part Two of this bulletin. With the approval of the appropriate department, the student working toward the master of science degree may elect either Plan A, requiring a thesis and an oral defense, or Plan B, requiring a comprehensive written examination.

Students shall arrange their coursework, in conference with their graduate adviser, according to the following requirements for the specific degree.

### Aerospace Engineering (Major Code: 09021)

**General information:** The Department of Aerospace Engineering and Engineering Mechanics offers graduate study leading to the Master of Science degree in aerospace engineering.

Students are encouraged to engage in thesis research or special study projects. Available areas of research include experimental, theoretical and computational aerodynamics and fluid mechanics, structural mechanics, fracture mechanics, composite structures, random vibrations, fluid-structure interactions, acoustics, and aircraft and spacecraft stability and control

Mail or deliver your complete admissions package to:

Professor S. Venkataraman, Graduate Adviser  
Department of Aerospace Engineering and  
Engineering Mechanics  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1308

**Specific requirements for the degree:** The student's program prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:

1. Twenty-one units of 600- and 700-numbered courses in aerospace engineering and/or engineering mechanics. At least one course must be outside the student's area of specialization.
2. Nine additional units of 500-, 600- and 700-numbered courses approved by the graduate adviser.

### Areas of Specialization in Aerospace Engineering and Engineering Mechanics

#### 1. Aerodynamics/Astronautics

AE 601	Computational Fluid Mechanics (3)
AE 612	Compressible Fluid Flow (3)
AE 620	Incompressible Aerodynamics (3)
AE 643	Laminar Flow (3)
AE 644	Turbulent Flow (3)

## 2. Structural Mechanics

EM 600	Seminar (1-3)
EM 603	Theory of Vibrations (3)
EM 611	Vibration of Elastic Solids (3)
EM 621	Theory of Elasticity (3)
EM 711	Structural Acoustics (3)
EM 724	Theory of Plates and Shells (3)
EM 727	Theory of Elastic Stability (3)

### Bioengineering (Major Code: 09051)

**General information:** The College of Engineering offers graduate study leading to the Master of Science degree in bioengineering. The M.S. in bioengineering seeks to provide both an advanced degree for students to enter the biotechnology and medical device industries as well as preparation for further study in bioengineering or medicine. Current areas of specialization are biomechanics, biomaterials, and bioinstrumentation.

Mail or deliver your complete admissions package to:

Dr. Karen May-Newman  
College of Engineering  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1323

**Specific requirements for the degree:** The student's program will be prepared in conference with and approved by the bioengineering graduate adviser. Students take a "core" of courses required for their specialization, and additional courses and electives as listed below. Students without prerequisites for the required courses may need to take additional courses outside the 30 units needed for the degree. The student's program of study must satisfy the following requirements:

1. Students select a specialization in biomechanics, biomaterials, or bioinstrumentation in consultation with the bioengineering graduate adviser.
2. A total of 30 units, consisting of five required 500-, 600-, and 700- level core courses (15-16 units) corresponding to the specialization, 6-9 units of Research (ME 797/EE 797), Thesis (ME 799A/EE 799A), or Special Study (ME 798/EE 798), and electives selected from the list below.
3. A thesis project is required.
4. Demonstration of prior coursework equivalent to a core course will enable substitution of an elective chosen in consultation with the bioengineering graduate adviser.
5. At least 15 units of coursework (excluding 797, 798, 799 courses) must be from Engineering.
6. At least 12 units of coursework (excluding 797, 798, 799 courses) must be 600- or 700-level courses.

#### Core Courses:

##### Biomechanics

BIOL 590	Physiology of Human Systems (4)
ME 590	Biomechanics (3)
ME 610	Finite Element Methods in Mechanical Engineering (3)
ME 685/EE 685	MEMS Design and Applications (3)
ME 691	Biomaterials (3)

##### Biomaterials

BIOL 585	Cell and Molecular Immunology (3)
BIOL 630	Signal Transduction (3)
ME 540	Nonmetallic Materials (3)
ME 685/EE 685	MEMS Design and Applications (3)
ME 691	Biomaterials (3)

## Bioinstrumentation

BIOL 590	Physiology of Human Systems (4)
EE 503	Biomedical Instrumentation (3)
EE 539	Instrumentation Circuits I (3)
EE 685/ME 685	MEMS Design and Applications (3)
ME 590	Biomechanics (3)

#### Electives:

AE 601	Computational Fluid Dynamics (3)
BIOL 585	Cell and Molecular Immunology (3)
BIOL 590	Physiology of Human Systems (4)
BIOL 597A	Univariate Statistical Methods in Biology (3)
BIOL 598	Computational Biology (3)
BIOL 630	Signal Transduction (3)
BIOL 750	Molecular Biophysics (3)
CHEM 711	Chemical Thermodynamics (3)
CHEM 712	Chemical Kinetics (3)
CHEM 751	Separations Science (3)
EE 503	Biomedical Instrumentation (3)
EE 539	Instrumentation Circuits I (3)
EM 585	Fundamentals of Micro-Electro-Mechanical Systems (MEMS) (3)
EM 621	Theory of Elasticity (3)
ENS 630	Advanced Biomechanics: Kinematics (3)
ENS 631	Advanced Biomechanics: Kinetics (3)
ENS 660	Advanced Kinesiology (3)
ENS 673	Advanced Principles of Motor Control (3)
ENV E 554	Process Fundamentals of Environmental Systems (3)
ENV E 648	Biological Processes and Bioremediation Engineering (3)
ME 540	Nonmetallic Materials (3)
ME 590	Biomechanics (3)
ME 610	Finite Element Methods (3)
ME 645	Mechanical Behavior of Engineering Materials (3)
ME 671	Conduction of Heat and Mass Transfer (3)
ME 691	Biomaterials (3)
PHYS 660	Radiological Health Physics (3)
PHYS 670A	Medical Physics I (3)
PHYS 670B	Medical Physics II (3)
RA 601	Pharmaceutical, Biotechnology, and Medical Device Industries (3)
RA 602	Food and Drug Law (3)
RA 770	Current Good Manufacturing Practice-General Concepts (3)

## Civil Engineering

**General information:** The Department of Civil and Environmental Engineering offers graduate study leading to the Master of Science degree in civil engineering. Available areas of study include a concentration in environmental engineering and specializations in geotechnical engineering, structural engineering, transportation engineering, and water resources engineering. Programs of study may also include combinations of the above areas and related courses from other disciplines subject to the approval of the graduate adviser.

Applicants with a bachelor's degree in an approved non-engineering curriculum must make up the deficiencies in biology, calculus, chemistry, computer skills, differential equations, fluid mechanics and hydraulics, physics, statics and dynamics, statistics, and thermodynamics, as determined by the graduate adviser.

Mail or deliver your complete admissions package to:

Dr. B. Westermo, Graduate Adviser  
 Department of Civil and Environmental Engineering  
 San Diego State University  
 5500 Campanile Drive  
 San Diego, CA 92182-1324

**Concentration in Environmental Engineering  
 (Major Code: 09221)**

**Specific requirements for the concentration:** The student's program, prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:

1. A minimum of 21 units of coursework, and up to nine combined units of Research (ENV E 797), Thesis (ENV E 799A), and Special Topics (ENV E 798).
2. Eighteen units of 600- and 700-numbered courses in civil and environmental engineering.

**Required courses:**

- ENV E 554 Process Fundamentals of Environmental Systems (3)
- ENV E 645 Aquatic Chemistry for Environmental Engineers (3)
- ENV E 646 Microbiological Principles for Environmental Engineering (3)
- ENV E 647 Physical and Chemical Processes of Water Pollution Control (3)
- ENV E 648 Biological Processes and Bioremediation Engineering (3)

**Electives:**

- ENV E 553 Environmental Engineering Laboratory (3)
- ENV E 555 Water and Wastewater Engineering (3)
- ENV E 556 Air Quality Management (3)
- ENV E 558 Solid Waste Management (3)
- ENV E 560 Environmental Engineering Design (3)
- ENV E 637 Process Design for Industrial Waste Treatment (3)
- ENV E 797 Independent Research (1-3)
- ENV E 798 Special Study (1-3)
- ENV E 799A Thesis or Project (3)
- ENV E 799B Thesis or Project Extension (0)
- CIV E 632 Computational Hydraulics and Hydrology (3)
- CIV E 633 Environmental Hydrology (3)
- CIV E 634 Surface Water Hydrology (3)
- CIV E 638 Sedimentation and River Engineering (3)

Other electives may be arranged on an individual basis by the faculty adviser and the student.

A statistics course equivalent to Civil Engineering 160 and an introductory course in environmental engineering equivalent to Environmental Engineering 355 must be taken before or during the early stages of the program.

**Specializations in Civil Engineering  
 (Major Code: 09081)**

**Specific requirements for the specializations:** The student's program, prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:

1. Eighteen units of 600- and 700-numbered courses in civil engineering. A total of no more than three units from courses numbered 797, 798, and 799 may be used to satisfy this requirement.
2. A minimum of four courses should be selected from one of the specialty areas listed below; in exceptional cases, this requirement may be waived at the discretion of the graduate adviser, provided the substitute course is in the College of Engineering and enhances a coherent program in a specific professional area.

3. At least twelve additional units of 500-, 600- or 700-numbered courses, approved by the graduate adviser.

**Areas of Specialization in Civil Engineering**

1. **Geotechnical Engineering**
  - CIV E 640 Advanced Soil Mechanics (3)
  - CIV E 641 Advanced Foundation Engineering (3)
  - CIV E 642 Groundwater Seepage and Earth Dams (3)
  - CIV E 644 Soil Dynamics (3)
2. **Structural Engineering**
  - CIV E 605 Prestressed Concrete Structures (3)
  - CIV E 607 Dynamics of Structures (3)
  - CIV E 608 Earthquake Engineering (3)
  - CIV E 610 Finite Element Analysis of Structures (3)
  - CIV E 612 Advanced Concrete Materials (3)
3. **Transportation Engineering**
  - CIV E 620 Traffic Flow and Control (3)
  - CIV E 621 Transportation Demand Analysis (3)
  - CIV E 622 Mass Transit Engineering (3)
  - CIV E 781 Seminar in Transportation Engineering (2 or 3)
4. **Water Resources Engineering**
  - CIV E 632 Computational Hydraulics and Hydrology (3)
  - CIV E 633 Environmental Hydrology (3)
  - CIV E 634 Surface Water Hydrology (3)
  - CIV E 638 Sedimentation and River Engineering (3)

**Electrical Engineering  
 (Major Code: 09091)**

**General information:** The Department of Electrical and Computer Engineering offers graduate study leading to a Master of Science degree in Electrical Engineering. The program provides balanced opportunities to study practical engineering design and do research. Research assistantships are available in the research areas of computer engineering, digital system design, VLSI design, digital signal processing and communications systems, electro-optic system design and instrumentation, applied electron and molecular spectroscopy, power systems, and biomedical/rehabilitation engineering.

Mail or deliver your complete admissions package to:

Graduate Adviser  
 Department of Electrical and Computer Engineering  
 San Diego State University  
 5500 Campanile Drive  
 San Diego, CA 92182-1309

**Specific requirements for the degree:** The student's program, prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:

1. Eighteen units of 600- and 700-numbered courses in electrical engineering.
2. At least six additional units of 500-, 600- or 700-numbered courses in the College of Engineering or, with the prior approval of the graduate adviser, in the College of Sciences.
3. Six elective units of 500-, 600- or 700-numbered courses approved by the graduate adviser.
4. Prerequisites for all courses taken for the degree must be completed with a grade of C or better.
5. As a breadth requirement, each classified graduate student is required to complete, with approval of the graduate adviser, at least one course from four of the following specialty areas: Communications, Computers, Electronics/Networks, Physical Electronics, Power/Control Systems. If the course content is appropriate, the graduate adviser may approve certain Electrical Engineering 596 courses to satisfy part of the breadth requirement.

**Disciplines and related courses:**

**Communications:** Computer Engineering 560, 565; Electrical Engineering 553, 556, 558, 650, 652, 653, 657, 658, 705.

**Computers:** Computer Engineering 561, 572; Electrical Engineering 672, 675, 678, 679, 706.

**Electronics:** Electrical Engineering 502, 503, 530, 539, 634.

**Physical Electronics:** Electrical Engineering 534, 540, 541, 546, 642, 644.

**Power/Control Systems:** Electrical Engineering 520, 580, 581, 582, 583, 622, 680.

- Students selecting Plan B must pass a written comprehensive examination. The examination tests the students' understanding and mastery of *fundamental principles* and their ability to apply them to engineering problems. Members of the ECE faculty will grade the comprehensive examination for technical correctness, completeness, and clarity of expression. After two unsuccessful attempts, the student may not take the examination again without written permission from the graduate adviser. The adviser may require the student to successfully complete certain additional courses before taking the comprehensive examination a third and final time.

**Mechanical Engineering  
(Major Code: 09101)**

**General information:** The Department of Mechanical Engineering offers graduate study leading to the Master of Science degree in mechanical engineering.

Available opportunities for thesis research and special study projects include heat transfer, thermodynamics, fluid mechanics, mechanical design which includes vibration, controls, CAD/CAM and robotics, materials, optimization and bioengineering.

Mail or deliver your complete admissions package to:

Dr. Subrata Bhattacharjee, Graduate Adviser  
Department of Mechanical Engineering  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1323

**Specific requirements for the degree:** The student's program, prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:

- Twenty-one units of 600- and 700-numbered courses in mechanical engineering to include 12 units in one area of specialization (designated as Group A and Group B) and Mechanical Engineering 797 or alternative courses subject to approval of graduate adviser.
- Nine additional units of 500-, 600- and 700-numbered courses approved by the graduate adviser.

**Areas of Specialization in Mechanical Engineering**

**Group A: Thermal Sciences**

- ME 651 Advanced Thermodynamics (3)
- ME 661 Gas Dynamics (3)
- ME 671 Conduction of Heat and Mass Transfer (3)
- ME 675 Radiation Heat Transfer (3)

**Group B: Engineering Design**

- ME 610 Finite Element Methods in Mechanical Engineering (3)
- ME 614 Engineering Design: Analytical Methods (3)
- ME 621 Mechanical Vibrations (3)
- ME 632 Advanced Topics in Automatic Controls (3)
- ME 645 Mechanical Behavior of Engineering Materials (3)

**Master of Engineering Degree**

(Major Code: 09134)

**General Information**

The Master of Engineering degree in Manufacturing and Design is a practice-oriented, interdisciplinary degree designed to meet the needs of students who are interested in furthering a career in engineering with a business/management emphasis. The student will select his/her own program in consultation with the Department of Mechanical Engineering graduate adviser subject to the guidelines listed below. In addition to the course requirements, the student will be required to complete a design project and a final written report. This phase of the program will be used to initiate the student to the problems and solutions that a practicing engineer will face. The program is aimed at the industrial employee who is seeking a career enhancement and also to the new baccalaureate graduate who wants to continue to study to be able to enter the work force with well-defined professional skills.

**Admission to Graduate Study**

All students must satisfy the general requirements for admission to the Graduate Division with classified graduate standing as described in Part Two of this bulletin. Candidates must have attained an undergraduate grade point average of at least 2.85 (4 point scale) in the last 60 semester (90 quarter hours) of technical study. In addition, applicants must have a bachelor's degree in mechanical engineering or a closely related discipline. If undergraduate preparation is deemed insufficient, the student will be required to take specified undergraduate courses to remove this deficiency. Such courses may be in addition to the 36 units required. Admission to the program will be limited to applicants who will have a background, interest, and expertise consistent with the demands of the design projects.

**Specific Requirements for Master of Engineering Degree**

The student's program, prepared with the approval of the graduate adviser, consists of 30 units of coursework, of which no more than six units may be in 500-level courses, and six units of design project. Eighteen units will be in manufacturing and design, 12 units will be from Business Administration: Finance, Information and Decision Systems, Management, and Marketing areas; and six manufacturing and design project units as indicated:

**Graduate Courses in Mechanical Engineering (18 units)**

- ME 540 Nonmetallic Materials (3)
- ME 542 Manufacturing with Nonmetallic Materials (3)
- ME 546 Computer Aided Manufacturing (3)
- ME 570 Thermal Systems Analysis and Design (3)
- ME 610 Finite Element Methods in Mechanical Engineering (3)
- ME 614 Engineering Design: Analytical Methods (3)
- ME 621 Mechanical Vibrations (3)
- ME 632 Advanced Topics in Automatic Controls (3)
- ME 645 Mechanical Behavior of Engineering Materials (3)
- ME 651 Advanced Thermodynamics (3)
- ME 661 Gas Dynamics (3)
- ME 671 Conduction of Heat and Mass Transfer (3)
- ME 675 Radiation Heat Transfer (3)
- ME 696 Advanced Topics in Mechanical Engineering (2 or 3)
- EM 603 Theory of Vibrations (3)
- EM 611 Vibration of Elastic Solids (3)
- EM 621 Theory of Elasticity (3)
- EM 711 Structural Acoustics (3)
- EM 724 Theory of Plates and Shells (3)
- EM 727 Theory of Elastic Stability (3)

### Graduate Courses in the College of Business Administration (12 units)

BA 651	Organizational Behavior (2)
BA 653	Managerial Economics (2)
BA 655	Marketing (3)
BA 662	Operations Management (2)
BA 665	Financial Management I (3)
FIN 617	Financial Management II (3)
IDS 609	Information Technology for Business (3)
IDS 686	Database Management Systems (3)
IDS 744	Seminar in Quality and Productivity Management (3)
IDS 750	Project Management (3)
IDS 753	Global Supply Chain Management (3)
MGT 721	Seminar in Group Processes and Leadership (3)
MGT 724	Entrepreneurship (3)
MKT 761	Product Innovation Management (3)

Project – Six units of a design project (ME 797 or 799) to be selected in cooperation with the graduate adviser in the area of interest. The project will be specifically designed to address both the technical and economic aspects in the solution of an engineering problem. A formal written report of project findings will be submitted to and approved by a committee of two engineering faculty members and one faculty member from business administration prior to graduation.

## Section II. Doctoral Program

<http://www.engineering.sdsu.edu/main/info>

## Engineering Sciences/Applied Mechanics

(Major Code: 09012)

The cooperating faculties of the College of Engineering at San Diego State University and the Department of Mechanical and Aerospace Engineering at the University of California, San Diego offer a joint doctoral program in engineering sciences/applied mechanics. The Doctor of Philosophy degree is awarded jointly by the Trustees of The California State University and the Regents of the University of California in the names of both cooperating institutions.

The Ph.D. degree is a research degree and represents both attainment of advanced knowledge and demonstration of research skills. It is not awarded solely for the fulfillment of technical requirements such as academic residence and coursework. A typical student with an appropriate bachelor of science degree in engineering may complete the joint program in five to six years of full-time study and research. A student with advanced standing may complete the program in a shorter period of time.

The research interests of the participating faculty members cover a wide range of subjects including: acoustics, biomechanics, boundary layer separation, boundary layer stability, computational fluid mechanics, combustion, experimental fluid mechanics, finite element methods in structural analysis, flow field acoustic interaction, gas physics, hydrology, hypersonic flow field, low speed aerodynamics, material science, material processing, soil mechanics, structural fluid interaction, and two phase flows, and all aspects of environmental engineering, including development and application of air, water, and soil pollution control methods.

At SDSU, the major areas of research at the graduate level and the participating faculty members that constitute the Graduate Group in Applied Mechanics include:

**Acoustics:** M. Pierucci

**Aerodynamics:** J. Katz, A. Plotkin

**Bioengineering:** K. May-Newman, A. Szeto

**Combustion:** S. Bhattacharjee

**Computational Mechanics:** T. Impelluso, J. Katz, R. Kline, E. Olevsky, V. Ponce, N. Sharabi

**Environmental Engineering:** M. Gurol

**Experimental Mechanics:** Z. Bayasi, R. Kline

**Fluid Mechanics:** J. Katz, N. Nosseir, A. Plotkin

**Hydrology:** H. Chang, V. Ponce

**Material Engineering:** Z. Bayasi, J. Burns, R. Kline, E. Olevsky, B. Westermo

**Robotics and Controls:** G. Lee, L. Tummala

**Soil Mechanics:** B. Westermo

**Structure and Fluid Interactions:** M. Pierucci, B. Westermo

**Structural Mechanics:** Z. Bayasi, M. Pierucci, N. Sharabi, B. Westermo

**Thermal Sciences:** S. Bhattacharjee

## Financial Support

Students admitted to the program will be eligible for teaching associateships and graduate assistantships. It is the policy of SDSU College of Engineering to support doctoral students during their entire tenure as long as they are in good standing, are making satisfactory progress toward their degree, and are in residence at one of the two institutions.

For further information, the student should write to the Director of the Engineering Sciences/Applied Mechanics Joint Doctoral Program at the College of Engineering, San Diego State University, San Diego, CA 92182-1326.

### PROGRAM

#### Preparation for Admission

Applicants must have an acceptable bachelor's degree or master's degree and must meet the requirements for admission to both SDSU and UCSD. A minimum grade point average of 3.0 in the major field for students with the B.S. degree or 3.4 for students with the M.S. degree is required. Students are expected to have engineering degrees in the classical engineering sciences/applied mechanics areas (i.e., aerospace, chemical, civil, environmental, mechanical). Students with degrees in one of the allied fields (i.e., physics, mathematics, electrical engineering, and engineering physics) will be required to remove any academic deficiencies by completing a series of courses normally required of the students who have academic degrees in the applied mechanics areas.

APPLICATIONS FOR THE PH.D. PROGRAM IN ENGINEERING SCIENCES/APPLIED MECHANICS MUST BE RECEIVED NO LATER THAN FEBRUARY 15.

#### Application

Students seeking admission to the joint doctoral program in engineering sciences/applied mechanics should write directly to the Doctoral Program Director requesting application materials. A complete application requires the following:

The appropriate completed application forms completed with application fees.

Three letters of recommendation.

An official transcript of academic work completed at all institutions attended.

Acceptable scores on both the qualitative and the quantitative sections of the Graduate Record Examination General Test (GRE).

The faculty of the joint doctoral program on each campus will recommend admission of acceptable applicants to the graduate deans at SDSU and UCSD. Entry occurs when the student is formally accepted by both graduate deans and the student is officially notified of the acceptance.

### Residency Requirements

The student must spend at least one academic year in full-time residence at each of the two institutions. The definition of such residence must be in accord with the regulations of the Graduate Divisions of SDSU and UCSD.

### Advising Committee

When a student is admitted to the joint doctoral program, the chair of the Department of Mechanical and Aerospace Engineering at UCSD and the director of the joint doctoral program in engineering sciences/applied mechanics at SDSU will appoint a three-member advising committee consisting of at least one member from each institution. It is the responsibility of this committee to develop in consultation with the student a course of study and a plan of preparation for the doctoral qualifying examination, which should be taken as soon as possible after the two years of study at the two institutions. Students with advanced standing may be capable of taking the examination earlier. Upon the student's successful completion of the examination, the advising committee will recommend to the chair of the Department of Mechanical and Aerospace Engineering at UCSD and the director of the joint doctoral program at SDSU, the membership of the student's doctoral committee. Upon appointment, this committee will supersede the advising committee and be responsible for the student's program of study and dissertation research.

### Course Requirements

The Doctor of Philosophy degree in engineering sciences/applied mechanics is a research degree and represents both attainment of advanced knowledge and demonstration of research skills. Therefore, no specific course requirements for the joint doctoral program exist; however, the doctoral qualifying examination is based on a certain level of competence in the general areas of: (1) fluid mechanics, (2) solid mechanics, and (3) applied mathematics. Preparation for the examination is normally done through coursework in these areas.

## Qualifying Examinations

### Joint Qualifying Committee

The doctoral program qualifying examination is administered by the student's advising committee supplemented, if appropriate, by faculty appointed by the chair of the Department of Mechanical and Aerospace Engineering at UCSD and the director of the joint doctoral program at SDSU. The examination will be oral, will cover at least four areas selected to ensure appropriate competence in the general area of applied mechanics, and will be at the level and content of the SDSU and UCSD graduate courses. The specific areas will be approved in advance by the chair of the Department of Mechanical and Aerospace Engineering at UCSD and the director of the joint doctoral program at SDSU. One of the areas may be satisfied by completing a series of courses in the area with at least a B grade in each course.

### Joint Doctoral Committee

Upon successful completion of the doctoral qualifying examination, a doctoral committee shall be appointed by the graduate deans of SDSU and UCSD upon the recommendation of the chair of the Department of Mechanical and Aerospace Engineering at UCSD and the director of the joint doctoral program at SDSU. The doctoral committee shall supervise the continued study and research programs of the student. The chair of the committee is the primary adviser of the student's dissertation research. The dissertation committee will consist of three members from each institution; one of the three will be

from outside of the Department of Mechanical and Aerospace Engineering and one from outside the student's major area.

### Senate Qualifying Examination

The major requirement for the doctorate is the completion of a dissertation based on original research, which contributes new knowledge to the fields. The Senate Qualifying Examination consists of a presentation of initial dissertation results and plans for future research. The chair of the doctoral committee will determine in consultation with the student when the Senate Qualifying Examination will be held. Approval of a student's dissertation topic by the doctoral committee implies that the committee believes that the work will contain the potential for one or more articles publishable in refereed journals.

### Dissertation

The doctoral committee will administer the final examination, which will consist of the student's presentation and defense of the dissertation, with particular emphasis on the principal findings and areas of future research. The first part of this examination is open to the public; a concluding portion involves appropriate questioning of the student by the committee.

The detailed requirements concerning the preparation of the dissertation, the number of copies, the editorial style, etc., are set forth in the UCSD document entitled "Instructions for the Preparation and Submission of Doctoral Dissertations and Masters' Theses." Acceptance of the dissertation by the University Librarian at UCSD and the Graduate Division at SDSU represents the final step in completion of the student's degree requirements.

### Satisfactory Progress

The students admitted to this program are expected to make continuous, satisfactory progress and to remain in good standing at both institutions.

### Award of the Degree

The Doctor of Philosophy degree in engineering sciences/applied mechanics will be awarded jointly by the Trustees of The California State University and the Regents of the University of California in the names of both cooperating institutions.

## Faculty

The following faculty members of the cooperating institutions participate in the joint doctoral program in engineering sciences/applied mechanics and are available for direction of research and as members of joint doctoral committees.

### San Diego State University:

Program Director: Gordon K. F. Lee

Committee Members:

- J. Katz, N. Nosseir, M. Pierucci, A. Plotkin, S. Venkataraman (Aerospace Engineering and Engineering Mechanics).
- B. Badriyha, Z. Bayasi, H. Chang, M. Gurol, V. Ponce, N. Sharabi, B. Westermo (Civil and Environmental Engineering).
- A. Szeto, L. Tummula (Electrical and Computer Engineering).
- J. Castillo, M. Tarokh (Computer Science).
- S. Bhattacharjee, J. Burns, T. Impelluso, R. Kline, M. Lambert, K. May-Newman, K. Morsi, E. Olevsky (Mechanical Engineering).

### University of California, San Diego:

Program Director: P. Linden

Committee Members:

- R. Bitmead, J. Goddard, S. Krasheninikov, P. Linden, X. Markenscoff, M. Meyers, C. Pozrikidis, J. Talbot, F. Williams (Mechanical and Aerospace Engineering).

## Section III. Other Programs

### Rehabilitation Technology Certificate

The purpose of this certificate is to train interested engineers and non-engineers in the field of rehabilitation technology using formal classroom instruction, project design and fabrication, and internship. Enrollment in this certificate program will provide interested engineering students exposure to rehabilitation technology. For non-engineering rehabilitation professionals (e.g., vocational rehabilitation counselors, special education teachers, transition and supported employment specialists), the certificate program will provide specialty training in the application of rehabilitation technology. Specifically, the certificate program will do the following:

1. Expose graduate engineering students to the problems and promises of rehabilitation engineering as a field of specialization.
2. Provide a number of interrelated training activities that will improve the professional competence of employed rehabilitation workers.
3. Provide opportunities for extensive training, in the form of extended internships with knowledgeable rehabilitation professionals whose backgrounds are in such specializations as communicative disorders, rehabilitation engineering, physical and occupational therapy, rehabilitation electronics, prosthetics and orthotics, rehabilitation counseling, special education, biomechanics, etc.
4. Offer both formal classroom instruction and guided problem solving opportunities in designing, building, customizing, and delivering rehabilitation technology for enhancing the integration of individuals with disabilities into school, residential, community, and employment settings.

This is an advanced trans-disciplinary academic certificate at the postbaccalaureate level. Admission requirements include a bachelor's degree in engineering, rehabilitation, or special education, or a related allied health field. Students admitted into the program must maintain a minimum grade point average of 3.0 in all certificate coursework with no less than a grade of "C" in all courses. Depending on the background and work experience, students may be required to remove deficiencies through additional coursework as part of the certificate requirements.

Students in the certificate program will complete 12 units of formal coursework and one semester of internships as described below unless alternative courses are approved by the program advisers.

**Electrical Engineering 502** (*Electronic Devices for Rehabilitation – 3 units*) will acquaint students with the design and application of electronic devices used in rehabilitation; explain the problems of the disabled; and present possible solutions for some of their needs. This is a non-traditional and practical electrical engineering course that requires student involvement in the collaborative assessment (with students in Communicative Disorders 676) of disabled persons for their cognitive, communicative, and physical abilities at the SDSU Communications Clinic.

**Administration, Rehabilitation and Postsecondary Education 607** (*Applications of Rehabilitation Technology – 3 units*) will provide an overview of assistive technology in the areas of assessment, accessibility, mobility, communication, employment, and more. Students will collaborate on transdisciplinary teams to design and construct an adaptation or modification which will enable a person with disabilities to participate more fully in school, work and/or community environments.

**Administration, Rehabilitation and Postsecondary Education 685A or 685B** (*Medical and Psychological Aspects of Disability – 3 units*) will cover the impact of different disabilities (e.g. visual and sensory impairments, orthopedic impairments, burns, amputation, chronic pain, cancer, developmental and learning disabilities, traumatic brain injuries, and spinal cord injuries) in terms of functional limitations, rehabilitative services needed, and environmental adjustments required.

**Electrical Engineering 798** (*Special Study in Rehabilitation Technology Design – 3 units*) will provide students hands-on opportunities to work with rehabilitation professionals, occupational and physical therapists, and other non-engineers on technology teams in the design and fabrication of customized adaptations for persons with disabilities.

**Internships (one semester)** will provide guided field experience through placement with knowledgeable practicing rehabilitation professionals in such settings as the Sharp Rehabilitation Center, Assistive Device Assessment Program within SDSU's Communications Clinic, Access Center of San Diego, and San Diego schools.

For application and additional information, contact the program adviser Dr. Andrew Szeto in the Department of Electrical and Computer Engineering or Dr. Caren L. Sax in the Department of Administration, Rehabilitation, and Postsecondary Education.

### Courses Acceptable on Master's Degree Programs in Engineering (ENGR)

#### UPPER DIVISION COURSE

#### ENGR 510. Methods of Analysis (3)

Prerequisite: Engineering 280 with minimum grade of C. Selected topics from vector calculus, partial differential equations, and complex analysis, with engineering applications.

### Courses Acceptable on Doctoral Degree Program in Engineering (ENGR)

In addition to the courses listed below, a number of other graduate level courses are acceptable for the doctoral degree. For a description of these courses, see individual department listings (e.g., aerospace, civil and environmental, or mechanical), and contact the director of the doctoral program.

#### GRADUATE COURSES

#### ENGR 800. Seminar (1) Cr/NC

Prerequisite: Admission to the doctoral program. Doctoral students are expected to attend a weekly seminar dealing with current topics in different areas of applied mechanics. Course is to be taken every semester.

#### ENGR 810. Colloquium in Engineering Sciences (1) Cr/NC/RP

Prerequisite: Admission to the doctoral program. Discussions on advances in research in engineering science/applied mechanics conducted by SDSU and UCSD faculty.

#### ENGR 896. Doctoral Laboratory and Computer Research (1-3) Cr/NC/RP

Prerequisite: Admission to the doctoral program. Independent research in laboratory and computer settings in the areas of applied mechanics. Content to be determined after consultation with adviser.

#### ENGR 897. Doctoral Research (1-15) Cr/NC/RP

Prerequisite: Admission to the doctoral program. Independent research in general areas of applied mechanics. Content to be determined after consultation with adviser.

#### ENGR 898. Doctoral Special Study (1-3) Cr/NC/RP

Prerequisite: Advancement to candidacy. Individual study leading to study and research required for doctoral dissertation.

#### ENGR 899. Doctoral Dissertation (3-15) Cr/NC/RP

Prerequisites: An officially constituted joint doctoral committee and successful completion of Senate Qualifying Examination. Final research and preparation of dissertation for doctoral degree. Enrollment required during term in which dissertation is approved.

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# Aerospace Engineering and Engineering Mechanics

In the College of Engineering

OFFICE: Engineering 308  
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EMAIL: ae@engineering.sdsu.edu

## Faculty

Joseph Katz, D.Sc., Professor of Aerospace Engineering and Engineering Mechanics, Chair of Department  
Balbir S. Narang, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics  
Nagy Nosseir, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics  
Mauro Pierucci, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics  
Allen Plotkin, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics  
Satchi Venkataraman, Ph.D., Assistant Professor of Aerospace Engineering and Engineering Mechanics (Graduate Adviser)

## Courses Acceptable on Master's Degree Programs in Aerospace Engineering and Engineering Mechanics (A E) (E M)

### UPPER DIVISION COURSES IN AEROSPACE ENGINEERING (A E)

- A E 520. Intermediate Aerospace Flight Mechanics (3)**  
Prerequisite: Aerospace Engineering 320.  
Rigid-body dynamics with applications in spacecraft attitude dynamics.
- A E 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.
- A E 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.
- A E 550. Viscous Flow (3)**  
Prerequisites: Credit or concurrent registration in Engineering Mechanics 340, and Engineering 510.  
Kinematics of fluid motion. Conservation of mass, momentum, and energy. Navier-Stokes equations; exact solutions. Boundary layer approximations, turbulent flow.
- A E 596. Advanced Aerospace Engineering Topics (3)**  
Prerequisite: Consent of instructor.  
Modern developments in aerospace engineering. See Class Schedule for specific content. Maximum credit of six units for any combination of Aerospace Engineering or Engineering Mechanics 496, 499, and 596 applicable to a bachelor's degree. Maximum combined credit of six units of Aerospace Engineering or Engineering Mechanics 596 and 696 applicable to a 30-unit master's degree.

### UPPER DIVISION COURSES IN ENGINEERING MECHANICS (E M)

- E M 510. Finite Element Methods in Aerospace Structures (3)**  
Prerequisite: Aerospace Engineering 410.  
Static and dynamic analysis of aerospace structures utilizing finite element methods.
- E M 530. Composite Structural Analysis (3)**  
Prerequisites: Engineering 280 and Civil Engineering 301.  
Strength of composite materials; lamination theory; strength analysis of laminates; bending, buckling, and vibration of composite plates.
- E M 585. Fundamentals of Micro-Electro-Mechanical Systems (MEMS) (3)**  
One lecture and four hours of laboratory.  
Prerequisites for aerospace engineering majors: E E 204, E M 220, and M E 260.  
Prerequisites for electrical engineering majors: E E 330, E M 202, and M E 260.  
Prerequisites for mechanical engineering majors: E E 303, E M 220, and M E 260.  
Microfabrication techniques, microsensors and microactuators, and scaling laws. A design project of a micro-device including schematic creation, test of performance, layout generation, and layout versus schematic comparison.
- E M 596. Advanced Engineering Mechanics Topics (1-3)**  
Prerequisite: Consent of instructor.  
Modern developments in engineering mechanics. See Class Schedule for specific content. Maximum credit of six units for any combination of Engineering Mechanics 496, 499, and 596 applicable to a bachelor's degree. Maximum combined credit of six units of Engineering Mechanics 596 and 696 applicable to a 30-unit master's degree.

### GRADUATE COURSES IN AEROSPACE ENGINEERING (A E)

- A E 601. Computational Fluid Mechanics (3)**  
Prerequisites: Credit or concurrent registration in Aerospace Engineering 302 and Engineering 510.  
Finite difference method of solving general fluid mechanics problems. Study of stability, convergence, compatibility, dissipation, and dispersion. A project is required.
- A E 612. Compressible Fluid Flow (3)**  
Prerequisites: Aerospace Engineering 302 and credit or concurrent registration in Engineering 510.  
Theory of flow at supersonic speeds. Linearized theory, three-dimensional wings in steady flight, slender-body theory, methods of characteristics.
- A E 620. Incompressible Aerodynamics (3)**  
Prerequisites: Aerospace Engineering 301 and Engineering 510.  
Theory of incompressible aerodynamics; airfoil and wing theory; computational methods.

### **A E 643. Laminar Flow (3)**

Prerequisites: Aerospace Engineering 302 and Engineering 510.

Fluid kinematics and dynamics. Governing equations in general coordinate systems. Navier-Stokes equations; exact solutions, approximations including boundary layer. Three-dimensional flows. Numerical methods. Vector and tensor notation will be used.

### **A E 644. Turbulent Flow (3)**

Prerequisites: Engineering Mechanics 340 and Engineering 510.

Nature of turbulence based on simple flow observations and a theoretical basis for interpreting and predicting the behaviors of specialized turbulent flow problems.

### **A E 696. Advanced Topics in Aerospace Engineering (2 or 3)**

Intensive study in specific areas of aerospace engineering. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### **A E 797. Research (1-3) Cr/NC/RP**

Prerequisite: Consent of graduate adviser.

Research in engineering. Maximum credit six units applicable to a master's degree.

### **A E 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit three units applicable to a master's degree.

### **A E 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

### **A E 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.

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

### **A E 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

## GRADUATE COURSES IN ENGINEERING MECHANICS (E M)

### **E M 600. Seminar (1-3)**

Prerequisite: Consent of the graduate adviser and instructor.

Intensive study of one of the following topics: Nonlinear vibrations, random vibrations, continuum mechanics, anisotropic elasticity, energy methods, plasticity, and other areas of engineering mechanics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **E M 603. Theory of Vibrations (3)**

Prerequisites: Aerospace Engineering 410 and Engineering 510.

Linear and nonlinear periodic phenomena as applied to discrete systems and continuous media with application to physical problems.

### **E M 611. Vibration of Elastic Solids (3)**

Prerequisites: Engineering 510 and Aerospace Engineering 410 or Mechanical Engineering 520.

Vibrational characteristics of elastic media. Vibration of plates. Longitudinal and transverse wave motion in infinite, semi-infinite and finite thickness media.

### **E M 621. Theory of Elasticity (3)**

Prerequisites: Civil Engineering 301 and credit or concurrent registration in Engineering 510.

Analysis of stress and strain: stress-strain relations; the equations of elasticity; uniqueness theorem; compatibility conditions; flexure and torsion.

### **E M 711. Structural Acoustics (3)**

Prerequisites: Engineering 510 and Engineering Mechanics 611.

Acoustic radiation from different sources. Vibration of and acoustic radiation from beams, plates, and other solids. Effect of fluid loading.

### **E M 724. Theory of Plates and Shells (3)**

Prerequisite: Engineering Mechanics 621.

Bending and buckling of plates. Membrane and bending theory of shells of revolution. Discontinuity analysis of shells.

### **E M 727. Theory of Elastic Stability (3)**

Prerequisite: Engineering Mechanics 621.

Stability of elastic systems. Differential equations of stability by summation of forces and moments, and by the variational method. Applications.

### **E M 797. Research (1-3) Cr/NC/RP**

Prerequisite: Consent of graduate adviser.

Research in engineering. Maximum credit six units applicable to a master's degree.

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# Civil and Environmental Engineering

In the College of Engineering

**OFFICE: Engineering 424**  
**TELEPHONE: (619) 594-6071**  
**EMAIL: ce@engineering.sdsu.edu**

## Faculty

- Janusz C. Supernak, Ph.D., Professor of Civil and Environmental Engineering, Chair of Department
- James H. Banks, Ph.D., Professor of Civil and Environmental Engineering
- Mirat D. Gurol, Ph.D., Professor of Civil and Environmental Engineering, The Blasker Chair in Environmental Engineering
- David T. Hayhurst, Ph.D., Professor of Civil and Environmental Engineering, Dean of the College of Engineering
- Victor M. Ponce, Ph.D., Professor of Civil and Environmental Engineering
- Bruce D. Westermo, Ph.D., Professor of Civil and Environmental Engineering, Assistant Dean for Student Affairs of the College of Engineering (Graduate Adviser)
- M. Ziad Bayasi, Ph.D., P.E., Associate Professor of Civil and Environmental Engineering
- M. Nazmi Sharabi, Ph.D., Associate Professor of Civil and Environmental Engineering
- Kenneth D. Walsh, Ph.D., P.E., Associate Professor of Civil and Environmental Engineering, The AGC-Paul S. Roel Chair in Construction Engineering and Management
- Badri Badriyha, Ph.D., P.E., Assistant Professor of Civil and Environmental Engineering
- Fatih Buyuksonmez, Ph.D., P.E., Assistant Professor of Civil and Environmental Engineering
- Selena M. Forman, Ph.D., P.E., Assistant Professor of Civil and Environmental Engineering, The William E. Leonhard, Jr., Chair in Civil and Environmental Engineering
- Julio R. Valdes, Ph.D., Assistant Professor of Civil and Environmental Engineering

## The Associated General Contractors (AGC) Paul S. Roel Chair in Construction Engineering and Management

The AGC-Paul S. Roel Chair in Construction Engineering and Management is funded with an endowment established by generous gifts from members of the Associated General Contractors in San Diego Chapter. Recognizing the need for expert construction professionals, the local construction community has invested considerable resources in this new degree program. In particular, the endowment is funded by a significant gift from Roel Construction, in honor of Paul S. Roel, the son of the company's founder and the man responsible for moving the family business to San Diego in 1959. The first appointee to the Chair, Dr. Kenneth D. Walsh, is an accomplished teacher-scholar, with a research background in improvement of production systems in construction in residential, commercial, and heavy civil settings.

## The Blasker Chair in Environmental Engineering

The Blasker Chair in Environmental Engineering was established by an endowment from the Blasker-Rose-Miah Endowment Fund of the San Diego Foundation. The fund was created in honor of Mr. Samuel Blasker who left \$8.0 million to the San Diego Foundation. Mr. Blasker was a successful aeronautical engineer and a business man with a vision to nurture and develop unique and innovative discoveries and experiences which may be of benefit to humanity.

The first appointee to the Chair, Dr. Mirat D. Gurol, is an accomplished scholar and researcher in the areas of innovative treatment technologies of contaminated water, air, soil, and hazardous waste.

## The William E. Leonhard, Jr. Chair in Civil and Environmental Engineering

The William E. Leonhard, Jr. Chair in Civil and Environmental Engineering is funded with an endowment created by generous gifts from William G. Leonhard, Jr. and his parents, William E. and Wyllis M. Leonhard. After Bill Leonhard graduated from San Diego State in 1964, he entered a career in the Air Force, rising to the rank of colonel. In January 1990, he retired from the Air Force, spent the next several years in private industry, and retired again in 1998. The first appointee to the Chair is Assistant Professor, Dr. Selena Forman, an expert in sediment water interactions, contaminated sediment transport, and river restoration design.

## Courses Acceptable on Master's Degree Programs in Civil and Environmental Engineering (CIV E) (ENV E)

**Note:** Proof of completion of prerequisites (copy of transcript) is required for all courses which list prerequisites.

### UPPER DIVISION COURSES IN CIVIL ENGINEERING (CIV E)

#### CIV E 521. Structural Analysis II (3) I

Prerequisite: Civil Engineering 321.

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. (Formerly numbered Civil and Environmental Engineering 521.)

#### CIV E 525. Design of Steel Structures (3) I, II

Prerequisite: Civil Engineering 321.

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. (Formerly numbered Civil and Environmental Engineering 525.)

**CIV E 528. Masonry Structures Design (3) I**

Prerequisites: Civil Engineering 301 and 321.

Analysis and design of masonry beams, retaining walls, shear walls, bearing walls, and columns. Use of allowable stress and strength design methods. Design project, including structural system analysis and lateral design of masonry buildings.

**CIV E 530. Open Channel Hydraulics (3) I, II**

Prerequisite: Civil Engineering 444.

Principles of open channel flow; analysis and problems of critical, uniform, gradually-varied, and rapidly-varied flows, design and environmental problems; computer simulations and applications; and culvert hydraulics. (Formerly numbered Civil and Environmental Engineering 530.)

**CIV E 580. Traffic Engineering Design (3) II**

Prerequisite: Civil Engineering 481.

Sizing and configuration of highway facilities based on capacity analysis. Traffic signal design, impact and mitigation studies, parking, safety design. (Formerly numbered Civil and Environmental Engineering 580.)

**CIV E 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.

**UPPER DIVISION COURSES IN  
ENVIRONMENTAL ENGINEERING (ENV E)**

**ENV E 553. Environmental Engineering Laboratory (3)**

Two lectures and three hours of laboratory.

Prerequisites: Chemistry 200 and Environmental Engineering 355.

Analysis of natural waters and wastewaters. Sampling and analysis of hazardous environmental pollutants. Techniques to analyze solid waste. (Formerly numbered Civil and Environmental Engineering 553.)

**ENV E 554. Process Fundamentals of Environmental Systems (3) I**

Prerequisites: Environmental Engineering 355 and Engineering Mechanics 340.

Equilibrium and kinetics of chemical and biological reactions of environmental systems. Considerations of mass-transfer and fluid dynamics in water quality management and air pollution control. (Formerly numbered Civil and Environmental Engineering 554.)

**ENV E 555. Water and Wastewater Engineering (3) I**

Prerequisites: Environmental Engineering 355 and Engineering Mechanics 340.

Water and wastewater. Physical, chemical and biological methods of treatment. Advanced waste treatment processes. Water reclamation. (Formerly numbered Civil and Environmental Engineering 555.)

**ENV E 556. Air Pollution Engineering (3)**

Prerequisite: Environmental Engineering 355.

Sources of air pollutants. Transportation, diffusion, and transformation of pollutants in the atmosphere. Measurement and control of air pollution. (Formerly numbered Civil and Environmental Engineering 556.)

**ENV E 558. Solid and Hazardous Waste Engineering (3)**

Prerequisite: Environmental Engineering 355.

Municipal solid and hazardous solid wastes from an environmental engineering perspective, including waste minimization and recycling. Engineered volume reduction through composting, incineration, mechanical compaction, and other methods. Ultimate disposal, landfill design and legislative regulations. (Formerly numbered Civil and Environmental Engineering 558.)

**ENV E 560. Environmental Engineering Design (3) II**

Prerequisites: Environmental Engineering 555, 558 and Engineering 430.

Application of engineering principles and design techniques to design of environmental engineering projects. (Formerly numbered Civil and Environmental Engineering 560.)

**ENV E 596. Advanced Environmental Engineering Topics (1-3) I, II**

Prerequisites: Minimum grade point average of 3.0 and consent of instructor.

Modern developments in environmental engineering. See Class Schedule for specific content. Maximum credit of six units for any combination of Environmental Engineering 496, 499 and 596 applicable to a bachelor's degree. Maximum combined credit of six units of Environmental Engineering 596 and 696 applicable to a 30-unit master's degree.

**GRADUATE COURSES IN  
CIVIL ENGINEERING (CIV E)**

**CIV E 605. Prestressed Concrete Structures (3)**

Prerequisite: Civil Engineering 421 with minimum grade of C.

Fundamental concepts of prestressed concrete theory. Design applications to various types of structures. (Formerly numbered Civil and Environmental Engineering 605.)

**CIV E 607. Dynamics of Structures (3)**

Prerequisite: Civil Engineering 521 with minimum grade of C.

Dynamic disturbances, structures with variable degelastic beams; continuous beams, rigid frames, floor systems. Energy methods in structural dynamics. (Formerly numbered Civil and Environmental Engineering 607.)

**CIV E 608. Earthquake Engineering (3)**

Prerequisite: Civil Engineering 607.

Elements of seismology. Methods of analysis for earthquake loads. Procedures and code provisions for the design of earthquake-resistant structures. (Formerly numbered Civil and Environmental Engineering 608.)

**CIV E 610. Finite Element Analysis of Structures (3)**

Prerequisites: Engineering 120 and Civil Engineering 321 with minimum grade of C.

General procedure, various types of finite elements; analysis and design of isotropic and orthotropic plates and shells, deep beams, and shear walls using finite element technique; use of digital computers for solutions. Application to civil engineering structures. (Formerly numbered Civil and Environmental Engineering 610.)

**CIV E 612. Advanced Concrete Materials (3)**

Two lectures and three hours of laboratory.

Prerequisite: Civil Engineering 421.

Microstructure and cracking behavior of concrete. Theory and application of high strength and fiber reinforced concrete. Concrete durability additives and fiber reinforced plastic reinforcement for concrete. Innovative applications of advanced concrete materials. Includes a laboratory project. (Formerly numbered Civil and Environmental Engineering 612.)

**CIV E 620. Traffic Flow and Control (3)**

Prerequisites: Civil Engineering 481 or City Planning 625 or Geography 559, with minimum grade of C.

Advanced treatment of traffic flow and control issues. Highway capacity and traffic flow characteristics, traffic flow modeling, intersection control, freeway control systems, intelligent transportation systems. (Formerly numbered Civil and Environmental Engineering 620.)

### **CIV E 621. Transportation Demand Analysis (3)**

Prerequisite: Civil Engineering 481 or Geography 559 or City Planning 625, with minimum grade of C.

Travel demand modeling with emphasis on application to growing metropolitan areas; four-step travel demand forecasting; disaggregate, behavioral, and activity-based approaches; recent methodological developments; transportation-land use interactions. (Formerly numbered Civil and Environmental Engineering 621.)

### **CIV E 622. Mass Transit Engineering (3)**

Prerequisites: Civil Engineering 481 or City Planning 625 or Geography 559, with minimum grade of C.

Transit system characteristics, analysis of demand for transit services, transit system planning, scheduling, analysis and design. (Formerly numbered Civil and Environmental Engineering 622.)

### **CIV E 632. Computational Hydraulics and Hydrology (3)**

Prerequisites: Civil Engineering 445 and 530.

Computational methods applied to hydraulics and hydrology. Explicit and implicit schemes for solving hyperbolic problems. Method of characteristics. One- and two-dimensional nonsteady open channel flow simulation. (Formerly numbered Civil and Environmental Engineering 632.)

### **CIV E 633. Environmental Hydrology (3)**

Prerequisite: Civil Engineering 445 and Environmental Engineering 355.

Hydrosphere function, hydroclimatology, hydrographic characteristics, desertification, hydroecology, salinity modeling and management, stream and lake restoration, and case studies. (Formerly numbered Civil and Environmental Engineering 633.)

### **CIV E 634. Surface Water Hydrology (3)**

Prerequisite: Civil Engineering 445.

Hydrologic systems. Physical hydrology. Kinematic wave theory. Diffusion and dynamic wave theories. Watershed and stream channel routing. Hydrologic simulation. (Formerly numbered Civil and Environmental Engineering 634.)

### **CIV E 638. Sedimentation and River Engineering (3)**

Prerequisite: Civil Engineering 444 with minimum grade of C.

Hydraulics of sediment transport; erosion and sedimentation problems; river mechanics and morphology; mathematical modeling of river hydraulics; sediment transport and river channel changes. Design and environmental problems; erosion control and river training. (Formerly numbered Civil and Environmental Engineering 638.)

### **CIV E 640. Advanced Soil Mechanics (3)**

Prerequisites: Civil Engineering 462 and 463 with minimum grades of C.

Advanced theories of soil mechanics applied to geotechnical and environmental engineering. Classification of terrestrial and marine soils, compaction, consolidation, expansion, stress distribution, strength, permeability and seepage, site improvement, and remediation. (Formerly numbered Civil and Environmental Engineering 640.)

### **CIV E 641. Advanced Foundation Engineering (3)**

Prerequisites: Civil Engineering 462 and 463 with minimum grades of C.

Advanced theories of soil bearing capacity, settlement, and stress distribution applied to design of shallow and deep foundations and earth retaining structures. Subsurface exploration and dewatering methods. (Formerly numbered Civil and Environmental Engineering 641.)

### **CIV E 642. Groundwater Seepage and Earth Dams (3)**

Prerequisites: Civil Engineering 462 and 463 with minimum grades of C.

Groundwater seepage and contaminant transport in saturated and unsaturated soils. Flow nets for homogeneous and layered soils. Design and stability analysis of embankments and earth dams. (Formerly numbered Civil and Environmental Engineering 642.)

### **CIV E 644. Soil Dynamics (3)**

Prerequisite: Civil Engineering 462 and 463 with a minimum grade of C.

Behavior of soil and soil-structure systems under dynamic loading. Applications include dynamic earth bearing capacity and pressure, soil spring constants for machine foundation design, liquefaction analysis, site response spectra, and seismic stability of slopes. Case histories discussed. (Formerly numbered Civil and Environmental Engineering 644.)

### **CIV E 696. Advanced Topics in Civil Engineering (2 or 3)**

Intensive study in specific areas of civil engineering. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of Civil Engineering 596 and 696 applicable to a 30-unit master's degree.

### **CIV E 781. Seminar in Transportation Engineering (2 or 3)**

Prerequisites: Minimum grade point average of 3.0 and consent of instructor.

An intensive study in transportation engineering. Maximum credit six units applicable to a master's degree. (Formerly numbered Civil and Environmental Engineering 781.)

### **CIV E 797. Independent Research (1-3) Cr/NC/RP**

Prerequisite: Consent of graduate adviser.

Independent research in civil and environmental engineering. Maximum credit three units applicable to a master's degree.

### **CIV E 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit three units applicable to a master's degree.

### **CIV E 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

### **CIV E 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.

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

### **CIV E 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

## **GRADUATE COURSES IN ENVIRONMENTAL ENGINEERING (ENV E)**

### **ENV E 637. Process Design for Industrial and Hazardous Waste Treatment (3)**

Prerequisites: Environmental Engineering 647 and 648.

Process design of physical, chemical, and biological methods for treatment of hazardous and industrial waste. (Formerly numbered Civil and Environmental Engineering 637.)

### **ENV E 645. Aquatic Chemistry for Environmental Engineers (3)**

Prerequisite: Graduate standing.

Chemistry of natural and polluted water. Process chemistry for water and wastewater treatment. (Formerly numbered Civil and Environmental Engineering 645.)

**ENV E 646. Microbiological Principles of Environmental Engineering (3)**

Prerequisite: Environmental Engineering 554.

Relationships and significance of microorganisms to organic matter decomposition, mineral transformations, and environmental quality. Applied study in natural (water, sediments, wetlands) and disturbed ecosystems (landfills, contaminated sediments, and groundwater). (Formerly numbered Civil and Environmental Engineering 646.)

**ENV E 647. Physical and Chemical Processes of Water Pollution Control (3)**

Prerequisites: Environmental Engineering 554 and 645.

Engineering principles and design of physical and chemical processes used in water and wastewater treatment. (Formerly numbered Civil and Environmental Engineering 647.)

**ENV E 648. Biological Processes and Bioremediation Engineering (3)**

Prerequisites: Environmental Engineering 554 and 646.

Engineering principles and design of biological processes used in wastewater and bioremediation treatment technologies. (Formerly numbered Civil and Environmental Engineering 648.)

**ENV E 696. Advanced Topics in Environmental Engineering (2 or 3)**

Intensive study in specific areas of civil engineering. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of Civil Engineering 596 and Environmental Engineering 696 applicable to a 30-unit master's degree.

**ENV E 797. Independent Research (1-3) Cr/NC/RP**

Prerequisite: Consent of graduate adviser.

Independent research in civil and environmental engineering. Maximum credit three units applicable to a master's degree.

**ENV E 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit three units applicable to a master's degree.

**ENV E 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**ENV E 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.

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

**ENV E 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Electrical and Computer Engineering

In the College of Engineering

**OFFICE: Engineering 426**  
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## Faculty

R. Lal Tummala, Ph.D., Professor of Electrical and Computer Engineering, Chair of Department

Ching-Ten Chang, Ph.D., Professor of Electrical and Computer Engineering

Madhu S. Gupta, Ph.D., Professor of Electrical and Computer Engineering

fredric j. harris, M.S.E.E., P.E., Professor of Electrical and Computer Engineering

Jay H. Harris, Ph.D., Professor of Electrical and Computer Engineering

Paul T. Kolen, Ph.D., Professor of Electrical and Computer Engineering

Gordon K.F. Lee, Ph.D., Professor of Electrical and Computer Engineering, Associate Dean of the College of Engineering and Director of Doctoral Program

Long C. Lee, Ph.D., Professor of Electrical and Computer Engineering

Leonard R. Marino, Ph.D., Professor of Electrical and Computer Engineering

Andrew Y.J. Szeto, Ph.D., P.E., Professor of Electrical and Computer Engineering

Ramon Betancourt, Ph.D., Associate Professor of Electrical and Computer Engineering

Yusuf Ozturk, Ph.D., Associate Professor of Electrical and Computer Engineering

Jeff Liu, Ph.D., Assistant Professor of Electrical and Computer Engineering

Sridhar Seshagiri, Ph.D., Assistant Professor of Electrical and Computer Engineering

Rahul Singh, Ph.D., Assistant Professor of Electrical and Computer Engineering

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## Courses Acceptable on Master's Degree Program in Electrical and Computer Engineering (COMPE) (E E)

### UPPER DIVISION COURSES IN ELECTRICAL ENGINEERING (E E)

**NOTE:** Prerequisites will be enforced in all 500-level courses. A copy of an official transcript will be accepted as proof. For corequisites, an enrollment confirmation form will be accepted.

*Any course at the 300 level or below must be passed with a grade of C- or better in order to be used as a prerequisite for any subsequent course.*

#### **E E 502. Electronic Devices for Rehabilitation (3)**

Two lectures and three hours of laboratory.

Prerequisite: Electrical Engineering 303 or 330.

Recent developments in electronic assistive devices and micro-computers for persons with various disabilities; assessment of disabled persons for suitable technological assistive devices.

#### **E E 503. Biomedical Instrumentation (3)**

Prerequisites: Engineering 280; Electrical Engineering 410 and 430 (or for Mechanical Engineering majors, Electrical Engineering 303 and Mechanical Engineering 512).

Instrumentation systems to monitor, image, control, and record physiological functions.

#### **E E 520. Feedback Control Systems (3) I**

Prerequisite: Electrical Engineering 410.

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.

#### **E E 530. Analog Integrated Circuit Design (3)**

Prerequisite: Electrical Engineering 430 with minimum grade of C-.

Advanced treatment of transistor pairs, device mismatches, differential amplifiers, current mirrors, active loads, level shifting, and output stages. Parasitic and distributed device parameters. Economics of IC fabrication and impact on design.

#### **E E 534. Solid-State Devices (3)**

Prerequisite: Electrical Engineering 434.

Conduction theory of solids. Characteristics of tunnel, backward, breakdown, multilayer and varactor diodes; silicon controlled rectifiers and switches, unijunction transistors, hot electron devices. Lasers and laser applications.

#### **E E 539. Instrumentation Circuits I (3)**

Prerequisite: Electrical Engineering 430.

Design and analysis of hybrid analog/digital electronic sub-systems incorporated into modern instrument design. Emphasis on operational amplifier based circuit design and analog-to-digital and digital-to-analog conversion processes.

#### **E E 540. Microwave Devices and Systems (3)**

Prerequisite: Electrical Engineering 340. Recommended: Engineering 510.

Applications of Maxwell's equations to wave propagation. Microwave network parameters; guided wave transmission and reflection. Design of filters, couplers, power dividers and amplifiers. Applications in radar and telecommunications systems.

#### **E E 540L. Microwave Design and Measurements Laboratory (1)**

Three hours of laboratory.

Prerequisites: Credit or concurrent registration in Electrical Engineering 430L and 540.

Designs, computer simulations, fabrications, and testings of microwave matching networks, couplers, filters, and amplifiers.

**E E 541. Electro-Optics (3) II**

Prerequisite: Electrical Engineering 434.

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.

**E E 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.

**E E 553. Stochastic Signals (3) I**

Prerequisite: Electrical Engineering 410.

Random signals, correlation functions, power spectral densities, the Gaussian process, narrow band processes. Applications to communication systems.

**E E 556. Digital Signal Processing (3)**

Prerequisite: Electrical Engineering 410 or Physics 516.

Digital signal processing. Discrete-time signals, transform techniques, and digital filters. Design of FIR and IIR filters, FFTs, and finite length effects on digital systems.

**E E 558. Communication Systems II (3) II**

Prerequisite: Electrical Engineering 458.

Performance of analog and digital communication systems. Effects of noise and spectral characteristics.

**E E 558L. Communications and Digital Signal Processing Laboratory (1)**

Prerequisite: Electrical Engineering 558.

Experiments in modulation techniques, effects of noise on system performance, digital filters, and signal processing.

**E E 580. Modern Power Systems I (3) I**

Prerequisites: Engineering 280, Electrical Engineering 310 and 380.

Modern power system elements; calculation of load flow, fault currents, and system stability.

**E E 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.

**E E 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.

**E E 583. Power Electronics (3)**

Prerequisites: Electrical Engineering 380 and 430.

Design and analysis of power electronic devices. Power semiconductor switches, switch-mode power supplies, dc-to-ac inverters, PM and PWM ac-to-ac converters. Power electronics applications.

**E E 596. Advanced Electrical Engineering Topics (1-3) I, II**

Prerequisite: Consent of instructor.

Modern developments in electrical engineering. See Class Schedule for specific content. Maximum credit of nine units for any combination of Electrical Engineering 496 and 596 applicable to a bachelor's degree. Maximum credit of six units of Electrical Engineering 596 applicable to a 30-unit master's degree.

**UPPER DIVISION COURSES IN  
COMPUTER ENGINEERING (COMPE)**

**NOTE:** Prerequisites will be enforced in all 500-level courses. A copy of an official transcript will be accepted as proof. For corequisites, an enrollment confirmation form will be accepted.

*Any course at the 300 level or below must be passed with a grade of C- or better in order to be used as a prerequisite for any subsequent course.*

**COMPE 560. Computer and Data Networks (3)**

Two lectures and three hours of laboratory.

Prerequisites: Computer Engineering 271 and Electrical Engineering 410.

Wide area and local area networks. Multi-layered protocol models, telephone systems, modems, and network applications.

**COMPE 561. Advanced Windows Programming (3)**

Prerequisite: Computer Engineering 361.

Win32 application programmers interface. Microsoft foundation classes. Memory management. Multitasking and multithreading. The clipboard. Dynamic data exchange. Dynamic link libraries. Object linking and embedding. Active template library. ActiveX controls. Internet programming. (Formerly numbered Computer Engineering 577 and 577L.)

**COMPE 565. Multimedia Communication Systems (3)**

Prerequisite: Credit or concurrent registration in Computer Engineering 560.

Design and implementation of multimedia communication systems. Image compression, JPEG, VQ, cell-B standards. Video and audio compression standards, MPEG, MPEG-2, H.26X, G.72X. Data storage systems and multimedia requirements. Networking requirements and networks as multimedia carriers. Transport and network protocols for carrying multimedia over data networks. Multimedia system design, scheduling, congestion control, traffic shaping, buffer management.

**COMPE 572. VLSI Circuit Design (3) I**

Prerequisites: Computer Engineering 271 and Electrical Engineering 330.

Design of digital integrated circuits based on CMOS technology; characterization of field effect transistors, transistor level design and simulation of logic gates and subsystems; chip layout, design rules, introduction to processing; ALU architecture.

**COMPE 596. Advanced Computer Engineering Topics (1-3) I, II**

Prerequisite: Consent of instructor.

Modern developments in computer engineering. See Class Schedule for specific content. Maximum credit of nine units for any combination of Computer Engineering 496 and 596 applicable to a bachelor's degree. Maximum combined credit of six units of Computer Engineering 596 and 696 applicable to a 30-unit master's degree.

**GRADUATE COURSES IN  
ELECTRICAL ENGINEERING (E E)**

*All listed prerequisite courses or their equivalent for computer engineering and electrical engineering courses must be satisfied with a grade of C- or better.*

**E E 600. Seminar (1-3)**

Prerequisite: Consent of instructor.

An intensive study in advance electrical engineering. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **E E 622. Sampled-Data Systems (3)**

Prerequisite: Electrical Engineering 520.

Analysis and synthesis of sampled-data and digital control systems; techniques for the design of time optimal sampled-data control systems; z-transform calculus and difference equation synthesis techniques for determining stability and system response.

### **E E 634. Semiconductor RF Circuit Design (3)**

Prerequisite: Electrical Engineering 540.

Wide band amplifiers, low level RF amplifiers and mixers, IF amplifiers, AGC, tuning and stability problems, unilateralization and mismatching techniques, harmonic oscillators, VHF power amplifiers including varactor multipliers.

### **E E 642. Optical Communications (3)**

Prerequisite: Electrical Engineering 541 or 546.

Advanced topics of interest in electro-optical communications, including lasers, background light sources, modulators, receivers, optical fiber and atmospheric channels, and adaptive techniques.

### **E E 650. Modern Communication Theory I (3)**

Prerequisite: Electrical Engineering 553 or 558.

Probability theory, random variables, random processes, Gaussian process, random signals through linear systems, noise considerations, optimum receiver design, applications to digital and waveform communication.

### **E E 652. Principles and Applications of Information Theory (3)**

Prerequisite: Electrical Engineering 650.

Measure of information; digital communication systems, Shannon theorems, channel coding for applications in interference, noise combatting and jamming; source encoding for data compression. Multi-channel and multi-user information theory with applications to diversity, multipath and other environments.

### **E E 653. Coding Theory (3)**

Prerequisite: Electrical Engineering 650.

The theory of coding to combat noise over communication channels. Redundancy added to messages to assure arbitrarily small error rates at a given information rate. Discussion of channels and capacity. Block codes, cyclic codes, BCH codes, convolutional code.

### **E E 657. Digital Image Processing (3)**

Prerequisite: Electrical Engineering 556.

Theory of two-dimensional signals and systems, image transforms, image enhancement, restoration and compression, image analysis and computer vision.

### **E E 658. Advanced Applications of Digital Signal Processing (3)**

Prerequisite: Electrical Engineering 556 or 657.

Concepts of spectral analysis. Applications of DSP to speech encoding. Image coding, fast algorithms applied to speech, image, radar, sonar and geophysical signal processing.

### **E E 672. VLSI System Design (3)**

Prerequisite: Computer Engineering 572.

Design of microprocessor data paths and controllers, memory management, pipelines, multipliers, Risc and multiprocessor systems and applications.

### **E E 675. Advanced Microprocessors (3)**

Prerequisite: Computer Engineering 475.

Program development, circuit design, direct-memory access, multiprocessing, co-processing, and standardized bus design for a 32-bit microprocessor.

### **E E 678. Advanced Computer Design (3)**

Prerequisite: Computer Engineering 475.

Design principles for high performance computers. State-of-the-art in parallel computer systems, including pipelined computers, array processors and multiprocessor systems.

### **E E 679. Real-Time Software Engineering (3)**

Prerequisite: Electrical Engineering 675.

Principles of real-time programming and software engineering for microprocessor systems. Concurrent programming and multitasking. Structured programming. Software validation. Team programming projects.

### **E E 680. Computer Methods in Advanced Power System Analysis (3)**

Prerequisite: Electrical Engineering 580.

Computer Modeling and analysis techniques applied to large power systems.

### **E E 685. Micro-Electro-Mechanical Systems (MEMS) Design and Applications (3)**

(Same course as Mechanical Engineering 685.)

Prerequisite: Engineering Mechanics 585.

Design and manufacturing technology for micro- and nano-scale devices. Topics include solid state transducers, microscale physics, biomedical microelectronics, microfluidics, biosensors, and hybrid integration of microfabrication technology. Emphasis on biomedical applications.

### **E E 705. Seminar in Communications Systems (1-3)**

Prerequisite: Consent of instructor.

An intensive study in communication theory and systems. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **E E 706. Seminar in Computer Engineering (1-3)**

Prerequisite: Consent of instructor.

Intensive study in computer engineering topics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **E E 797. Research (1-3) Cr/NC/RP**

Prerequisite: Consent of department chair.

Research in engineering. Maximum credit six units applicable to a master's degree.

### **E E 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of department chair.

Individual study. Maximum credit three units applicable to a master's degree.

### **E E 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

### **E E 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.

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

### **E E 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Mechanical Engineering

In the College of Engineering

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## Faculty

Karen D. May-Newman, Ph.D., Associate Professor of Mechanical Engineering, Interim Chair of Department  
Subrata Bhattacharjee, Ph.D., Professor of Mechanical Engineering (Graduate Adviser)  
Ronald A. Kline, Ph.D., Professor of Mechanical Engineering  
James S. Burns, Ph.D., Associate Professor of Mechanical Engineering  
Khaled B. Morsi, Ph.D., Associate Professor of Mechanical Engineering  
Eugene A. Olevsky, Ph.D., Associate Professor of Mechanical Engineering  
Asfaw Beyene, Ph.D., Assistant Professor of Mechanical Engineering  
Thomas J. Impelluso, Ph.D., Assistant Professor of Mechanical Engineering  
Michael A. Lambert, Ph.D., Assistant Professor of Mechanical Engineering

## Adjunct Faculty

Randall German, Ph.D., Mechanical Engineering

## Courses Acceptable on Master's Degree Programs in Mechanical Engineering (M E)

### UPPER DIVISION COURSES

**NOTE:** Proof of Completion of prerequisites required for all Mechanical Engineering 300-, 400-, and 500-level courses. Copy of transcript. In addition, Mechanical Engineering 390, 450, 490A, and 530 require evidence of concurrent registration in appropriate courses.

#### **M E 510. Advanced Machine Design (3) I, II**

Prerequisites: Mechanical Engineering 314 and 340.

Application of advanced mechanics of materials to the design and analysis of mechanical elements. Introduction to probabilistic design and to finite element methods and applications. Design projects involve extensive use of finite element programs.

#### **M E 512. Simulation of Engineering Systems (3) I, II**

Prerequisites: Mechanical Engineering 290, 314, 350; Engineering Mechanics 340; Engineering 280; C programming language.

Modeling, simulation, analysis, and design of mechanical engineering dynamic, vibration, electromechanical, heat transfer, thermodynamic, fluid mechanics, and control systems.

#### **M E 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.

#### **M E 530. Automatic Control Systems (3)**

Prerequisites: Engineering 280 with a grade of C or better, and credit or concurrent registration in Mechanical Engineering 512.

Analysis of the dynamic characteristics of control components and systems. Stability and response of closed loop systems. Design of control systems.

#### **M E 540. Nonmetallic Materials (3)**

Prerequisites: Mechanical Engineering 314 and 340.

Fundamentals of ceramics, polymers, and composite materials. Materials design and selection. Statistical methods of brittle materials design, appropriate for ceramic materials, and rheological modeling of polymeric materials. Stress and strain analysis using classical lamination theory of multi-ply composite laminates.

#### **M E 542. Manufacturing with Nonmetallic Materials (3)**

Prerequisites: Mechanical Engineering 340 and Engineering 280 with a grade of C or better.

Engineering polymers and composites, processes, and manufacturing techniques. Polymer flow in extrusion, compression molding, RTM, and calendaring. Hands-on fabrication and test exercises included along with a capstone manufacturing project.

#### **M E 546. Computer Aided Manufacturing (3)**

Prerequisites: Mechanical Engineering 314, 340; Engineering 280 with a grade of C or better; and Engineering 195.

Computer controlled manufacturing and assembly techniques and devices. Databases and special languages. Agile manufacturing software programs and technologies.

#### **M E 570. Thermal Systems Analysis and Design (3)**

Prerequisites: Mechanical Engineering 450 and 470.

Analysis, design, and optimization of thermal systems using micro-computers. Modeling of thermal systems and components. Thermal system component characteristics and their effect on overall system performance. Relationship among thermal sciences in design process. Introduction to thermoeconomic optimization.

#### **M E 582. Heating, Ventilating, and Air-Conditioning (3)**

Prerequisites: Mechanical Engineering 450 and 470.

Fundamentals of air conditioning processes, psychrometrics, and building cooling load calculations. Design and analysis of HVAC systems. Equipment selection. Design codes and standards. Computerized cooling load calculations.

#### **M E 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.

#### **M E 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.

#### **M E 596. Advanced Mechanical Engineering Topics (1-3) I, II**

Prerequisite: Consent of instructor. **Proof of completion of prerequisite required:** Copy of transcript.

Modern developments in mechanical engineering. See Class Schedule for specific content. Maximum credit of six units for any combination of Mechanical Engineering 496, 499 and 596 applicable to a bachelor's degree. Maximum combined credit of six units of Mechanical Engineering 596 and 696 applicable to a 30-unit master's degree.

### GRADUATE COURSES

#### **M E 610. Finite Element Methods in Mechanical Engineering (3)**

Prerequisites: Engineering 280 with a grade of C or better and Mechanical Engineering 510.

Development of finite elements and an introduction to solution methods. Problems from various fields of study in mechanical engineering such as stress analysis, vibrations and heat transfer. Introduction to finite element programs such as NASTRAN.

#### **M E 614. Engineering Design: Analytical Methods (3)**

Prerequisites: Mechanical Engineering 512 and Engineering 510.

Classical optimization techniques, digital computer methods of optimization, design decision theory, reliability in design.

#### **M E 621. Mechanical Vibrations (3)**

Prerequisites: Mechanical Engineering 512, 520 and Engineering 510.

Topics in vibration relating to mechanical design such as nonlinear vibrations, distributed mass systems, random vibrations, mobility analysis, isolator design.

#### **M E 632. Advanced Topics in Automatic Controls (3)**

Prerequisite: Mechanical Engineering 530.

Analysis and synthesis of sample data systems. State space analysis of multivariable systems, optimal control systems.

#### **M E 645. Mechanical Behavior of Engineering Materials (3)**

Prerequisites: Mechanical Engineering 314, 340, and 350.

Elastic and plastic deformation of monolithic engineering materials and composites. Dislocation theory and plasticity of crystalline solids. Linear elastic and elastic-plastic fracture mechanics. Failure analysis of engineering components. Design optimization based on materials and service environment variables.

#### **M E 651. Advanced Thermodynamics (3)**

Prerequisites: Engineering 280 with a grade of C or better and Mechanical Engineering 450.

Advanced concepts of macroscopic thermodynamics are developed including entropy generation, irreversibility, effectiveness, exergy, and chemical exergy of fuels. Concepts applied to power and refrigeration cycles using computer software.

#### **M E 661. Gas Dynamics (3)**

Prerequisites: Mechanical Engineering 450 and Engineering 510.

Thermodynamics of high velocity compressible fluid flow. Adiabatic and diabatic flow; shock phenomena; imperfect gases; multidimensional flow. Applications to the propulsive duct and turbomachinery.

#### **M E 671. Conduction of Heat and Mass Transfer (3)**

Prerequisites: Mechanical Engineering 470 and Engineering 510.

Conduction heat transfer analysis of multi-dimensional and transient processes using both classical analysis and numerical methods. Analogous transport problems involving mass transfer by diffusion.

#### **M E 673. Convection Heat Transfer (3)**

Prerequisites: Mechanical Engineering 470 and Engineering 510. Recommended: Concurrent registration in Mechanical Engineering 663.

Convection heat transfer processes under laminar and turbulent conditions. Mass transfer. Scaling arguments, analytical and numerical modeling.

#### **M E 675. Radiation Heat Transfer (3)**

Prerequisites: Mechanical Engineering 470 and Engineering 510.

Radiation heat transfer processes. Radiative properties of surfaces and gases. Absorption, emission, and scattering phenomena. Numerical modeling.

#### **M E 685. Micro-Electro-Mechanical Systems (MEMS) Design and Applications (3)**

(Same course as Electrical Engineering 685.)

Prerequisite: Engineering Mechanics 585.

Design and manufacturing technology for micro- and nano-scale devices. Topics include solid state transducers, microscale physics, biomedical microelectronics, microfluidics, biosensors, and hybrid integration of microfabrication technology. Emphasis on biomedical applications.

#### **M E 691. Biomaterials (3)**

Prerequisites: Mechanical Engineering 260 and 590.

Structure and properties of metallic, ceramic, and polymer biomaterials. Chemical interaction with physiological environment. Thrombosis and hemostasis on synthetic surfaces. Sterilization and packaging. Ethics and regulatory approval process. Applications discussed in cardiovascular, pulmonary, renal, orthopedic and dental medicine.

#### **M E 696. Advanced Topics in Mechanical Engineering (2 or 3)**

Intensive study in specific areas of mechanical engineering. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of Mechanical Engineering 596 and 696 applicable to a 30-unit master's degree.

#### **M E 797. Research (1-3) Cr/NC/RP**

Prerequisites: Consent of graduate adviser and advancement to candidacy.

Research in engineering. Maximum credit six units applicable to a master's degree.

#### **M E 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit three units applicable to a master's degree.

#### **M E 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

#### **M E 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.

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

#### **M E 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# English

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In the Department of English and Comparative Literature  
In the College of Arts and Letters

## Faculty

Sherry B. Little, Ph.D., Professor of English, Chair of Department  
Sandra B. Alcosser, M.F.A., Professor of English (Fall Graduate Adviser, M.F.A. Program)  
Alida L. Allison, Ph.D., Professor of English and Comparative Literature  
Gerald J. Butler, Ph.D., Professor of English  
Marilyn Chin, M.F.A., Professor of English and Comparative Literature (Spring Graduate Adviser, M.F.A. Program)  
Laurie D. Edson, Ph.D., Professor of English and Comparative Literature  
Gerald H. Farber, Ph.D., Professor of English and Comparative Literature  
Ronald J. Gervais, Ph.D., Professor of English  
Sinda J. Gregory, Ph.D., Professor of English  
Jerome J. Griswold, Ph.D., Professor of English  
Peter C. Herman, Ph.D., Professor of English  
Harold Jaffe, Ph.D., Professor of English  
Lynda L. Koolish, Ph.D., Professor of English  
Lawrence F. McCaffery, Ph.D., Professor of English and Comparative Literature  
Harry Polkinhorn, Ph.D., Professor of English  
Laurel Amtower, Ph.D., Associate Professor of English  
Clare Colquitt, Ph.D., Associate Professor of English, Director of Graduate Studies, M.A. Program  
David Matlin, Ph.D., Associate Professor of English  
William A. Nericcio, Ph.D., Associate Professor of English and Comparative Literature  
June Cummins-Lewis, Ph.D., Assistant Professor of English  
Priti Joshi, Ph.D., Assistant Professor of English

## Associateships and Scholarships

Graduate teaching associateships and graduate assistantships in English are available to a limited number of qualified students. Applications and additional information may be secured from the graduate director and from the department office.

## General Information

The Department of English and Comparative Literature offers graduate study leading to a Master of Arts in English and the Master of Fine Arts in creative writing. The M.A. student can choose one of five areas of specialization: American literature, British literature, children's literature, comparative literature, or rhetoric and writing. The M.A. is a 30-unit degree program particularly well-suited for students who anticipate further graduate work in a literature or rhetoric Ph.D. program or who intend to teach English in a community college or, after obtaining a credential, in a secondary school. The M.F.A. in creative writing is a 54-unit program which offers study in poetry or fiction with a balance between studio and academic, traditional and experimental, commercial and aesthetic approaches. The program has two stages – graduate seminars followed by intensive study with one or more professors in tutorials and thesis preparation. The M.F.A. is a professional program intended for full-time students who wish to receive a terminal degree in creative writing. Each year, in addition to the resident faculty, the department invites approximately twenty writers and editors to the campus for readings and residencies.

The department offers a wide range of courses and approaches to the study of literature and writing, many of which are outlined in English 600, Introduction to Graduate Study, required of all entering M.A. students. Faculty publications in literature and rhetoric are similarly diverse. They include major literary biographies, historical studies, critical analysis from various current perspectives, reviews of and interviews with contemporary writers, as well as a broad spectrum of original poetry and fiction. The department also sponsors the literary periodicals Fiction International, Poetry International, and The Pacific Review.

## Master of Arts Degree in English

### Admission to Graduate Study

Students will be admitted in both the fall and spring semesters. Submit applications by October 1 for the spring and by February 1 for the fall.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. Students may be admitted to the master's program in English in one of two categories:

1. Classified Graduate Standing  
To be considered for admission, students must meet the following minimal requirements:
  - a. 24 units of upper division work in English. (Students choosing the comparative literature specialization may substitute foreign language literature or comparative literature courses.)
  - b. 2.85 overall on a 4.0 Grade Point Scale.
  - c. 3.0 grade point average in the English major. (Students choosing the comparative literature specialization must possess a 3.0 grade point average in either foreign language literature or comparative literature courses.)
  - d. The applicant normally must achieve a minimum score of 550 on the verbal section of the Graduate Record Examination, and a minimum of 5.0 on the GRE analytical essay examination. The results of the GRE should be sent directly to the Office of Graduate Admissions, San Diego State University (SDSU code: 4682).
2. Conditional Classified Graduate Standing
  - a. Conditional acceptance may be granted if there is a deficiency in any of the above requirements. A student accepted conditionally must customarily achieve an average of 3.25 in nine units of English or comparative literature courses with no grade less than B– before proceeding to further study and is limited to 12 units. Any units taken above this quota will not count toward the 30 units for the master's degree in English.
  - b. English major unit deficiencies. Students who lack 24 units of credit in upper division courses in English or in foreign language literature or comparative literature courses will be considered for conditional standing if they meet the requirements of 2.85 overall and achieve a minimum score of 550

on the verbal section of the Graduate Record Examination and a minimum of 5.0 on the GRE analytical essay examination. After the completion of 24 units for the undergraduate major, students will be considered for classified graduate standing if they meet the other requirements. Students choosing a comparative literature specialization may substitute 24 units of upper division coursework in foreign language literature or comparative literature courses for part of this requirement.

Applicants are required to submit a 750-1000 word statement of purpose and a 10-page writing sample from a previous literature course, preferably an analytical essay involving research. These materials, along with two sets of official transcripts (in sealed envelopes), and three letters of recommendation, should be sent in one single packet directly to the graduate adviser in the Department of English and Comparative Literature.

## Advancement to Candidacy and Language Requirement

All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement, as stated in Part Two of this bulletin. Each candidate, with the approval of the graduate director, may fulfill the foreign language requirement in one of several ways: (1) by passing a local examination administered by one of the University's foreign language departments, (2) by completing one three-unit upper division foreign language literature course with readings in the original language with a grade of C (2.0) or better, or (3) by passing an examination to be determined by the graduate adviser if the chosen language is one not taught in a department at San Diego State University.

## Specific Requirements for the Master of Arts Degree

(Major Code: 15011)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a 30-unit program of study, approved by the department's director of graduate studies, with at least 21 units of 600- and 700-numbered courses. The major includes a specialization in one of five program areas: American literature, British literature, children's literature, comparative literature, or rhetoric and writing. Students specializing in literature may choose Plan A (thesis) or Plan B (written examination). Students specializing in rhetoric and writing may only select the thesis option (Plan A).

### Specialization in American Literature

Core Courses (9 units):

- ENGL 600 Introduction to Graduate Study (3)
- ENGL 601 Literary Study in a Multicultural World (3)
- ENGL 602 Literary Theory and Critical Practice (3)

**American Literature Research Focus.** With prior approval by the graduate adviser, a student will select nine units from the following:

- ENGL 604A American Literary Period or Movement (3)
- ENGL 606A American Literary Type (3)
- ENGL 625 Literature of the United States (3)
- ENGL 700 Seminar: A Major Author or Authors (3)
- ENGL 725 Seminar: Issues in Literature of the United States (3)

(With the consent of the graduate adviser, English 798, with appropriate content, may be substituted for **one** of the above courses.)

**Electives: Diversification in Literary and Writing Research.** With the approval of the graduate adviser, nine units selected from other English and comparative literature departmental graduate offerings. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

### Culminating Experience:

- Plan A: (Thesis or Project) – 799A (3 units)
- Plan B: (Comprehensive Examination) – Additional 3 units of 700-level coursework in English.

### Specialization in British Literature

Core Courses (9 units):

- ENGL 600 Introduction to Graduate Study (3)
- ENGL 601 Literary Study in a Multicultural World (3)
- ENGL 602 Literary Theory and Critical Practice (3)

**British Literature Research Focus.** With prior approval by the graduate adviser, a student will select nine units from the following:

- ENGL 604B British Literary Period or Movement (3)
- ENGL 606B British Literary Type (3)
- ENGL 624 British Literature (3)
- ENGL 700 Seminar: A Major Author or Authors (3)
- ENGL 724 Seminar: Issues in British Literature (3)

(With the consent of the graduate adviser, English 798, with appropriate content, may be substituted for **one** of the above courses.)

**Electives: Diversification in Literary and Writing Research.** With the approval of the graduate adviser, nine units selected from other English and comparative literature departmental graduate offerings. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

### Culminating Experience:

- Plan A: (Thesis or Project) – 799A (3 units)
- Plan B: (Comprehensive Examination) – Additional 3 units of 700-level coursework in English.

### Specialization in Children's Literature

Core Courses (9 units):

- ENGL 600 Introduction to Graduate Study (3)
- ENGL 601 Literary Study in a Multicultural World (3)
- ENGL 602 Literary Theory and Critical Practice (3)

**Children's Literature Research Focus.** With prior approval by the graduate adviser, a student will select nine units from the following:

- ENGL 607 A Literary Type in Children's Literature (3)
- ENGL 627 History of Children's Literature (3)
- ENGL 700 Seminar: A Major Author or Authors (3)
- ENGL 727 Seminar: Issues in Children's Literature (3)

(With the consent of the graduate adviser, English 798, with appropriate content, may be substituted for **one** of the above courses.)

**Electives:** With the approval of the graduate adviser, nine units selected from other English and comparative literature departmental graduate offerings. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

### Culminating Experience:

- Plan A: (Thesis or Project) – 799A (3 units)
- Plan B: (Comprehensive Examination) – Additional 3 units of 700-level coursework in English.

### Specialization in Comparative Literature

Core Courses (9 units):

- ENGL 600 Introduction to Graduate Study (3)
- ENGL 601 Literary Study in a Multicultural World (3)
- ENGL 602 Literary Theory and Critical Practice (3)

**Comparative Literature Research Focus.** With prior approval by the graduate adviser, a student will select nine units from the following:

Three units acceptable for graduate credit, in a foreign language literature read in the original language.

Six units from the following:

ENGL 604C	Comparative Literature Literary Period or Movement (3)
ENGL 606C	Comparative Literature Literary Type (3)
ENGL 626	Comparative Literature (3)
ENGL 700	Seminar: A Major Author or Authors (3)
ENGL 726	Seminar: Issues in Comparative Literature (3)

(With the consent of the graduate adviser, English 798, with appropriate content, may be substituted for **one** of the above courses.)

**Electives: Diversification in Literary and Writing Research.**

With the approval of the graduate adviser, nine units selected from other English and comparative literature departmental graduate offerings. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

**Culminating Experience:**

Plan A:	(Thesis or Project) – 799A (3 units)
Plan B:	(Comprehensive Examination) – Additional 3 units of 700-level coursework in English.

**Specialization in Rhetoric and Writing**

Core Courses (9 units):

ENGL 600	Introduction to Graduate Study (3)
ENGL 601	Literary Study in a Multicultural World (3)
ENGL 602	Literary Theory and Critical Practice (3)

**Rhetoric and Writing Research Focus (9 units):**

RWS 601A	History of Rhetoric I (3)
RWS 602	Modern Rhetoric and Composition Studies (3)

Three units selected from:

RWS 640	Research Methods in Rhetoric and Writing Studies (3)
RWS 744	Seminar in Issues in Rhetorical Theory and Practice (3)

**Electives: Diversification in Literary and Writing Research.**

With the approval of the graduate adviser, nine units selected from other English and comparative literature departmental graduate offerings. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

**Culminating Experience:**

Plan A:	(Thesis or Project) – 799A (3 units)
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## Master of Fine Arts Degree in Creative Writing

### Admission to Graduate Study

STUDENTS WILL BE ADMITTED TO THE M.F.A. IN CREATIVE WRITING ONLY IN THE FALL SEMESTER AND COMPLETE APPLICATIONS MUST BE RECEIVED NO LATER THAN FEBRUARY 1.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

In addition to meeting the general requirements for admission to San Diego State University with classified graduate standing, as described in Part Two of this bulletin, a student must satisfy the following requirements before being recommended for classified graduate standing.

1. The applicant must submit a sample of creative work (15 poems or 30 pages of prose), a 750-1000 word statement of purpose, and three letters of recommendation, to enable the creative

writing faculty to assess the candidate's suitability to pursue an M.F.A. in creative writing. The sample of creative writing, the statement of purpose, and the letters of recommendation are to be sent directly to the director of the creative writing program, Department of English and Comparative Literature, San Diego State University.

2. The applicant must possess a baccalaureate degree in creative writing, or in English with a focus in creative writing, or an approved affiliated field, with a grade point average of not less than 3.0 overall in the last 60 units of study attempted, with a 3.25 undergraduate grade point average in the major, and a 3.5 average in those courses considered prerequisite for the M.F.A. focus the student elects. The applicant should send two sets of official transcripts (in sealed envelopes) directly to the graduate adviser in the Department of English and Comparative Literature.
3. If deficient, the applicant must complete undergraduate requirements commensurate with the proposed focus in the M.F.A. program.
4. The applicant normally must achieve a minimum score of 1050 on the Graduate Record Examination, with a minimum of 550 on the verbal section. The results of the GRE should be sent directly to the Office of Graduate Admissions, San Diego State University (SDSU code: 4682).

Students who submit especially compelling samples of creative work, but who have not met certain criteria or who demonstrate deficiencies in undergraduate preparation or basic skill development may be granted conditional classified admission to the program. The graduate coordinator shall specify the conditions for such admission with the proviso that any prerequisite coursework assigned must be completed with a minimum grade point average of 3.0 and no grade less than a B-.

A student holding an M.A. degree in English with a specialization in creative writing from San Diego State University, or any other acceptable accredited institution of higher learning, must formally apply for admission to the M.F.A. program. Applicants holding an M.A. or pursuing an M.F.A. at an acceptable accredited institution may transfer up to 18 units upon review and recommendation by the creative writing faculty in the area of focus and the approval of the Dean of the Graduate Division. Students unable to satisfy the requirements for the M.F.A. degree will not automatically be considered for an M.A. degree.

Students already accepted into the M.F.A. program at San Diego State University who request a change of focus (poetry or fiction) at a later date will be required to reapply to the creative writing committee.

### Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. Candidates for the M.F.A. degree must have completed 30 units within their official program of study, including transfer credit, with a minimum grade point average of 3.25 and have no grade less than B-. Students will be permitted to repeat only one course to achieve these levels.

In addition, the M.F.A. graduate committee must have recommended appointment of a thesis adviser from the student's area of focus (poetry, fiction) and the creative writing committee must have approved a thesis topic. Applicants for advancement should submit a portfolio of their creative work to the creative writing committee for a recommendation for advancement. Aspects to be reviewed include artistic achievement, ability to function in situations that writers and teachers usually encounter, and demonstration of skills in the focus area.

After advancement to candidacy, a student must enroll in and complete a minimum of 24 units from the official program to include English 797 and 799A.

## Specific Requirements for the Master of Fine Arts Degree in Creative Writing

(Major Code: 15071)

In addition to meeting the requirements for classified graduate standing, candidates for the M.F.A. in creative writing must complete a 54-unit graduate program, 39 of which must be in courses numbered 600 and above as follows:

1. **Creative Writing Research Focus.** Student to select one 24-unit research focus as follows:
  - A. Fiction  
18 units of ENGL 750F.  
Six units in another genre of creative writing.
  - B. Poetry  
18 units of ENGL 750P.  
Six units in another genre of creative writing.
2. **Literature Research.** An 18-unit literature research component divided as follows:
  - A. Three units selected from the following:  
ENGL 630 Form and Theory of Poetry (3)  
ENGL 631 Form and Theory of Fiction (3)
  - B. Nine units in American, British, or comparative literature, or an appropriate modern language literature selected with the approval of the M.F.A. adviser.
  - C. Six units selected from the following:  
ENGL 700 Seminar: A Major Author or Authors (3)  
ENGL 724 Seminar: Issues in British Literature (3)  
ENGL 725 Seminar: Issues in Literature of the United States (3)  
ENGL 726 Seminar: Issues in Comparative Literature (3)  
ENGL 730 Seminar: Perspectives in Critical Analysis (3)  
ENGL 784 Seminar: Creative Non-Fiction (3)  
ENGL 796 Internship (3) **OR** ENGL 798 Special Study (3) with consent of instructor  
RWS 601A History of Rhetoric I (3)  
RWS 601B History of Rhetoric II (3)  
RWS 602 Modern Rhetoric and Composition Studies (3)  
RWS 640 Research Methods in Rhetoric and Writing Studies (3)  
RWS 744 Seminar in Issues in Rhetorical Theory and Practice (3)
3. Six units of electives selected with consent of adviser.
4. **Thesis.** Six units in preparation of the thesis; a book-length creative work.  
ENGL 797 Thesis Research (3)  
ENGL 799A Thesis (3)

## Courses Acceptable on the Master's Degree Programs in Creative Writing and English

(C LT) (ENGL)

### UPPER DIVISION COURSES IN ENGLISH (ENGL)

Prerequisite for all 500-level courses: Six lower division units in courses in literature and/or creative writing.

#### ENGL 501. Literature for Children (3) I, II

Critical analysis of literature intended for children. Study of texts and illustrations.

#### ENGL 502. Adolescence in Literature (3)

Prerequisite: Six units in literature.

Works centrally concerned with an adolescent protagonist. Includes both traditional novels of development (Bildungsroman) and contemporary young adult novels.

#### ENGL 503. Topics in Children's Literature (3)

Topics in children's and adolescents' literatures such as regionalism, multiculturalism, fantasy, science fiction, non-fiction, illustrated books, nineteenth-century classics, major works by twentieth-century authors, British children's literature, the noir young adult novel, and the history of genre. Maximum credit six units.

#### ENGL 508W. The Writing of Criticism (3) I, II

Prerequisites: Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units, passed Transfer Writing Assessment or Writing Proficiency Assessment with a score of 8 or better or earned a C or higher in RWS 95 or 96 or 280 or 281, and completed the General Education requirement in Composition and Critical Thinking. **Proof of completion of prerequisites required:** Test scores or verification of exemption; copy of transcript.

Theory and practice of literary criticism. Emphasis on the work of important critics and on development of student's own critical writing.

#### ENGL 510. Teaching Literature (3)

Prerequisite: Six units in 500-level literature courses.

Theory and practice of teaching literature in high schools, colleges, and universities; various critical approaches (such as feminist, new historical, deconstruction, reader response) to literature and their implications for teaching and developing teaching styles.

#### ENGL 519. Ethnic Literatures of the United States (3) I, II

Prerequisite: Six units in literature.

Works from United States ethnic literatures, with emphasis on formerly excluded traditions as African-American, Hispanic and Chicano, Asian-American, and American Indian.

#### ENGL 520. African-American Literary Tradition (3)

Prerequisite: Six units in literature.

African-American literature from its eighteenth-century beginnings to the present. Early political and social concerns and concomitant utilitarian forms; aesthetic concerns and forms in nineteenth and twentieth centuries.

#### ENGL 521. Early American Literature (3) I, II

Prerequisites: Six lower division units in literature.

Representative works by American writers from the colonial period through the Revolution; to include works by Anne Bradstreet, Phillis Wheatley, Olaudah Equiano, Cotton Mather, Jonathan Edwards, Benjamin Franklin, Thomas Jefferson, various Native American speakers and writers, and others.

#### ENGL 522. Literature of the United States, 1800-1860 (3) I, II

Representative works by United States writers from 1800 to 1860; likely to include works by Emerson, Hawthorne, Melville, Poe, Stowe, Thoreau, Whitman, and others.

#### ENGL 523. Literature of the United States, 1860-1920 (3) I, II

Representative works by United States writers from 1860 to 1920; likely to include works by Charles Chesnutt, Kate Chopin, Stephen Crane, Emily Dickinson, Henry James, Mark Twain, Edith Wharton, and others.

#### ENGL 524. Literature of the United States, 1920-1960 (3) I, II

Representative works by United States writers from 1920 to 1960; likely to include works by Willa Cather, T. S. Eliot, William Faulkner, F. Scott Fitzgerald, Ernest Hemingway, Zora Neale Hurston, Eugene O'Neill, Katherine Anne Porter, Ezra Pound, John Steinbeck, and others.

#### ENGL 525. Literature of the United States, 1960 to Present (3) I, II

United States writers from 1960 to the present; likely to include works by Edward Albee, Saul Bellow, Allen Ginsberg, Joseph Heller, Maxine Hong Kingston, Norman Mailer, Toni Morrison, Sylvia Plath, Adrienne Rich, Kurt Vonnegut, Eudora Welty, and others.

**ENGL 526. Topics in Literature of the United States (3)**

Topics in United States literature to include the literature of the South, Black writers in the U.S., the frontier and U.S. literature, the out-cast in U.S. literature, the immigrant experience in U.S. literature. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

**ENGL 527. Genre Studies in Literature of the United States (3)**

Study of a specific literary genre: overview of the genre's development in United States literature (the U.S. novel, the U.S. short story, U.S. poetry) or focus on a narrower period (the modern U.S. novel, the contemporary U.S. novel, U.S. autobiographies, others). May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

**ENGL 528. Individual United States Authors (3)**

Works of a major United States author or, if useful comparisons and juxtapositions warrant it, the works of two or three authors: Melville, Twain, James, Faulkner, Steinbeck, Cather, Morrison; or Pound and Eliot, Emerson and Thoreau, Vonnegut and Barth, Rich and Levertov, and others. See Class Schedule for specific content. May be repeated with new title and content. Maximum credit six units.

**ENGL 529. Medieval Literature (3)**

English literature from its birth through high middle ages.

**ENGL 530. Chaucer (3)**

Chaucer's works, with emphasis on *The Canterbury Tales* and *Troilus and Criseyde*.

**ENGL 531. Renaissance Literature (3)**

English poetry and prose from 1485 to 1603.

**ENGL 533. Shakespeare (3) I, II**

An introduction to the writings of Shakespeare. This course cannot be used in place of English 302 to satisfy General Education requirements.

**ENGL 534. Study of Shakespeare (3)**

Prerequisite: English 533.

Advanced study of Shakespeare's achievement as poet and playwright. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**ENGL 536. Seventeenth Century Literature (3)**

English poetry and prose from 1603 to 1660.

**ENGL 537. Milton (3)**

Milton's writings, with emphasis on *Paradise Lost*.

**ENGL 538A-538B. Restoration and Eighteenth Century Literature (3-3)**

English literature in the neoclassical era. Semester I: Dryden, Swift, Pope, and their contemporaries. Semester II: Writers of the middle and late eighteenth century.

**ENGL 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.

**ENGL 541A-541B. English Drama (3-3)**

English dramatic literature from its beginnings to the present. Semester I: From the beginning to 1642. Semester II: Period following reopening of the theatres in 1660.

**ENGL 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.

**ENGL 543. Victorian Literature (3)**

Representative British works from 1837 to 1890 by such writers as Carlyle, Tennyson, Ruskin, Browning, Dickens, Arnold, Eliot, and Pater.

**ENGL 544. British Literature, 1890-1918 (3)**

Representative British works from 1890 to 1918 by such writers as Hardy, Gissing, Shaw, Conrad, Yeats, Wells, Forster, Mansfield, and the World War I poets.

**ENGL 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.

**ENGL 548. British Literature, 1950 to Present (3)**

Representative British works from 1950 to the present by such writers as Golding, Amis, Murdoch, Lessing, Pinter, Hughes, Fowles, Stoppard, Drabble, and Ishiguro.

**ENGL 549. Topics in English Literature (3)**

The works of Spenser, the metaphysical school of poetry, the English satirists, major movements in contemporary English fiction, and the like. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

**ENGL 560A. British Literature, Beginnings Through the Eighteenth Century (3) I, II**

Survey of major British writers, with emphasis on reading of complete works. From the beginnings to the neoclassical period. Especially appropriate for those who will teach British literature, and for those proceeding on to graduate study.

**ENGL 560B. British Literature, Romanticism to the Present (3) I, II**

Survey of major British writers, with emphasis on reading of complete works. Begins with the Romantic writers. Especially appropriate for those who will teach British literature, and for those proceeding on to graduate study.

**ENGL 570. Techniques of Poetry (3)**

Prerequisite: English 280.

Techniques of poetry from the creative writer's point of view. Introduction to critical and theoretical literature on poetry. Includes a creative writing workshop.

**ENGL 571. Techniques of the Short Story (3)**

Prerequisite: English 280.

Techniques of the short story from the writer's point of view. Introduction to critical and theoretical literature on the short story. Includes a creative writing workshop.

**ENGL 573. Techniques of the Novel (3)**

Prerequisite: English 280.

Techniques of the novel from the writer's point of view. Introduction to critical and theoretical literature on the novel. Includes a creative writing workshop.

**ENGL 576. Literary Editing and Publishing (3)**

Prerequisite: English 280.

Principles and practices of editing and literary publishing. Workshop on small press publishing. Includes editing and publishing workshop.

**ENGL 577. Techniques of Screenwriting (3)**

Prerequisite: English 280 or Television, Film, and New Media 110 or 510 for television, film, and new media majors.

Techniques of screenwriting. Introduction to critical and theoretical literature on screenwriting. Includes a creative writing workshop.

**ENGL 579. Topics in Creative Writing (3)**

Prerequisite: English 280.

Techniques of creative writing focusing on a specialized genre such as comedy, science fiction, and biography. Study of the critical and theoretical literature on the genre. Includes a creative writing workshop. See Class Schedule for specific content. Maximum credit six units.

### **ENGL 580. Writing of Poetry (3) I, II**

Prerequisite: English 570.

A creative writing workshop in poetry. Continuation of English 570. Maximum credit six units.

### **ENGL 581W. Writing of Fiction (3) I, II**

Prerequisites: English 280. Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units, passed Transfer Writing Assessment or Writing Proficiency Assessment with a score of 8 or better or earned a C or higher in RWS 95 or 96 or 280 or 281, and completed the General Education requirement in Composition and Critical Thinking. **Proof of completion of prerequisites required:** Test scores or verification of exemption; copy of transcript.

A creative writing workshop in fiction. Continuation of English 571. Maximum credit six units.

### **ENGL 583. Writing Long Narrative (3)**

Prerequisite: English 573.

A creative writing workshop in long narrative, especially the novella or novel. Continuation of English 573. Maximum credit six units.

### **ENGL 584W. Writing Informal Essays (3) I, II**

Prerequisites: English 280. Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units, passed Transfer Writing Assessment or Writing Proficiency Assessment with a score of 8 or better or earned a C or higher in RWS 95 or 96 or 280 or 281, and completed the General Education requirement in Communication and Critical Thinking. **Proof of completion of prerequisites required:** Test scores or verification of exemption; copy of transcript.

A creative writing workshop in nonfiction, especially the essay as an art form. Maximum credit six units.

### **ENGL 587. Writing the Screenplay (3)**

Prerequisite: English 577 or Television, Film, and New Media 110 or 510 for television, film, and new media majors.

A creative writing workshop in screenwriting with emphasis on the feature film. Continuation of English 577. Includes playwriting and revising a television script or short film. Maximum credit six units.

### **ENGL 596. Selected Topics in English (1-3)**

Selected topics in English. May be repeated with new content and approval of instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

#### **UPPER DIVISION COURSES IN COMPARATIVE LITERATURE (C LT)**

Prerequisite for all 500-level courses: Six units in literature or three units in literature and three units in a related area appropriate to the course in question.

### **C LT 511. Continental Renaissance (3)**

Representative selections from authors of the Renaissance period in continental Europe.

### **C LT 512. Seventeenth and Eighteenth Century European Literature (3)**

Selected works by European writers prior to 1800.

### **C LT 513. Nineteenth Century European Literature (3)**

Selected works by European writers between 1800 and 1900.

### **C LT 514. Modern European Literature (3)**

Selected works by European writers of the twentieth century.

### **C LT 530. Topics in Asian Literature (3)**

Specialized study of a selected topic in Asian literature. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

### **C LT 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.

### **C LT 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.

### **C LT 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.

### **C LT 571. Literary Use of Legend (3)**

Literary treatment of such legendary figures as Don Juan, Faust, and Ulysses, in a wide range of literature and genres. See Class Schedule for specific content.

### **C LT 577. Major Individual Authors (3)**

In-depth study of the works of a major author, such as Dante, Murasaki, or Dostoyevsky. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

### **C LT 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.

### **C LT 594. Topics in Literature and the Arts (3)**

Prerequisite: Six upper division units in literature or any of the other arts.

Comparative study of literature and other arts such as painting, sculpture, architecture, music, dance, and film. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a bachelor's degree. Maximum credit six units applicable to the M.F.A. degree in creative writing.

### **C LT 595. Literature and Aesthetics (3)**

Prerequisite: Six upper division units in literature or any of the other arts.

Theoretical and experiential investigation of relationships between literature and the other arts; literary works in context of an inquiry into aesthetics.

### **C LT 596. Topics in Comparative Literature (3)**

An intensive study of a topic to be selected by the instructor. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

#### **GRADUATE COURSES IN ENGLISH (ENGL)**

### **ENGL 600. Introduction to Graduate Study (3)**

Prerequisite: Twelve upper division units in English.

Introduction to research methods and critical approaches common in the graduate study of literature and expository writing, with attention to basic reference works, bibliographical techniques, analytical strategies, scholarly frames of reference, and pedagogy. Recommended for first-semester graduate students.

### **ENGL 601. Literary Study in a Multicultural World (3)**

Prerequisite: Credit or concurrent registration in English 600.

Relationship of literature to gender, race, class, and nationality. Changing conceptions of literary canons. Exploration, through literary texts, of values in literature and the constituents of literary value.

**ENGL 602. Literary Theory and Critical Practice (3)**

Prerequisite: Credit or concurrent registration in English 600.

Major issues in the history of literary criticism as well as contemporary approaches. Study of criticism and theory accompanied by writing practicum. Students will write in several critical modes and build graduate level proficiency in analyzing literary issues. Prerequisite to 700-level seminars.

**ENGL 604. A Literary Period or Movement (3)**

Prerequisites: An appropriate upper division or graduate level background course; credit or concurrent registration in English 600.

Advanced study, through its literature, of a literary period such as the Renaissance, or a movement such as American modernism. May be repeated with new content. Maximum credit six units applicable to a master's degree.

- A. American Literature
- B. British Literature
- C. Comparative Literature

**ENGL 606. A Literary Type (3)**

Prerequisite: Credit or concurrent registration in English 600.

Advanced study of a specific literary genre, such as the novel, tragic drama, lyric poetry, the personal essay, autobiography. May be repeated with new content. Maximum credit six units applicable to a master's degree.

- A. American Literature
- B. British Literature
- C. Comparative Literature

**ENGL 607. A Literary Type in Children's Literature (3)**

Prerequisite: Twelve upper division units in English. Strongly recommended: Coursework in children's literature.

Focus on children's literature to examine a literary type, such as the regional novel, post colonial literature, fantasy, autobiography, young adult literature, fairy tales, illustrated literature, etc. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**ENGL 624. British Literature (3)**

Prerequisite: Twelve upper division units in English.

Selected works of an author, period, or subject in English literature. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**ENGL 625. Literature of the United States (3)**

Prerequisite: Twelve upper division units in English, with courses in American literature strongly recommended.

Selected works of an author, period, or subject in literature of the United States. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**ENGL 626. Comparative Literature (3)**

Prerequisite: Twelve upper division units in English, comparative literature, or a foreign language literature.

Comparative approaches to literature: study of a theme, geographical region, external relationship, or of selected authors. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**ENGL 627. History of Children's Literature (3)**

Prerequisite: Twelve upper division units in English. Strongly recommended: Coursework in children's literature.

Roots and development of children's literature as a distinct field, from oral literature to contemporary explosions of publications.

**ENGL 630. Form and Theory of Poetry (3)**

Prerequisite: Twelve upper division units in English.

Poetry as a literary form. May be repeated with new content. Maximum credit six units applicable to an M.F.A. degree in creative writing.

**ENGL 631. Form and Theory of Fiction (3)**

Prerequisite: Twelve upper division units in English.

Fiction as a literary form. May be repeated with new content. Maximum credit six units applicable to an M.F.A. degree in creative writing.

**ENGL 696. Special Topics (3)**

Prerequisite: Twelve upper division units in English.

Intensive study in specific areas of English. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 526, 549, or 696 applicable to a 30-unit master's degree.

**ENGL 700. Seminar: A Major Author or Authors (3)**

Prerequisites: English 600 and 602.

Critical study of a major author or authors such as Shakespeare, Charles Dickens, Edith Wharton, Marcel Proust, Gabriel Garcia Marquez, and others. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**ENGL 724. Seminar: Issues in British Literature (3)**

Prerequisites: English 600 and 602.

Advanced study of issues within the development of the novel in Great Britain, colonial literatures in English, the British lyrical tradition and others. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**ENGL 725. Seminar: Issues in Literature of the United States (3)**

Prerequisites: English 600 and 602.

Advanced study of such issues as regionalism, ethnicity, the urban experience, gender, the political novel in literature of the United States. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**ENGL 726. Seminar: Issues in Comparative Literature (3)**

Prerequisites: At least two courses selected from English 600, 601, and 602.

Advanced study of an issue such as translation, negritude, poetic language, or literature and censorship. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**ENGL 727. Seminar: Issues in Children's Literature (3)**

Prerequisite: Six units of approved 500- or 600-level courses.

Issues and topics of special interest to children's literature, such as gender depictions, commodification, cross-over writing, and regionalism. Maximum credit six units applicable to a master's degree.

**ENGL 730. Seminar: Perspectives in Critical Analysis (3)**

Prerequisites: English 600 and 602.

Advanced study of analytical perspectives such as contemporary literary theory, feminist poetics, canon and exclusion, literature and other arts, literature and other disciplines.

**ENGL 750F. M.F.A. Seminar: Fiction Writing (3)**

Prerequisite: Open only to students admitted to M.F.A. in creative writing.

Advanced seminar in fiction writing. May include readings in contemporary fiction and narrative theory. Students in fiction focus must take course six times, generating new work each time with various instructors. Maximum credit 18 units applicable to a master's degree.

**ENGL 750P. M.F.A. Seminar: Poetry Writing (3)**

Prerequisite: Open only to students admitted to M.F.A. in creative writing.

Advanced seminar in poetry writing. May include readings in contemporary poetry and theory. Students in poetry focus must take course six times, generating new work each time with various instructors. Maximum credit 18 units applicable to a master's degree.

**ENGL 784. Seminar in Creative Non-Fiction (3)**

Prerequisite: Six units of graduate level creative writing courses.

Advanced approach to writing book reviews and short critical essays. Professional focuses necessary for these forms. Emphasis on writing, reading, research, and direct function of these processes.

**ENGL 790. M.A. Examination Preparation (3) Cr/NC**

Prerequisites: Twenty-four units of graduate coursework that counts toward the M.A. in English. Student must be in final semester of study for the master's degree.

Survey of selected poetry, fiction, and drama in American, British, and comparative literature included in M.A. examination. Emphasis on texts (close readings) and contexts (critical, literary, historical, cultural). Strongly recommended for students taking M.A. examination.

**ENGL 796. Internship (3) Cr/NC**

Prerequisites: Advancement to candidacy for the Master of Arts degree in English and comparative literature or admission to the Master of Fine Arts program and consent of the graduate adviser and supervising professor.

Work experience with a practicing professional or company in the community, such as working as editorial assistant or teacher intern.

**ENGL 797. Thesis Research (3)**

Prerequisite: Advancement to candidacy in the M.F.A. degree in creative writing.

Independent work in general field of candidate's thesis project.

**ENGL 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

**ENGL 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**ENGL 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

**ENGL 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Exercise Physiology

In the Department of Exercise and Nutritional Sciences  
In the College of Professional Studies and Fine Arts

**OFFICE: Exercise and Nutritional Sciences 351**  
**TELEPHONE: (619) 594-5541**

## Faculty

Barbara E. Ainsworth, Ph.D., M.P.H., Professor of Exercise and Nutritional Sciences, Chair of Department  
Michael J. Buono, Ph.D., Professor of Exercise and Nutritional Sciences  
Jeanne F. Nichols-Bernhard, Ph.D., Professor of Exercise and Nutritional Sciences  
Larry S. Verity, Ph.D., Professor of Exercise and Nutritional Sciences (Graduate Adviser)  
Fred W. Kolkhorst, Ph.D., Associate Professor of Exercise and Nutritional Sciences

## Associateships

Graduate teaching associateships in exercise and nutritional sciences are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the department or the graduate adviser.

## General Information

The Department of Exercise and Nutritional Sciences offers graduate study leading to the Master of Science degree in exercise physiology and a concurrent graduate program leading to a Master of Science degree in nutritional science and M.S. degree in exercise physiology. The major objective of the concurrent graduate program is to offer preparation in the interrelated fields of nutritional science and exercise physiology.

The Master of Science degree in exercise physiology has strong theoretical and practical components that provide a basis for students who anticipate employment in the field of rehabilitative and/or preventive exercise, as well as for those who intend to pursue a doctoral degree in exercise science. The faculty includes researchers who are professionally active in areas of study such as thermoregulation, nutrition and metabolism, exercise and aging, cardiac and metabolic pathophysiology, and environmental physiology. The department also has an adult fitness program which provides the students an opportunity to gain exercise-related experience with apparently healthy adults of all ages. Moreover, under the close supervision of faculty, graduate students learn pragmatic skills, such as comprehensive physiological testing, exercise training, and participant education in the field of preventive and clinical exercise programming.

## Master of Science Degree in Exercise Physiology

### Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin. In addition, a student applying for admission to the graduate program in exercise physiology must meet the following requirements.

1. A bachelor's degree in kinesiology. Applicants who do not have an undergraduate major in kinesiology may be admitted to conditionally classified graduate standing on the recommendation of the departmental graduate adviser. Students will be required to complete or have equivalent preparation in Biology 212, 336, Exercise and Nutritional Sciences 303, 304, 304L, and an undergraduate statistics course in addition to the minimum 36 units required for the Master of Science degree.
2. A grade point average (GPA) of at least 3.0 in the last 60 units of coursework.
3. A minimum score of 475 on each of the verbal and quantitative sections of the GRE General Test.

Students will be admitted ONLY in the fall semester. Submit applications no later than February 1.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Exercise and Nutritional Sciences:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) Two letters of reference;
- (4) Letter of intent: 1-2 pages describing applicant's background, research interests, and goals.

Mail or deliver your complete admissions package to:  
Department of Exercise and Nutritional Sciences  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7251

## Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Two of this bulletin. Nine units of coursework in the official program must remain after advancement to candidacy.

## Specific Requirements for the Master of Science Degree

**(Major Code: 08355)**

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree, described in Part Two of this bulletin. The 36-unit program includes a minimum of 30 units in Exercise and Nutritional Sciences. The remaining units must be selected from courses listed in this bulletin as acceptable on master's degree programs. At least 27 units of the 36-unit program must be in 600- and 700- numbered courses. A final oral examination on the field of the thesis and on the implications of the thesis research for the broader field of exercise physiology is also required.

## Exercise Physiology

Students must develop and sign a formal plan of study which must be approved by both a faculty adviser and the graduate adviser. This official program of study is developed when the student has completed between 12 and 21 units of study, and must be filed with the Graduate Division as a prerequisite for advancement to candidacy.

The department expects a student to complete the degree within seven years. Failure to complete the degree requirements within seven years will result in dismissal from the program.

Required courses (36 units):

ENS 601	Experimental Methods in Exercise and Nutritional Sciences (3)
ENS 602	Research Evaluation in Exercise and Nutritional Sciences (3)
ENS 632	Physiological Chemistry of Exercise (3)
ENS 659	Exercise Cardiology and Pathology (3)
ENS 661	Seminar in Advanced Physiology of Exercise (3)
ENS 662	Advanced Exercise Physiology Laboratory (3)
ENS 666	Adult Fitness: Exercise Prescription (3)
ENS 668	Adult Fitness: Exercise Leadership and Administration (3)
ENS 796	Exercise Specialist Internship (3) Cr/NC
ENS 799A	Thesis (3) Cr/NC/RP

Electives (6 units): Electives to be selected with approval of graduate adviser.

### Master of Science Degree in Nutritional Science and Master of Science Degree in Exercise Physiology

#### Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin. In addition, a student applying for admission to the concurrent program in nutritional science and exercise physiology must meet the following requirements.

1. A grade point average (GPA) of at least 3.0 in the last 60 units of coursework.
2. A bachelor's degree in foods and nutrition, exercise science, kinesiology, physical education, or related fields. Students will be required to complete or have equivalent preparation in Biology 212, 336, Chemistry 100, 130, 160, Nutrition 302, 302L, and either Nutrition 204 or 311, and Exercise and Nutritional Sciences 303, 304, 304L, and an undergraduate statistics course.
3. A minimum score of 475 on each of the verbal and quantitative sections of the GRE General Test.

Students will be admitted ONLY in the fall semester. Submit applications no later than February 1.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Exercise and Nutritional Sciences:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) Two letters of reference;
- (4) Letter of intent: 1-2 pages describing applicant's background, research interests, and goals.

Mail or deliver your complete admissions package to:

Department of Exercise and Nutritional Sciences  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7251

#### Advancement to Candidacy

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

### Specific Requirements for the Master of Science in Nutritional Science and Master of Science in Exercise Physiology

(Major Code: 08356)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete an officially approved course of study of not less than 48 units as outlined below.

ENS 601	Experimental Methods in Exercise and Nutritional Sciences (3)
ENS 602	Research Evaluation in Exercise and Nutritional Sciences (3)
ENS 632	Physiological Chemistry of Exercise (3)
ENS 659	Exercise Cardiology and Pathology (3)
ENS 661	Seminar in Advanced Physiology of Exercise (3)
ENS 662	Advanced Exercise Physiology Laboratory (3)
ENS 666	Adult Fitness: Exercise Prescription (3)
ENS 668	Adult Fitness: Exercise Leadership and Administration (3)
ENS 796	Exercise Specialist Internship (3) Cr/NC
ENS 798	Special Study (2) Cr/NC/RP
NUTR 600	Seminar: Foods and Nutrition (3)
NUTR 607	Child Nutrition (3)
NUTR 608	Geriatric Nutrition (3)
NUTR 610	Nutrition and Energy (3)
NUTR 700	Seminar in Nutrition (3)
NUTR 798	Special Study (1) Cr/NC/RP
ENS 799A	Thesis (3) Cr/NC/RP
OR	
NUTR 799A	

If a student, after entering the concurrent program leading to a Master of Science degree in nutritional science and a Master of Science degree in exercise physiology returns to a single degree program, all the requirements for the single degree program must then be met. A final oral examination in the field of the thesis and its implications to the broader fields of nutritional science and exercise physiology is also required.

The department expects the student to complete the degree requirements within seven years. Failure to complete the degree requirements within seven years will result in dismissal from the program.

### Courses Acceptable on Master's Degree Programs (ENS)

#### UPPER DIVISION COURSE Exercise and Nutritional Sciences Course

#### ENS 596. Selected Topics in Exercise and Nutritional Sciences (1-3) I, II

Selected topics in exercise and nutritional sciences. May be repeated with new content and approval of instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**GRADUATE COURSES**

**Exercise and Nutritional Sciences Courses**

**ENS 601. Experimental Methods in Exercise and Nutritional Sciences (3)**

Prerequisite: Undergraduate statistics course.  
Experimental methods in exercise and nutritional science.

**ENS 602. Research Evaluation in Exercise and Nutritional Sciences (3)**

Prerequisite: Exercise and Nutritional Sciences 601.  
Techniques in designing, conducting, and reporting research in exercise and nutritional science. Qualitative and quantitative paradigms examined. Ethical consideration of human research.

**ENS 632. Physiological Chemistry of Exercise (3)**

Prerequisite: Exercise and Nutritional Sciences 661.  
Biochemical and metabolic responses of the human body to acute and chronic exercise. Neuroendocrine control of fuel regulation during exercise.

**ENS 659. Exercise Cardiology and Pathology (3)**

Prerequisites: Exercise and Nutritional Sciences 304 and 304L.  
Interpretation of resting and exercise electrocardiograms with cardiopulmonary pathologies that skew interpretations.

**ENS 661. Seminar in Advanced Physiology of Exercise (3)**

Prerequisites: Exercise and Nutritional Sciences 303 and 304.  
Advanced aspects of the physiology of exercise. Effects of exercise on human beings in relation to health, longevity, morphology and performance.

**ENS 662. Advanced Exercise Physiology Laboratory (3)**

Nine hours of laboratory.  
Prerequisites: Exercise and Nutritional Sciences 304, 304L, and admission to program in Exercise Physiology.  
Laboratory course designed to develop competency in respiratory metabolism pulmonary function, gas analysis, blood chemistry and ergometry. Experience in the application of exercise procedures with human subjects and analysis and interpretation of results.

**ENS 666. Adult Fitness: Exercise Prescription (3)**

Prerequisites: Exercise and Nutritional Sciences 304 and 304L.  
Physical conditioning programs for the prevention, rehabilitation, and control of diseases associated with aging adults. Topics include disease etiology, health/disease evaluation, and exercise prescription for apparently healthy and diseased adults.

**ENS 668. Adult Fitness: Exercise Leadership and Administration (3)**

One lecture and six hours of laboratory.  
Prerequisite: Exercise and Nutritional Sciences 666.  
Administration of and role of exercise programs in preventive medicine, corporate fitness, and Phase I, II, and III of cardiac rehabilitation, and other disease rehabilitation. Development of skills in exercise leadership in traditional and experimental exercise programs for the apparently healthy and diseased adult.

**ENS 796. Exercise Specialist Internship (1-3) Cr/NC**

Three hours of laboratory per unit.  
Prerequisites: Exercise and Nutritional Sciences 659, 662, 668.  
Supervised application of exercise laboratory testing, test interpretation, exercise prescription and exercise leadership in adult fitness, corporate fitness, preventive medicine and/or hospital disease rehabilitation setting.

**For additional courses applicable to the Master of Science degree in exercise physiology see:**

- |           |  |
|-----------|--|
| ENS 696.  | Advanced Topics in Exercise and Nutritional Sciences |
| ENS 798.  | Special Study  |
| ENS 799A. | Thesis or Project                                    |
| ENS 799B. | Thesis Extension                                     |

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# French

In the Department of European Studies  
In the College of Arts and Letters

OFFICE: Business Administration 304

TELEPHONE: (619) 594-5111

FAX: (619) 594-8006

E-MAIL: french.coord@mail.sdsu.edu

<http://www-rohan.sdsu.edu/dept/frenital/french.html>

## Faculty

Edith J. Benkov, Ph.D., Professor of French, Chair of Department

Laurie D. Edson, Ph.D., Professor of French

Steven J. Loughrin-Sacco, Ph.D., Professor of French

Mary Ann Lyman-Hager, Ph.D., Professor of French

James L. Schorr, Ph.D., Professor of French

JoAnne Cornwell, Ph.D., Associate Professor of French

Anne Donadey, Ph.D., Associate Professor of French  
(Graduate Adviser)

## Associateships

Graduate teaching associateships in French are available to a limited number of qualified students. Application forms and additional information may be secured from the Department of European Studies.

## General Information

The Department of European Studies offers graduate study leading to the Master of Arts degree in French.

Research areas of the graduate faculty cover all periods of French literature as well as French linguistics and Francophone studies. The library collection provides up-to-date research resources – books, periodicals, microfilms and video materials in all of these areas. A foreign language multimedia center is available to both undergraduate and graduate students.

The graduate program in French offers opportunities for well-qualified M.A. candidates to complete up to 12 units of their 30 unit official program at French speaking universities. In addition to the MICEFA program at the Universities of Paris, graduate students may participate in the CSU International Programs in both Paris and Aix-en-Provence as well as several French speaking institutions in Quebec. The Office of the Executive Director for International Programs also has international student exchange agreements with a number of French-speaking universities.

## Admission to Graduate Study

The student must satisfy the general requirements for admission to the University with classified standing, as described in Part Two of this bulletin. In addition, the student must satisfy the following requirements: (1) an undergraduate major in French, or its equivalent, including 30 upper division units, at least six units of which must be in a survey course in French literature; (2) a GPA of 3.0 (on a 4-point scale) in all upper division French courses; (3) three letters of recommendation from professors, at least two of which should be from professors of French at the institution where the degree was granted; (4) a minimum score of 500 on the verbal section and 450 on the quantitative section of the Graduate Record Examination (GRE) General Test.

## Advancement to Candidacy

All students will be required to pass a qualifying examination in French given by the Department of European Studies. This examination will also satisfy the foreign language requirement as stated in Part Two of this bulletin.

## Specific Requirements for the Master of Arts Degree

(Major Code: 11021)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units which includes a major consisting of at least 24 units in French, of which at least 18 units must be in 600- and 700-numbered courses in French, including French 799A, Thesis, for those following Plan A.

Students, with the consent of the graduate adviser, may elect Plan A, which includes French 799A, Thesis (minimum GPA 3.6), or Plan B, which includes written and oral examinations in lieu of the thesis.

## Courses Acceptable on Master's Degree Program in French (FRENC)

Related courses (500 and graduate level) in other departments may be taken for a total of six units credit with prior approval of the graduate adviser.

### UPPER DIVISION COURSES

#### FRENC 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.

#### FRENC 520. French and Francophone Literary Studies (3)

Prerequisites: French 302 and 305A or 305B.

Specialized study of a century, genre, movement or theme in French and Francophone literature. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

#### FRENC 530. French and Francophone Cultural Studies (3)

Prerequisites: French 302 and 421 or 422.

Specialized study of artistic and intellectual trends, customs, and politics in French and Francophone culture. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

#### FRENC 596. Topics in French Studies (1-4)

Prerequisite: French 302.

Topics in French 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 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

**FRENC 621. Critical Methods (3)**

Prerequisite: Eighteen upper division units in French.

Methods and theories of critical analysis and their application to the works of a major French author or literary genre.

**FRENC 631. Issues in French and Francophone Studies (3)**

Prerequisite: Graduate standing.

Study of a theme, theoretical or literary movement, or historical moment. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**FRENC 696. Topics in French Studies (3)**

Prerequisite: Eighteen upper division units in French.

Intensive study in specific areas of French. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**FRENC 700. Seminar: A Major French or Francophone Author (3)**

Prerequisites: Eighteen upper division units in French.

In-depth study of works of a major French or Francophone author. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**FRENC 710. Seminar in a Literary Genre (3)**

Prerequisite: Eighteen upper division units in French.

Study of a specific literary genre, e.g. poetry, novel, theater. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**FRENC 720. Seminar in French and Francophone Culture and Civilization (3)**

Prerequisite: Eighteen upper division units in French.

Study of a specific topic in French and Francophone culture and civilization. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**FRENC 798. Special Study (1-3) Cr/NC/RP**

Prerequisites: Advancement to candidacy and approval of graduate adviser.

Individual study. Maximum credit three units applicable to a master's degree.

**FRENC 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**FRENC 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

**FRENC 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Geography

In the College of Arts and Letters

OFFICE: Storm Hall 323  
TELEPHONE: (619) 594-5437  
FAX: (619) 594-4938

## Faculty

John F. O'Leary, Ph.D., Professor of Geography,  
Chair of Department  
Edward Aguado, Ph.D., Professor of Geography  
Stuart C. Aitken, Ph.D., Professor of Geography  
Lawrence R. Ford, Ph.D., Professor of Geography  
Barbara E. Fredrich, Ph.D., Professor of Geography  
Arthur Getis, Ph.D., Professor of Geography, The Stephen and Mary  
Birch Foundation Chair in Geographical Studies  
Allen S. Hope, Ph.D., Professor of Geography  
Piotr Jankowski, Ph.D., Professor of Geography  
David S. McArthur, Ph.D., Professor of Geography,  
M.A. Program Coordinator  
Sergio J. Rey, Jr., Ph.D., Professor of Geography  
Douglas A. Stow, Ph.D., Professor of Geography,  
Doctoral Program Coordinator  
Frederick P. Stutz, Ph.D., Professor of Geography  
John R. Weeks, Ph.D., Professor of Geography  
Fernando Bosco, Ph.D., Assistant Professor of Geography  
Molly M. Pohl, Ph.D., Assistant Professor of Geography  
Christina Tague, Ph.D., Assistant Professor of Geography  
Ming-Hsiang Tsou, Ph.D., Assistant Professor of Geography

## The Stephen and Mary Birch Foundation Chair in Geographical Studies

The Stephen and Mary Birch Foundation Chair in Geographical Studies was created through the Birch Foundation's grant to the Geography Department to endow a chair and create a Center for Earth Systems Analysis Research. Dr. Arthur Getis, internationally recognized for his expertise in spatial pattern analysis, spatial statistics, urban structure, and spatial modelling, is the occupant of the Chair.

## Associateships

Approximately 45 graduate teaching associateships and graduate research associateships in geography are available to highly qualified students. Applications and additional information may be secured from the department. The deadline for submitting applications for teaching associateships or research associateships is March 1 for the Master of Arts degree and February 1 for the Doctor of Philosophy degree. Applications for associateships must include transcripts, three letters of recommendation, and Graduate Record Examination (GRE) scores, and a statement of interests and goals.

## General Information

The Department of Geography offers graduate study leading to the Master of Arts and Doctor of Philosophy degrees in geography. In addition to the general M.A. program, it is possible to pursue a concentration in either natural resources and environmental policy or transportation.

The Master of Arts degree is designed to provide advanced training for (a) students who plan to terminate their graduate studies at the master's level, and (b) those who anticipate additional work leading to the doctoral degree in geography or related fields.

The Doctor of Philosophy program, offered jointly with the University of California, Santa Barbara, provides advanced training for research and teaching at the highest academic level.

Research and instructional facilities provided by the Department of Geography include an excellent map library, the Stephen and Mary Birch Center for Earth Systems Analysis Research (CESAR), a state-of-the-art image processing/GIS center, laboratories for physical geography, soils, cartography, meteorology, and remote sensing and aerial interpretation and equipment for field studies. The Social Science Research Laboratory provides specialized data collections in the social sciences and a well equipped data processing center.

## Section I. Master's Degree Programs

### Admission to Graduate Study

All persons interested in admission to the master's program in geography should write directly to the M.A./M.S. Program Adviser, Department of Geography, for complete information on the program and its requirements.

Students will be considered for admission to the master's program in geography for the fall semester if they have submitted directly to the Department of Geography by May 1 the following materials:

1. Two sets of official transcripts from all colleges and universities attended.
2. GRE scores (official notification).
3. Three letters of recommendation from persons familiar with the academic performance or potential of the applicant.
4. A statement of the applicant's areas of interest and professional goals.

Concurrent with application to the department, the applicant must submit the University application available at <http://www.csumenator.edu>. That application must be received by the Office of Graduate Admissions by May 1 in order for the applicant to be considered for the fall semester.

The Geography Department does not encourage students to apply for admission for spring semester. Completed applications for spring admission must be submitted to the department and the Office of Graduate Admissions by September 15. Satisfaction of the minimum requirements of San Diego State University or the Department of Geography does not guarantee admission to the master's program for either the fall or spring semester. Department requirements are normally a minimum grade point average of 3.0 in the last 60 units taken as an undergraduate and a satisfactory score on the verbal and quantitative sections of the GRE.

Candidates whose preparation is deemed insufficient by the master's program committee will be required to complete specified courses in addition to the minimum 30 units required for the degree.

### Advancement to Candidacy

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

## Specific Requirements for the Master of Arts Degree

(Major Code: 22061)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units of upper division and graduate courses selected with the approval of the graduate advising committee. The student may choose from the General Program, the Concentration in Natural Resources and Environmental Policy, or the Concentration in Transportation. The department requires students to complete all degree requirements within seven years of the semester that they entered the M.A. program.

### General Program

The requirements for students electing the general program are as follows:

1. A minimum of 30 units of courses numbered 500 or above as approved by the geography department M.A. advising committee. At least 24 of these units must be from the geography department.
2. A minimum of 18 of the 30 units of coursework must be 600- or 700-level courses.
3. Geography 700 and 701, normally taken during the first two semesters.
4. Completion of Geography 799A (Thesis) under Plan A.

### Concentration in Natural Resources and Environmental Policy

The requirements for students electing a concentration in natural resources and environmental policy are as follows:

1. A minimum of 30 units of which not more than six may be in disciplines other than geography.
2. A minimum of 18 units of 600- and 700-numbered courses, to include Geography 670, 700, 701, 770, 799A, and three units from courses numbered Geography 570-577.
3. A thesis in the area of natural resources or environmental quality management and policies.
4. Additional 500-, 600-, and 700-level coursework, as determined in consultation with the student's thesis committee, appropriate to successfully preparing the thesis.
5. Additionally, students in this concentration should take, or have already completed, three units from courses numbered Geography 581-588 or 683-688L.

### Concentration in Transportation

The requirements for students electing a concentration in transportation are as follows:

1. A minimum of 30 units including 15 units of 600- and 700-numbered courses.
2. Geography 700, 701, and at least nine additional units to be taken from 500- and 600-level geography courses, as approved by the graduate advising committee.
3. At least six units selected from:
 

CIV E 620	Traffic Flow and Control	(3)
CIV E 622	Mass Transit Engineering	(3)
CIV E 781	Seminar in Transportation Engineering	(2 or 3)
C P 730	Seminar in Urban Transportation Planning	(3)
GEOG 798	Special Study	(3) Cr/NC/RP

Graduate or 500-level courses in other departments that are not listed above may be taken if approved by the graduate advising committee.

4. GEOG 595 Geographic Internship (3)  
(Must be in approved transportation activity.)

5. GEOG 799A Thesis (3) Cr/NC/RP
6. A student should have completed a quantitative methods course prior to initiating the program, or take Geography 585, Quantitative Methods in Geographic Research (3), concurrently.

## Specific Requirements for the Master of Science Degree

(Major Code: 22061)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units of upper division and graduate courses selected with the approval of the M.A./M.S. advising committee. The department requires students to complete all degree requirements within seven years of the semester that they entered the M.S. program.

### Concentration in Geographic Information Science

1. A minimum of 30 units of which not more than six may be in disciplines other than geography and at least 15 from 600- and 700-numbered courses in geography.
2. Geography 700 and 701.
3. A thesis in the area of the application or development of geographic information science (Geography 799A).
4. Fifteen units from the following list of geographic information science courses: Geography 581 through 585, Geography 683 through 688L, 780.
5. Additional 500-, 600-, and 700-level coursework determined in consultation with the student's thesis adviser.

## Section II. Doctoral Program

<http://typhoon.sdsu.edu>

## General Information

(Major Code: 22061)

The cooperating faculties of the Department of Geography at San Diego State University and the University of California, Santa Barbara offer a joint doctoral program in geography. The research interests of the participating faculty members cover a range of geographic problems. The joint doctoral program offers work leading to the Ph.D. in the following systematic areas (Group A) with supporting development of skills in spatial techniques (Group B) as follows:

### Systematic Areas – Group A

#### Human Geography

Urban and regional modeling  
Comparative urbanization  
Urban structure  
Social theory

#### Environmental Geography

Natural resources management and policy

#### Physical Geography

Biogeography  
Geomorphology  
Physical climatology and hydroclimatology

### Spatial Techniques – Group B

Remote sensing and image processing  
Geographic information systems and computer cartography  
Spatial quantitative or qualitative techniques

Each student's program is designed around one of the areas selected from Group A and at least one of the technique emphases selected from Group B. The main regional foci are problems of Latin America, Western Europe, the Pacific Rim, Mexico-U.S. borderlands, arctic, and arid lands. Students must attain the requisite skills in programming, statistics, mathematics, and foreign language necessary to successfully pursue their research goals.

### Admission to Doctoral Study

Applicants for admission to the doctoral program in geography offered jointly by SDSU and UCSB must meet the general requirements for admission to both universities with classified graduate standing as outlined in the respective current catalogs. There are no inflexible requirements for entrance to graduate study in this program, but a strong background in geography or a closely related field is essential. Admission to the program requires acceptance by the graduate deans and by the participating departments at UCSB and SDSU. Applications from outstanding students in other majors are encouraged, but such students should expect to take additional courses during their first year to improve their background. All students entering the program should have completed a lower and upper division statistics course and the appropriate mathematics and computer science courses for the specialty chosen.

Applications must be received by the Department of Geography not later than February 1 for the Ph.D. program.

**Application.** Students seeking admission to the joint doctoral program in geography should communicate directly with the Doctoral Program Coordinator, Department of Geography, SDSU, to request information and application materials. You may also obtain information and application materials at <http://typhoon.sdsu.edu>.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Geography:

- (1) Application for admission to the Joint Doctoral Program in Geography;
- (2) Two sets of official transcripts (in sealed envelopes);
- (3) One copy of GRE scores;
- (4) One copy of TOEFL scores (for international students);
- (5) Three letters of reference;
- (4) Curriculum vitae or resume;
- (5) An essay describing the applicant's purpose in seeking the Ph.D.

Mail or deliver your complete admissions package to:

Department of Geography  
(Attention: Doctoral Program Coordinator)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4493

Applications must be received by the Department of Geography no later than February 1 for the Ph.D. program.

A high undergraduate grade point average, normally 3.25 or higher for the last 60 units taken (90 quarter units), and/or a graduate grade point average of 3.50 or higher are required for admission. A minimum combined score of 1100 on the GRE is expected. Scores on both the verbal and quantitative sections of the GRE should exceed the 50th percentile.

Satisfaction of the minimum requirements at San Diego State University or the Department of Geography does not guarantee admission to the doctoral program.

### Specific Requirements

**Residency Requirements.** After formal admission to the joint doctoral program, the student must spend at least one academic year in full-time residence on each of the two campuses. The definition of residence must be in accord with the regulations of UCSB and SDSU. Usually, the first year is spent at SDSU, the second at UCSB, and subsequent years at SDSU.

**Advising Committee.** Upon admission to the program, the joint doctoral graduate advisers of the two institutions will establish an advising committee for each student. The committee will consist of four faculty members, normally two from each campus. In consultation with the student, the committee will develop a course of study, including identifying academic deficiencies and recommending remedies for them. The advising committee will be the official advising group for the student until a joint doctoral committee has been chosen and recommended to the Graduate Divisions by the advising committee.

**Language Requirement.** There is no specific foreign language requirement for this program, but knowledge of a foreign language may be deemed necessary by the advising committee to successfully pursue the student's research goal.

**Course Requirements.** Students admitted into the joint doctoral program are expected to take common core courses which include: Geography 700 (Seminar in Geographic Research Design) and Geography 701 (Seminar in Development of Geographic Thought). No specified number of courses beyond core courses is required for the doctoral degree. However, students are expected to have a broad understanding of modern geographic principles in addition to a specialist's competence in their own sub-field. In addition, all doctoral students must have computation skills and knowledge of spatial analysis.

### Qualifying Examinations

**Joint Doctoral Committee.** When a doctoral student makes a definitive selection of the systematic area and technique emphasis as well as the general topic of their dissertation research, she/he will select a dissertation supervisor (major professor), who can be from either department but who normally will be a member of the SDSU faculty, and the members of his/her joint doctoral committee. The joint doctoral committee shall be composed of at least four members (with the rank of Assistant Professor or above), two from the SDSU department and two from the UCSB department. The committee may be augmented as needed by an additional member from outside geography at UCSB or a member of the faculty at SDSU from outside of geography or, when authorized, another university. Chaired by the student's major professor, the joint doctoral committee shall be responsible for evaluating the dissertation proposal, administering and evaluating the qualifying examination, judging the dissertation, and administering and evaluating the dissertation defense.

**Qualifying Examinations.** The process of qualifying to write a Ph.D. dissertation has three steps. First, the student must take a written qualifying examination that normally consists of three portions devoted to: 1) the student's substantive area, 2) her or his technical field(s) of interest, and 3) general geographic thought and inquiry. Second, the student prepares a dissertation proposal that describes the dissertation topic, summarizes the relevant background literature, and presents a comprehensive research plan for the dissertation. Third, the student's doctoral committee will conduct an oral qualifying examination to ensure that the student possesses the full knowledge and competence required to carry out her or his dissertation research. The doctoral committee will assign a pass or fail grade for each examination. Passing the written examination allows the student to proceed to the preparation of the dissertation proposal. The doctoral committee must conditionally approve the dissertation proposal before the student takes the oral qualifying examination. Passing the oral examination signifies that the doctoral dissertation proposal is approved. A student may repeat each examination once.

Upon satisfactory completion of the oral examination and prescribed coursework, the student must apply to the Graduate Dean at UCSB for advancement to candidacy. Upon payment of the candidacy fee to UCSB, and after approval by the graduate deans of both campuses, students will be notified of their advancement to candidacy by the UCSB Graduate Dean.

**Dissertation.** Following the successful completion of all prescribed coursework and qualifying examinations, the major remaining requirement for the Ph.D. degree will be the satisfactory completion of a dissertation consisting of original research of publishable quality carried out under the guidance of the major professor. Approval of the completed dissertation by the joint doctoral committee implies that an organized investigation yielding substantial conclusions of interest which expand the frontiers of knowledge and understanding in the discipline has been carried out. Results must be reported in a manner demonstrating the ability of the candidate to effectively prosecute and report independent investigation.

The requirement for completing and filing the dissertation, including the number of copies required, will be decided jointly by the graduate deans and in accordance with regulations of the Graduate Divisions.

**Final Examination.** The final examination, organized and administered by the joint doctoral committee, shall consist of a dissertation defense, before the joint doctoral committee. A public lecture will be presented in addition to this defense with the committee.

**Award of the Degree.** The Doctor of Philosophy degree in geography will be awarded jointly by the Regents of the University of California and the Trustees of The California State University in the names of both institutions.

**Financial Support.** The Department of Geography at SDSU has a number of research and teaching associateships available to support students admitted to the joint doctoral program. All students applying to admission to the joint doctoral program will be considered for financial support.

## Courses Acceptable on Master's and Doctoral Degree Programs in Geography (GEOG)

### UPPER DIVISION COURSES

#### GEOG 504. Coastal and Submarine Geomorphology (3)

Prerequisites: Geography 101 and Mathematics 121 or 150.

Analysis of marine waves, of their modification in shallow waters, of coastal currents and tides. Interpretation of coastal and submarine relief in relation to environmental processes and their modification by humans. Field trips may be arranged.

#### GEOG 505. Fluvial Geomorphology (3) I, II

Prerequisite: Geography 401.

Physical foundation of river systems. Geographic variability in river channels and influence of human activities on fluvial forms and processes. Role of fluvial geomorphology in river and watershed management. Field trips may be arranged.

#### GEOG 507. Geography of Natural Vegetation (3) I, II

Prerequisite: Geography 101.

The natural vegetation associations of the world, their distribution, classification and development, including relationship to human activities. Field trips may be arranged.

#### GEOG 508. Environmental Climatology (3)

Prerequisites: Geography 103; Mathematics 121 or 150.

Interaction between the atmosphere and earth surface. Solar and thermal radiation, turbulent heat transfer, soil heat transfer. Change in the atmosphere due to natural variations and human activity. Impacts on the environment.

#### GEOG 509. Regional Climatology (3)

Prerequisite: Geography 103.

The causes of climatic types as they occur throughout the world. Principles of several climatic classifications.

#### GEOG 511. Hydroclimatology (3)

Prerequisites: Geography 101 or 103 and Mathematics 121 or 150.

Hydrologic cycle, energy and mass fluxes from the earth to the atmosphere and land-atmosphere interactions. Agricultural and hydrologic significance of spatial variability of energy and mass fluxes.

#### GEOG 545. Arid Lands (3)

Prerequisites: Geography 101 and 370; Biology 100 or 201B.

Physical geography and human use of arid lands. Traditional and modern land use systems in context of technological and economic development. Environmental and social impacts of development including desertification.

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

Prerequisite: Geography 354.

Worldwide trends in urbanization. Case studies of selected cities from various culture areas with focus on international variations in city structure and urban problems.

#### GEOG 556. Location and Spatial Structure of Cities (3)

Prerequisite: Geography 354 or three units of upper division coursework in a related field.

Principles and characteristics of urban growth and settlement; the internal structure and functioning of urban centers; spatial models of urban land use; growth management, transportation problems, and sociopolitical urban problems. Field trips may be arranged.

#### GEOG 559. Urban Transportation Geography (3)

Prerequisite: Three units of upper division urban or transportation coursework in geography or related field.

Urban transportation networks and their effects, past, present and future, on the economy and physical structure of the urban region. Field trips may be arranged.

#### GEOG 570. Environmental Resource Conservation (3)

Prerequisite: Geography 370.

Management of environmental and natural resources. Effective programs and the institutional frameworks in which they occur.

#### GEOG 572. Land Use Analysis (3) II

Prerequisite: Geography 370.

Problems of maintaining environmental quality in the process of land conversion from rural to urban uses with emphasis on land capability and suitability studies. Field trips may be arranged.

#### GEOG 573. Population and the Environment (3)

Prerequisite: Geography 102.

Population distribution, growth, and characteristics as they relate to environmental degradation, both as causes and consequences. Roles of women, sustainable development, carrying capacity, optimum population, and policy initiatives in relationships between population and environment.

#### GEOG 574. Water Resources (3)

Prerequisite: Geography 370.

Occurrence and utilization of water resources and the problems of water resource development. Field trips may be arranged.

#### GEOG 575. Geography of Recreational Land Use (3) I

Prerequisite: Geography 101 or 102.

Importance of location and environment in the use, management, and quality of recreation areas. Field trips may be arranged.

#### GEOG 577. Geography of the National Parks (3)

Prerequisite: Geography 370.

Human and land relationships in the national parks of the United States. Emphasis on problems arising from the preservation and use mandate under which parks are managed.

### **GEOG 581. Cartographic Design (3)**

Two lectures and three hours of laboratory.  
Prerequisite: Geography 381.  
Computer-assisted map production techniques with emphasis on map design and color use.

### **GEOG 583. Internet Mapping and Distributed GIServices (3)**

Two lectures and three hours of laboratory.  
Prerequisite: Geography 381 or 484.  
Current development of Internet mapping and cartographic skills for web-based maps (multimedia, animation, and interactive design). Fundamental theories of distributed GIS to support Internet mapping with focus on distributed component technologies, Internet map servers and web services. Not open to students with credit in Geography 582.

### **GEOG 584. Geographic Information Systems Applications (3)**

Two lectures and three hours of laboratory.  
Prerequisite: Geography 484 or 588.  
Conceptualization, completion, and implementation of geographic information systems (GIS) at local, regional, national, and global levels. Spatial analysis and modeling with GIS. GIS in planning, management, and research.

### **GEOG 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.

### **GEOG 586. Qualitative Methods in Geographic Research (3) II**

Prerequisite: Geography 102.  
Application of qualitative techniques to geographic research including reflexive survey design and in-depth interviews, non-obtrusive methods, landscape interpretation, textual methods and discourse analysis, feminist criticism, and humanistic and historical materialist perspectives on measurement.

### **GEOG 588. Intermediate Remote Sensing of Environment (4) II**

Three lectures and three hours of laboratory.  
Prerequisites: Geography 385 and 488.  
Multispectral remote sensor systems and interpretation of imagery from nonphotographic systems. Computer-assisted image processing. Geographic analysis of selected terrestrial, oceanographic, and atmospheric processes.

### **GEOG 595. Geographic Internship (3) I, II**

Prerequisites: Six upper division units in geography and consent of instructor.  
Students will be assigned to various government agencies and industry and will work under the joint supervision of agency heads and the course instructor. Maximum credit three units.

### **GEOG 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**

### **GEOG 670. Environmental and Resource Conservation Theory (3)**

Prerequisite: Graduate standing.  
Theories and principles involved in natural and environmental resources management.

### **GEOG 683. Advanced Geographic Information Systems (3)**

Prerequisite: Geography 484.  
Geographic information systems in geographic problem solving including data structures, project designs, and vector graphics.

### **GEOG 683L. Geographic Information Systems Laboratory (1 or 2) II**

Three to six hours of laboratory.  
Prerequisite: Concurrent registration in Geography 683.  
Data processing and analysis in geographic information systems. Applications of overlay functions in spatial analysis.

### **GEOG 685. Advanced Quantitative Methods in Geography (3) I**

Prerequisite: Geography 585.  
Statistical techniques and quantitative models applied to spatial problems. Multiple regression, discriminant analysis, factor analysis and spatial modeling.

### **GEOG 688. Advanced Remote Sensing (3)**

Prerequisite: Geography 588.  
Sensor systems, image interpretation and geographic applications in thermal infrared and microwave remote sensing. Principles of digital image processing.

### **GEOG 688L. Advanced Remote Sensing Laboratory (1 or 2) II**

Two or four hours of laboratory.  
Prerequisite: Concurrent registration in Geography 688.  
Processing and analysis of remotely sensed data. Laboratory training in sensor systems and digital image-processing methods including thermal infrared and microwave data analysis.

### **GEOG 696. Advanced Special Topics in Geography (3)**

Prerequisite: Consent of instructor.  
Advanced special topics in geography. See Class Schedule for specific content. May be repeated with new content. Maximum combined credit of six units of 596 and 696 applicable to a graduate degree.

### **GEOG 700. Seminar in Geographic Research Design (3)**

Prerequisite: Graduate standing.  
Definition of spatial problems, hypothesis formulation and testing, selection of appropriate methodology. Development of research proposals, conduct of research, written and oral presentations.

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

Prerequisite: Graduate standing.  
Evolution of concepts concerning the nature, scope, theories, and methodologies of geography.

### **GEOG 710. Seminar in Physical Geography (3)**

Prerequisite: Six units of upper division or graduate level courses in physical geography.  
Intensive study of an aspect of physical geography. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **GEOG 740. Seminar in Human Geography (3)**

Prerequisite: Six units of upper division or graduate level courses in human geography.  
Intensive study of a spatial aspect of human geography. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **GEOG 760. Seminar in Behavioral and Social Geography (3) II**

Prerequisite: Six units of upper division or graduate level courses in behavioral or social geography.  
Intensive study of a spatial aspect of behavioral or social geography. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **GEOG 770. Seminar in Environmental and Resource Conservation (3)**

Prerequisites: Geography 670 and six units of upper division or graduate level courses in environmental or resource conservation.  
Natural and environmental resource conservation. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**GEOG 780. Seminar in Techniques of Spatial Analysis (3)**

Prerequisite: Six units of upper division or graduate level courses in spatial analytic techniques.

Spatial analytic techniques from image processing, remote sensing, geographic information systems, cartography or quantitative methods. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**GEOG 797. Research (1-3) Cr/NC/RP**

Research in one of the fields of geography. Maximum credit six units applicable to a master's degree.

**GEOG 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

**GEOG 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**GEOG 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

**GEOG 890. Independent Study for Doctoral Examination (1-9)**

Prerequisite: Consent of instructor or graduate adviser.

Tutorial with student's major professor in preparation for qualifying examinations. No unit credit allowed toward advanced degree. Maximum credit nine units.

**GEOG 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Independent investigation in the general field of the dissertation. A written proposal must be approved by the joint doctoral advising committee. Maximum credit six units applicable to a doctoral degree.

**GEOG 899. Doctoral Dissertation (1-15) Cr/NC/RP**

Prerequisites: Advancement to candidacy and an officially constituted dissertation committee.

Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved. No unit credit allowed toward advanced degree.

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# Geological Sciences

In the College of Sciences

**OFFICE: Geology/Mathematics/Computer Science 237**

**TELEPHONE: (619) 594-5586**

**FAX: (619) 594-4372**

**E-MAIL: [department.office@geology.sdsu.edu](mailto:department.office@geology.sdsu.edu)**

**<http://www.geology.sdsu.edu>**

## Faculty

Gary H. Girty, Ph.D., Professor of Geological Sciences,  
Chair of Department  
Steven M. Day, Ph.D., Professor of Geological Sciences,  
The Rollin and Caroline Eckis Chair in Seismology  
Clive E. Dorman, Ph.D., Professor of Geological Sciences  
David Huntley, Ph.D., Professor of Geological Sciences  
George R. Jiracek, Ph.D., Professor of Geological Sciences  
David L. Kimbrough, Ph.D., Professor of Geological Sciences  
Gary L. Peterson, Ph.D., Professor of Geological Sciences  
Thomas K. Rockwell, Ph.D., Professor of Geological Sciences  
Eric G. Frost, Ph.D., Associate Professor of Geological Sciences  
Kim B. Olsen, Ph.D., Associate Professor of Geological Sciences  
Kathryn W. Thorbjarnarson, Ph.D., Associate Professor of Geological  
Sciences (Graduate Adviser)  
Lindsey R. Leighton, Ph.D., Assistant Professor of Geological  
Sciences  
Aaron J. Pietruszka, Ph.D., Assistant Professor of Geological Sciences  
Eric M. Riggs, Ph.D., Assistant Professor of Geological Sciences  
Stephen A. Schellenberg, Ph.D., Assistant Professor of Geological  
Sciences  
Barry B. Hanan, Ph.D., Resident Isotope Geochemist  
Robert J. Mellors, Ph.D., Resident Computer Geoscientist

## Adjunct Faculty

Ronald Blom, Ph.D., Geological Sciences  
Robert Crippen, Ph.D., Geological Sciences  
Thomas A. Demere, Ph.D., Geological Sciences  
John M. Fletcher, Ph.D., Geological Sciences  
Jorg Geldmacher, Ph.D., Geological Sciences  
Marty Grove, Ph.D., Geological Sciences  
David R. Hargis, Ph.D., Geological Sciences  
Charles F. Kluth, Ph.D., Geological Sciences  
Harold W. Magistrale, Ph.D., Geological Sciences  
David Okaya, Ph.D., Geological Sciences  
Andres Polit, Ph.D., Geological Sciences  
Eleanora I. Robbins, Ph.D., Geological Sciences

## The Rollin and Caroline Eckis Chair in Seismology

A gift from Rollin and Caroline Eckis, combined with matching funds from the Atlantic Richfield Company and contributions from SDSU faculty and staff, established The Rollin and Caroline Eckis Chair in Seismology at SDSU. The late Rollin Eckis was former president of Richfield Oil Company and vice chairman of the board of Atlantic Richfield Company.

The first appointee to the Chair, Dr. Steven M. Day, conducts research on the mechanics of earthquakes and earthquake hazards.

## Associateships

Graduate teaching associateships in geological sciences are available to a limited number of qualified students. Application forms and additional information may be secured from the graduate adviser of the department.

## General Information

The Department of Geological Sciences offers graduate study leading to the Master of Science degree in geological sciences. The program emphasizes research and an advanced set of courses. Faculty research activities comprise a broad spectrum of expertise, including both theoretical and applied interests. Opportunities exist for integrated field and laboratory research. The department is equipped to support research in geophysics, groundwater hydrology, geoscience education, oceanography, and geochemistry as well as the classic areas of mineralogy, petrology, structural geology, stratigraphy and paleontology. Laboratories devoted to geochronology, isotopes, clay mineral analysis, soils, paleomagnetism, and whole rock analysis, as well as the Allison Center (paleontology), support the graduate research program.

The San Diego area enjoys a mild climate which permits year round field activity. An interesting and diverse geological environment provides many opportunities for research in the local area. Many graduate students are supported in their work by grants and contracts from government and industry.

## Admission to Graduate Study

All students must satisfy the general requirements for admission to classified graduate standing as described in Part Two of this bulletin. In addition, all students should satisfy the following requirements in order to achieve classified standing and enroll in graduate courses.

1. Have preparation in geological sciences, mathematics, chemistry, and physics deemed equivalent to the bachelor's degree in geological sciences at San Diego State University. Candidates whose preparation is deemed insufficient by the master's program committee will be required to complete specified courses in addition to the minimum 30 units required for the degree. Undergraduate grade point average should be at least 2.5, with a 2.85 in the last 60 units.
2. Have successfully completed all courses listed as deficiencies.
3. Have a minimum GRE General Test combined verbal and quantitative score of 1000. Students with a verbal score of less than 450 may be required to take a writing course.
4. Have a minimum grade point average of 3.0 in any courses taken as a postbaccalaureate student at San Diego State University.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Geological Sciences:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) Two letters of reference;
- (4) Department application available at <http://www.geology.sdsu.edu/gradprogram/applicants.htm>.

Mail or deliver your complete admissions package to:

Department of Geological Sciences  
 (Attention: Graduate Adviser)  
 San Diego State University  
 5500 Campanile Drive  
 San Diego, CA 92182-1020

All student applications are evaluated competitively and no fixed numerical standards automatically qualify or disqualify a student for graduate study in the Department of Geological Sciences. Students will be admitted on the basis of merit in relation to space and faculty availability.

## Advancement to Candidacy

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

## Specific Requirements for the Master of Science Degree

(Major Code: 19141)

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Two of this bulletin. The student's graduate program must include 24 units of approved 600- and 700-numbered courses in Geological Sciences to include 797 (3 units Cr/NC/RP), and 799A, Thesis (3 units Cr/NC/RP), and six units of upper division or graduate electives approved by the departmental adviser. With approval of the graduate adviser, students may include 18 units of approved 600-700 numbered courses and 12 units of upper division or graduate electives, with no more than six units of upper division electives taken from courses in the Department of Geological Sciences. Geological Sciences 306 and 508 or their equivalent as approved by the graduate adviser, are required as prerequisite to the program if they were not a part of the student's undergraduate work. The student is required to pass a final oral examination on the thesis.

## Courses Acceptable on Master's Degree Program in Geological Sciences (GEOL)

### UPPER DIVISION COURSES

#### GEOL 501. Geochronology (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 224.

Survey of radiometric, chemical, stratigraphic, and paleomagnetic methods used to establish time in relationship to the history of the earth. Basis for correlation of geologic events and estimation of rates and periodicity of geologic processes.

#### GEOL 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.

#### GEOL 505. Photogeology and Remote Sensing (3) II

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 514.

Geologic interpretation of aerial and satellite photographs, elementary stereoscopy and stereometry applied to structural and stratigraphic problems, and compilation of geologic maps from annotated aerial and satellite photographs.

#### GEOL 508. Advanced Field Geology (4 or 6) S

One lecture and three hours of laboratory plus 28 days in the field. For the option with six units: two additional weeks of field or laboratory work.

Prerequisite: Geological Sciences 306.

Investigation of individually assigned areas, preparation of geologic maps, geologic sections, and gathering other types of data, e.g., petrologic, geophysical, or paleontologic, as appropriate. Students are responsible for cost of food and transportation.

#### GEOL 514. Process Geomorphology (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 306.

Processes shaping and affecting the earth's surface, and application of resultant land forms in interpretation of geologic structure, stratigraphy, and neotectonics.

#### GEOL 520. Ore Deposits (3) I

Prerequisite: Geological Sciences 306.

Geologic relations, origin, distribution, and economics of metallic and nonmetallic mineral deposits.

#### GEOL 521. Petroleum Geology (3) II

Prerequisite: Geological Sciences 306.

History of petroleum exploration; statistics of energy use; principles of well logging; theories of petroleum generation, migration, and accumulation; exploration and production techniques; case studies of important oil fields.

#### GEOL 525. Petrography (3) I

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 224.

A study of rocks with the polarizing microscope; identification of mineral constituents; interpretation of textures; classification of rocks; problems of genesis.

#### GEOL 530. Geochemistry (3) I

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 224; Chemistry 201; Mathematics 150.

Fundamental principles of low- and high-temperature geochemistry. Origin of the elements; formation of the solar system; differentiation of the earth; weathering at the earth's surface; chemistry of natural waters. Laboratory methods applied to geological problems. Not open to students with credit in Geological Sciences 530L.

#### GEOL 532. Environmental Geophysics (3) I

Two lectures and three hours of laboratory.

Prerequisites: Mathematics 150 and Statistics 250; two semesters of physics. Recommended: Geological Sciences 307 and 551.

Applications of geophysical methods to hydrologic investigations, including d.c. resistivity, electromagnetics, radar, seismology, and magnetics.

#### GEOL 533. Geophysical Analysis (3)

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 307, Mathematics 252, Physics 197. Recommended: Physics 195L, 196L, 197L.

Analog and digital data collection, processing, modeling and error estimation. Computer-aided examples and field tests from seismics, gravity, magnetics, and electromagnetics including magnetotellurics.

### **GEOL 536. Sedimentology and Lithostratigraphy (3) I**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 105 (not required but recommended for Emphases in Geochemistry and Geophysics) and 224.

Sedimentologic description and interpretation of the textures and structures of sediments and sedimentary rocks. Stratigraphic analysis of stratal succession, age relationships, and correlation on local and global scales.

### **GEOL 537. Geobiology (3) II**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 105 and either Biology 100-100L or 101-101L, and Geological Sciences 536.

Principles of paleontology, including ecology and evolution. Tools of paleontology, including biomechanics, shape analysis, phylogeny, population analysis, study of biogeographic, temporal, and environmental distribution. Focus on using biology to solve geologic problems and vice versa.

### **GEOL 540. Marine Geology (3)**

Prerequisites: Geological Sciences 105, and either Geological Sciences 224, 502, 514, or 537.

Plate tectonic origin and history of the ocean basins. Formation and distribution of sediments in response to biologic, chemical, and geologic processes.

### **GEOL 545. Descriptive Physical Oceanography (3)**

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.

### **GEOL 550. Engineering Geology (3)**

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 306.

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.

### **GEOL 551. Hydrogeology (3) I**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 306 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.

### **GEOL 552. Field and Laboratory Techniques in Hydrogeology (4) II**

One lecture and nine hours of laboratory.

Prerequisites: Geological Sciences 551 and credit or concurrent registration in Geological Sciences 530.

Use and application of common field and laboratory techniques in hydrogeology. Exercises include drilling, coring, and sediment sampling, aquifer testing, unsaturated zone monitoring, fluid level measurement, tracer testing, laboratory measurement of permeability, capillarity, and analysis of inorganic and organic constituents in groundwater.

### **GEOL 560. Earthquake Seismology (3)**

Two lectures and three hours of laboratory.

Prerequisites: Mathematics 252, Physics 197. Recommended: Mathematics 342A.

Theory of seismic wave excitation, propagation, and recording. Methods of seismogram interpretation and analysis. Applications to tectonics and earthquake hazard analysis.

### **GEOL 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**

### **GEOL 600. Seminar (1-3)**

Refer to Class Schedule for lecture/laboratory format.

Prerequisite: Consent of instructor.

An intensive study in advanced geology. May be repeated with new content. Topic to be announced in the Class Schedule. Maximum credit six units applicable to a master's degree.

### **GEOL 601. Investigations in Earth Science (3)**

Prerequisites: Postbaccalaureate standing with B.S. or B.A. in geology or equivalent.

Review of major geologic concepts and processes. Relationships of research to advances in the understanding of modern earth processes and the geologic history of the earth.

### **GEOL 611. Seminar: Geoscience Education Research and Practice (3)**

Prerequisites: Senior or graduate standing. Strongly recommended: Background in earth science or education.

Research and practice in earth science education. Theory and practice in geoscience education at all levels, including research into constructivism in geoscience, influence of place and culture, and issues of spatial skills in the field and classroom.

### **GEOL 615. Geology of Clays (3)**

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 530 or 536.

Systematic mineralogy of clays and routine methods of identification. Geologic interpretation of clay minerals with respect to environmental conditions of origin, deposition and diagenesis.

### **GEOL 625. Paleocology (3)**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 537 and Biology 354.

Problems and methods in the study of relationships between fossil organisms and their environment: interpretation of paleoenvironment, paleoclimate, and biologic relationships among fossil organisms.

### **GEOL 630. Selected Topics in Geophysics (3)**

Prerequisite: Consent of instructor.

Research topics in seismic, gravity, magnetic, electrical, and electromagnetic methods. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **GEOL 633. Quaternary Geology (3)**

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 514.

Quaternary climate, geochronometric dating and soil stratigraphy.

### **GEOL 640. Geotectonics (3)**

Prerequisites: Geological Sciences 306; Physics 180B or 196.

Combination of plate tectonics, structural geology, and geophysics. Topics in continental genesis and evolution, orogeny, plate tectonics theory, and a survey of classic plate boundaries.

### **GEOL 642. Neotectonics (3)**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 306 and 514.

Observation, interpretation and significance of late Quaternary crustal deformation.

**GEOL 643. Extensional Tectonics (3)**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 306 and senior or graduate standing.

Geometries, kinematics, and dynamics of extensional deformation worldwide with emphasis on role in basin formation and resource localization. Focus on crustal scale view. Seismic reflection profiles interpreted and processed on workstations.

**GEOL 644. Compressional Tectonics (3)**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 306 and senior or graduate standing.

Geometrics, kinematics, and dynamics of compressional tectonics with emphasis on role in basin formation and resource localization. Focus on crustal scale view. Seismic reflection profiles interpreted and processed on workstations.

**GEOL 645. Advanced Structural Geology (3)**

Prerequisite: Geological Sciences 306.

Topics in advanced structural geology in the light of petrographic, geophysical, and experimental data, combined with classic field observations.

**GEOL 646. Sequence Stratigraphy (3)**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 306, 536, and senior or graduate standing.

Linkage between rock sequences and basin formation using seismic reflection profiles and outcrops. Profiles interpreted to determine sequences, boundaries, rock properties, and role in hydrocarbon localization.

**GEOL 647. Seismic Interpretation and 3-D Visualization (3)**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 200, 306, 307, and 536.

Skills in modern workstation-aided seismic reflection interpretation with emphasis on modern petroleum geology.

**GEOL 651. Numerical Modeling of Ground-Water Flow (3)**

Prerequisites: Geological Sciences 551 and experience in computer programming.

Finite difference approximations of ground water and mass transport equations. Direct and iterative solutions to simultaneous equations. Calibration, verification and application of numerical models to analyze ground water hydrologic problems.

**GEOL 652. Multiphase Flow (3)**

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 551.

Movement of water through the unsaturated zone and nonaqueous phase liquids (NAPL) through subsurface. Topics include vadose zone characterization, monitoring, and modeling; light and dense NAPL movement, monitoring, and remediation.

**GEOL 653. Ground Water Aquifer Testing (3)**

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 551.

Theory and practice of conducting and analyzing constant-rate aquifer tests, step-drawdown tests, and slug injection tests. Analysis of results for confined, unconfined, leaky-confined, and fractured aquifers.

**GEOL 660. Isotope Geology (3)**

Two lectures and three hours of laboratory.

A survey of isotopic and geochronologic topics with individual projects in isotopic analysis.

**GEOL 676. Solute Transport in Groundwater (3)**

Prerequisite: Geological Sciences 551.

Theory of dissolved solute transport in groundwater. Applications to contaminant delineation, modeling and characterization of aquifer heterogeneities. Case studies of tracer tests and contaminant plumes.

**GEOL 677. Environmental Fate of Organic Contaminants (3)**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 551 and 530, 530L, or chemistry background.

Physical and chemical properties and processes affecting distribution of organic contaminants in the environment. Focus on subsurface environments with applications to surface waters.

**GEOL 680. Sedimentary Geochemistry (3)**

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 530.

Topics in low temperature geochemistry.

**GEOL 687. Volcanology (3)**

Prerequisite: Geological Sciences 224.

Chemical and physical properties of magma; generation, rise, and storage of magma. Eruptive mechanisms, volcano types, and a variety of volcanic phenomena associated with Hawaiian, Strombolian, Plinian, volcanian, and hydrovolcanic eruptions.

**GEOL 688. Form and Function (3)**

Two lectures and three hours of laboratory.

Prerequisite: An upper division undergraduate course in paleontology or organismal biology.

Applied analysis of organismal shape and function. Emphasis on proper choice, application, and interpretation of biomechanical and morphometric techniques through participatory research projects illustrating relevant methods.

**GEOL 797. Research (1-3) Cr/NC/RP**

Prerequisite: Consent of the department.

Supervised research in an area of geological sciences. Maximum credit six units applicable to a master's or Ph.D. degree.

**GEOL 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a thesis for the master's degree.

**GEOL 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

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# German

In the Department of European Studies  
In the College of Arts and Letters

**OFFICE: Business Administration 304**  
**TELEPHONE: (619) 594-5111**  
**FAX: (619) 594-8006**  
**E-MAIL: [german.coord@sdsu.edu](mailto:german.coord@sdsu.edu)**  
**<http://www-rohan.sdsu.edu/~berlin/>**

**Chair of Department: Edith J. Benkov**

## Faculty

Erich W. Skwara, Ph.D., Professor of German  
Mary M. Wauchope, Ph.D., Associate Professor of German  
Kristin L. Lovrien-Meuwese, Ph.D., Assistant Professor of German

## General Information

The Department of European Studies offers advanced coursework in German. Graduate courses in German may be used to fulfill requirements for advanced degrees in other departments with the approval of the student's graduate adviser.

### **UPPER DIVISION COURSES (GERMN)** **(Also Acceptable for Advanced Degrees)**

#### **GERMN 501. Translation (3)**

Prerequisites: German 300 and 301.  
Translation of a variety of texts from German to English and English to German.

#### **GERMN 505. Applied German Linguistics (3)**

Prerequisite: German 301 or 304.  
Linguistic study of modern German; integration of modern linguistic theory with the language classroom.

#### **GERMN 520. Modern German Literature (3)**

Prerequisite: German 310.  
Major authors and genres since Enlightenment.

#### **GERMN 530. Topics in German Literature (3)**

Prerequisite: German 310.  
Study of a movement, theme or genre of German literature, such as Romanticism, literature and film, literature of the Holocaust, women's literature, literature of the German Democratic Republic in retrospect. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

#### **GERMN 596. Topics in German Studies (3)**

Prerequisite: German 310 (for literary topics) or 505 (for linguistics topics). **Proof of completion of prerequisite required:** Copy of transcript.

Topics in German language, literature, or linguistics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### **GRADUATE COURSES (GERMN)**

#### **GERMN 696. Topics in German Studies (1-3)**

Prerequisite: Eighteen upper division units in German.  
Intensive study in specific areas of German. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

#### **GERMN 798. Special Study (1-3) Cr/NC/RP**

Prerequisites: Eighteen upper division units in German and consent of staff; to be arranged with department chair and instructor.  
Individual study. Maximum credit six units applicable to a master's degree.

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# Gerontology

In the College of Health and Human Services

**OFFICE: Hepner Hall 203**  
**TELEPHONE: (619) 594-6765**  
**FAX: (619) 594-2811**

## Faculty

Mario D. Garrett, Ph.D., Professor of Gerontology, Chair of Department  
Barbara C. DuBois, Ph.D., Assistant Professor of Gerontology  
Paula M. Usita, Ph.D., Assistant Professor of Gerontology

## Adjunct Faculty

Dolores A. Wozniak, Ed.D., Nursing

## Assistantships

Graduate teaching and research assistantships in gerontology are available to a limited number of qualified students. Information regarding the availability of funds and the process for application may be obtained from the Department of Gerontology.

## General Information

The Master of Science degree in gerontology is supported by faculty from several departments. The program is administered by the Department of Gerontology. The program is designed to provide systematic advanced education in gerontology for those planning to enter professions related to higher education, social services, health services, government, or business. The program will provide education for those interested in the area of policy, theory and its applications, health and aging, community services, program development, and biostatistical evaluation. Students will gain a better understanding of the roles of older people and their contributions to society. The program will also prepare students for entry to doctoral level education.

## Admission to Graduate Study

The student must satisfy the general requirements for admission to the University with classified standing, as described in Part Two of this bulletin. Students whose preparation is deemed insufficient by the gerontology admissions committee may be admitted as conditionally classified and will be required to complete specific courses in addition to the minimum 36 units required for the degree. Students from other disciplines are encouraged to apply. In addition, students are required to request three letters of reference in support of their application from academic referees, submit a personal statement outlining their goals, background, interests, and abilities, and have a satisfactory score on the Graduate Record Examination (GRE) for verbal and quantitative sections combined. Applicants should have a minimum undergraduate grade point average of 3.0 (on a 4.0 scale) during the last 60 semester units of undergraduate college/university coursework. The grade point average must be in concurrence with Graduate Division requirements for admission. Admission requirements are outlined in the graduate application package for an advanced degree in gerontology at San Diego State University.

## Advancement to Candidacy

All students must pass the general requirements for advancement to candidacy as described in Part Two of this bulletin. Advancement to candidacy is contingent upon classified graduate status, completion of 12 semester units with a minimum grade point average of 3.0, satisfactory completion of an oral examination with a minimum grade of B and approval of the Graduate Council. Advancement to candidacy will be conferred prior to graduation.

## Specific Requirements for the Master of Science Degree

**(Major Code: 21043)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Science degree as described in Part Two of this bulletin, the student must complete a minimum of 36 units. The program consists of 30 units of required core courses and six units of electives.

**Core Curriculum Requirements.** A minimum of 30 units is required in the following core courses:

	Units
GERO 530 Research Methods and Evaluation. . . . .	3
GERO 601 Theory in Gerontology . . . . .	3
GERO 602 Policy Development, Analysis, and Evaluation. . .	3
GERO 603 Healthy Aging. . . . .	3
GERO 604 Program Planning and Development . . . . .	3
GERO 605 Long-Term Care . . . . .	3
GERO 700 Practicum (Cr/NC) . . . . .	3
GERO 797 Research (Cr/NC/RP) . . . . .	3
GERO 799A Thesis (Cr/NC/RP) . . . . .	3
P H 602 Biostatistics . . . . .	3

**Electives.** A minimum of six units of electives is required. Selected with the approval of the student's adviser, electives must include courses in gerontology or departments related to gerontology. Any gerontology graduate course or 500- to 700-level courses not taken for credit in the core curriculum qualify as electives. The breadth of courses available to supplement the core of required courses will be extensive, and draw on resources from across the University.

**Thesis Option.** The student will complete Plan A, Thesis option for the M.S. degree in gerontology.

### Courses Acceptable on Master's Degree Program in Gerontology (GERO)

#### UPPER DIVISION COURSES

##### **GERO 520. Analysis of Programs for the Aging (3)**

Prerequisite: One upper division course in gerontology.

Major programs in aging that support daily functioning of elderly. Effectiveness of programs in serving today's elderly with attention to ethnic and cross-cultural variations.

##### **GERO 522. International Issues on Aging (3)**

Prerequisite: Three units in gerontology.

Socio-economic implications of rapidly growing number and proportion of older people around the world. Comparative study of aging populations in different countries, analysis and evaluation of related policies and programs.

##### **GERO 530. Research Methods and Evaluation (3)**

Prerequisites: Course in elementary statistics and satisfaction of the Entry-Level Mathematics requirement. Recommended: Sociology 201.

Research methodology, assessment, and evaluation of gerontology. Basic statistical techniques in evaluating gerontology databases. Methods, statistical procedures, hypothesis testing, evaluation, use of tables and graphs, and use of gerontology databases. SPSS using gerontology databases for instruction.

##### **GERO 540. Physical Function and Disease Prevention (3)**

Prerequisites: One course in gerontology; Community Health Education 101 or 406; Psychology 101.

Physical functioning of older persons and diseases related to age changes. Healthy aging, assessments of frailty, risk factors related to diseases of aging, current medical and health promotion interventions directed to risk reduction and healthy aging.

##### **GERO 596. Advanced Special Topics in Gerontology (1-4)**

Advanced selected topics in gerontology. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

#### GRADUATE COURSES

##### **GERO 601. Theory in Gerontology (3)**

Prerequisite: Consent of instructor.

Concepts and theory in gerontology, theory construction, application of theory to research. Theoretical models and special topics.

##### **GERO 602. Policy Development, Analysis, and Evaluation (3)**

Prerequisites: Gerontology 601 and consent of instructor.

History, analysis, and assessment of current state and national policies and policy impacts on older people. Policy evaluation and recommendations from identification of gaps in policy that impact older people's access to programs and services. Conduct legislative visits and interact with policy-makers.

##### **GERO 603. Healthy Aging (3)**

Prerequisite: Consent of instructor.

Concepts of healthy aging. Analysis of approaches, methods, and applications from research about lifestyle, behavior change, prevention and health promotion, community health, work and productivity, belief systems, cognitive assessments. Emphasis on prevention and maintenance of health.

##### **GERO 604. Program Planning and Development (3)**

Prerequisite: Consent of instructor.

Design and development of aging programs. Needs assessment skills, program activities, evaluation methods, administrative and budget development in concert with selected agencies.

##### **GERO 605. Long-Term Care (3)**

Prerequisite: Consent of instructor.

Issues and problems in a changing long-term care delivery system for older people in a multi-cultural society. Emphasis on frailty of the elderly, demand for affordable long-term care, and analysis of federal and state policies shaping the industry.

##### **GERO 696. Contemporary Topics in Gerontology and Geriatrics Seminar (3)**

Prerequisite: A graduate level course in gerontology.

Areas of gerontology and geriatrics that make an immediate impact on the quality of life and lifestyles of the elderly. To include diverse life situations of older people.

##### **GERO 700. Practicum (3) Cr/NC**

Prerequisites: Gerontology 530 and 601.

Supervised field placement in public or private setting. Application of gerontological theory, policy, objectives, principles, and skills in service to individuals, families, groups, organizations, and communities.

##### **GERO 797. Research (1-3) Cr/NC/RP**

Prerequisite: Consent of instructor.

Research in an area of gerontology. Maximum credit six units applicable to a master's degree.

##### **GERO 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of adviser.

Individual study. Maximum credit six units applicable to a master's degree.

##### **GERO 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a thesis for the master's degree.

##### **GERO 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

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# History

In the College of Arts and Letters

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<http://www.rohan.sdsu.edu/dept/histweb/dept.html>

## Faculty

Joanne M. Ferraro, Ph.D., Professor of History,  
Chair of Department

Lawrence Baron, Ph.D., Professor of History, The Nasatir Professor of  
Modern Jewish History

William F. Cheek, Ph.D., Professor of History

David Christian, Ph.D., Professor of History

Elizabeth Cobbs Hoffman, Ph.D., Professor of History, The Dwight E.  
Stanford Chair in American Foreign Relations

Eve Kornfeld, Ph.D., Professor of History (Graduate Adviser)

Stephen A. Colston, Ph.D., Associate Professor of History

Elizabeth A. Colwill, Ph.D., Associate Professor of History

Sarah S. Elkind, Ph.D., Associate Professor of History

Mathew S. Kuefler, Ph.D., Associate Professor of History

Cristina Rivera-Garza, Ph.D., Associate Professor of History

Andrew Wiese, Ph.D., Associate Professor of History

Paula S. DeVos, Ph.D., Assistant Professor of History

Kathryn J. Edgerton, Ph.D., Assistant Professor of History

Elizabeth A. Pollard, Ph.D., Assistant Professor of History

John C. Putman, Ph.D., Assistant Professor of History

Heike I. Schmidt, Ph.D., Assistant Professor of History

Chiou-Ling Yeh, Ph.D., Assistant Professor of History

## The Dwight E. Stanford Chair in American Foreign Relations

A gift from alumnus Dwight E. Stanford, who earned a bachelor's degree in American history in 1936 from San Diego State College (now SDSU), established The Dwight E. Stanford Chair in American Foreign Relations. The holder of the Chair is Elizabeth Cobbs Hoffman, a distinguished scholar-teacher who is an expert on economic and political relations between the United States and the Third World, and on the history of the Cold War.

## The Nasatir Professor of Modern Jewish History

The Nasatir Professorship was established in honor of the late Professor Abraham Nasatir, a specialist in European colonial history in North America. Nasatir taught history at SDSU for 46 years and was active in the community as an advocate of Jewish education. The Professorship is now held by a distinguished scholar of European intellectual history and Holocaust studies, Lawrence Baron, director of SDSU's Lipinsky Institute for Judaic Studies.

## Master of Arts Degree in History

### Scholarships

The Kenneth and Dorothy Stott Scholarship is awarded each June to a student who has attended San Diego State University for at least two years and who is being graduated or who has been graduated by San Diego State University with a major in history. The recipient must continue work at San Diego State University, or at any other accredited college or university, toward a higher degree or credential. The selection is made by the Department of History with approval of the committee on scholarships.

### General Information

The Department of History offers graduate study leading to the Master of Arts degree in history.

The Master of Arts degree is designed to provide advanced training for (1) students who plan to terminate their graduate studies at the master's level, and (2) those who anticipate further study leading to a doctoral degree in history or related fields.

Research facilities include a substantial library of well over one million titles and an impressive periodical collection. The library is the depository for the documents of the United States and the state of California, and receives all publications of the United Nations and the Organization of American States. The library also houses 1,500 linear feet of manuscript materials as well as audiotapes, films, oral histories, and photographs of the greater San Diego area. The College of Arts and Letters houses the Social Science Research Laboratory which includes a well-equipped data processing center. The San Diego Historical Society and the San Diego Public Library contain many manuscript collections pertinent to local history. Located north of San Diego is the National Archives and Records Administration at Laguna Niguel.

### Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. As an additional requirement, the student must have completed a bachelor's degree with an undergraduate major in history or have taken enough units in history and related fields that would demonstrate sufficient preparation for the program. The grade point average required for admission to the M.A. program in history is 2.85 for the last 60 units of the student's undergraduate work and 3.0 in the major (not necessarily history), plus a satisfactory score on the GRE General Test (minimum 500 verbal score). Candidates must also submit with their applications a statement of purpose of approximately 400 words and two official transcripts directly to the department as a complete package. A candidate who is deficient in any of the requirements above may be considered for conditional admission. A candidate whose course preparation is deemed deficient will be required to complete specified courses in addition to the minimum 30 units required for the degree. Deficiencies must be corrected within a time period specified by the departmental graduate committee. Conditional admission is possible pending the taking of the GRE General Test during the first semester of enrollment and the attainment of a satisfactory score.

### Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as stated in Part Two of this bulletin, as well as the specific requirements of the department. All students should consult the graduate adviser. Students may not be advanced to candidacy until they have met the foreign language requirement or an approved substitute.

### Specific Requirements for the Master of Arts Degree in History

(Major Code: 22051)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of 30 units which includes a major consisting of at least 24 units in history from courses listed below as acceptable on the master's degree programs, at least 18 units of which must be in 600- and 700-numbered courses. Students may elect either Plan A, the normal option, requiring a thesis, or, in special circumstances and with the prior approval of the graduate adviser and the student's major professor, Plan B, requiring a comprehensive written and oral examination in both a major and minor field of history chosen in consultation with the graduate adviser. Required courses are History 601, 665; six units selected from History 620, 630, 640, 650, or 680; History 797; and History 799A for those students electing Plan A. Students approved for Plan B shall meet the same course requirements as those enrolling in Plan A, except that they must enroll in History 795 (three units) and one additional three-unit history course numbered from 620 to 680 in lieu of History 797 and 799A.

Candidates for this degree must demonstrate knowledge of either a relevant foreign language or an approved substitute in computer language or statistical methods. Other substitutes may be approved where the skills involved are directly related to the student's research interests. Course selection and programs must be approved by the graduate adviser prior to the student's registration.

### Courses Acceptable on Master's Degree Program in History (HIST)

#### Field (a). Thematic, Comparative, and Interdisciplinary History

##### UPPER DIVISION COURSES

#### HIST 500. Topics in Ancient History (3)

Prerequisite: Upper division standing.

Variable topics in ancient history throughout the world may include: Women in Greek and Roman societies, magic in the Greco-Roman World, Silk Roads, and pre-contact Mesoamerica. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

#### HIST 527. The Holocaust in Feature Films (3) II

(Same course as European Studies 527.)

Two lectures and two hours of activity.

Prerequisite: Upper division or graduate standing.

Depiction of the Nazi policy of destroying European Jewry and its impact on the perpetrators, bystanders, victims, and the post-war world in feature films.

#### HIST 553. History of Genders in Latin America (3)

Prerequisite: History 115 or 116 or 415 or 416.

History of gender constructions throughout Latin America from pre-Columbian times to present, emphasizing definition of masculinity, femininity, and sexual orientations in the region through use of primary and secondary sources.

#### HIST 560. Growing Up Latin American (3)

Prerequisite: History 115 or 116 or 415 or 416.

Historical analysis of life stories of men and women from majority and minority groups in Latin America.

#### HIST 580. Topics in the History of War and Violence (3)

Prerequisite: Upper division standing.

History of war and violence may include: Violence in Africa, modern genocide, trauma and modern East Asia, social suffering in historical perspective. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

#### HIST 581. Topics in Urban History (3)

Prerequisite: Upper division standing.

Variable topics in urban history may include: The city in United States history, Chinatowns, suburbs and suburbanization, urban politics. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

#### HIST 582. Topics in Social and Cultural History (3)

Prerequisite: Upper division standing.

Variable topics in the social and cultural history may include: Ritual in early modern Europe, radicals and revolutionaries, intellectuals and society, families in former times, and American popular culture. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

#### HIST 583. Topics in History of Gender and Sexuality (3)

Prerequisite: Upper division standing.

Variable topics in history of gender and sexuality may include: Gay and Lesbian history, Asian American gender and sexuality, genders in Latin America. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

#### HIST 584. Topics in Environmental History (3)

Prerequisite: Upper division standing.

Variable topics in environmental history may include: Press, politics, environment, world environmental history, water and society. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

#### HIST 596. Selected Studies in History (1-4)

Topics in 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

#### Field (b). The Ancient Through Early Modern World

##### UPPER DIVISION COURSES

#### HIST 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.

#### HIST 502. Ancient Greece (3)

Greek history from prehistoric period through Age of Alexander the Great. Emphasis on political, social, cultural and institutional developments and historiography. Secondary attention to military, economic, and religious topics. (Formerly numbered History 500A.)

#### HIST 503. Ancient Rome (3)

Roman history from origins of Rome to fall of the Empire. Emphasis on political, social, cultural and institutional developments and historiography. Secondary attention to military, economic, and religious topics. (Formerly numbered History 500B.)

**HIST 504. The Early Middle Ages (3)**

Europe and Mediterranean 300-1100 C.E. through various approaches: political, economic, social, and cultural. Collapse of Roman Empire, transformation of classical culture and regions that claimed its heritage: Christian kingdoms of western Europe, Byzantine, and Muslim Arab empires. (Formerly numbered History 503A.)

**HIST 505. The Later Middle Ages (3)**

Europe and the Mediterranean 1100-1450 C.E. through various approaches: political, economic, social, and cultural. Development of Christian kingdoms of western Europe and relationship to Byzantine empire, Muslim Arab and Turkish states. (Formerly numbered History 503B.)

**HIST 506. The Renaissance (3)**

Intellectual, artistic, social, and economic transformation in Europe from fourteenth to seventeenth centuries.

**HIST 507. The Reformation (3)**

Continental Europe, 1500-1648. Split of Christendom; political and intellectual dissent; social fabric of family life; relationship between gender, class, and power; cultural stratification of European society.

**HIST 513A. Early Scandinavia (3)**

The formation and development of the Scandinavian kingdoms from the Viking Age to the end of the Napoleonic Wars.

**HIST 522. Tudor and Stuart England (3)**

Struggle between monarchy, aristocracy, and gentry from Henry VII to Civil War. Reformation and Renaissance, cultural and colonial growth, the Glorious Revolution, parliamentary control, and political stability. (Formerly numbered History 522A-522B.)

**HIST 528. Social History of Early Modern Europe (3)**

Historical survey of European society emphasizing changes in the family, health, diet, standard of living, urbanism, crime, migration, and literacy, from 1350 to beginning of Industrial Revolution.

**HIST 530. Colonial America (3)**

Settlement and development of the English colonies in North America through the mid-eighteenth century. Contact of cultures, social structure, labor systems, religion, popular values, problems of imperial control, and political culture.

**HIST 532. Topics in Early American History (3)**

Prerequisites: Upper division standing and three units in history at the college level.

Variable topics in history of colonial America and the early republic. Possible topics include: Women and the Family; Race, Class and Labor; American Revolution; Religion and Politics; Immigrants' Experiences. See Class Schedule for topic. May be repeated with new content. Maximum credit six units.

**HIST 550. Colonial Mexico (3)**

Prerequisite: History 115, 116, 415, or 416.

Social history of Mexico from pre-contact through early national period using primary and secondary sources. Processes of social and cultural negotiation involving gender, religion, environment, medicine, and urban experience. (Formerly numbered History 551A.)

**HIST 563. Southeast Asia to 1800 (3)**

Cultural traditions of Southeast Asian people. Examines nature of the state, interstate relations, evolution of indigenous institutions, and influences of India, China, Islam, and the West to end of the eighteenth century. (Formerly numbered History 564A.)

**HIST 566. Chinese Civilization: The Great Traditions (3)**

China's institutional and cultural development from ancient to pre-modern times. Emphasis on traditional philosophy, religions, literature, and the arts.

**HIST 569. Japan from Classical Age to Early Modern Era (3)**

Historical examination of Japanese civilization as a social construction from creation myths to early modern era. Religion, philosophy, aesthetics, art, literature, and social relations. Customs, practices, myths, and historical precedents that created a shared sense of Japanese culture.

**Field (c). The Modern World****UPPER DIVISION COURSES****HIST 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.

**HIST 512B. The Age of Dictators and Contemporary Europe (3)**

Europe in the age of dictatorship, world war, decline, and recovery.

**HIST 513B. Modern Scandinavia (3)**

Major political, social and economic developments in Scandinavia from 1814 to the present, with emphasis on contemporary society.

**HIST 514. 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.

**HIST 517. Modern Germany (3)**

Political, social, and economic history of Germany from 1848 to present. (Formerly numbered History 517A-517B.)

**HIST 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.

**HIST 533A. The Jacksonian Era (3)**

Territorial expansion, democratic politics, revivalism, and the slavery controversy.

**HIST 533B. Civil War and Reconstruction (3)**

The Civil War and Reconstruction, emphasizing political affairs and the role of Lincoln.

**HIST 535. The Age of Roosevelt (3)**

The United States in Depression, War, and Cold War. (Formerly numbered History 535B.)

**HIST 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.

**HIST 539. Topics in the History of the American West (3)**

Prerequisites: Upper division standing and three units of history at the college level.

Selected topics in history of American West such as Westward movement; Southwest borderlands; gender and the frontier; new western history. May be repeated with new content. Maximum credit six units.

**HIST 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.

**HIST 543. American Involvement in Vietnam 1941-75 (3)**

Prerequisites: Upper division standing and six units in history.

Causes and costs of America's longest war: the war's beginning, United States involvement, role of media and antiwar movement, American withdrawal, impact of war on Southeast Asia and the United States.

**HIST 544A. Early American Foreign Relations (3)**

Development of American foreign relations from Colonial Period to the Spanish-American-Filipino War.

**HIST 544B. Modern American Foreign Relations (3)**

Development of American foreign relations since 1900.

**HIST 545. Constitutional History of the United States (3)**

Development of American constitutional ideals and institutions from colonial period to the present. Examines historical context of significant legal issues and constitutional cases. (Formerly numbered History 545A and 545B.)

### **HIST 551. Modern Mexico (3)**

Prerequisite: History 115, 116, 415, or 416.

Social history of Mexico since early national period using primary and secondary sources. Processes of social and cultural negotiation involving gender, religion, environment, medicine, and urban experience. (Formerly numbered History 551B.)

### **HIST 552. Brazil (3)**

Survey of history of Brazil from Portuguese backgrounds to present. Brazil as a tropical society. Recommended for students minoring in Portuguese.

### **HIST 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.

### **HIST 564. Southeast Asia in the Modern World (3)**

Southeast Asian history since 1800 with attention to colonialism, sociocultural change, Chinese diaspora, nationalism and independence, and economic development. Considers transnational comparisons among Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam. (Formerly numbered History 564B.)

### **HIST 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.

### **HIST 570. Japan in the Modern World (3)**

Japan's emergence as a modern state since the nineteenth century, and ongoing struggle to redefine Japanese identity. Examines Japan's engagement with modernity as seen through changes in political discourse, gender relations, international relations, intellectual trends, and economic development.

### **HIST 574. Arab-Israeli Relations, Past and Present (3)**

Arab-Israeli conflict and diplomacy over Palestine from perspectives of Zionism, Arab nationalism, and Great Power relations from nineteenth century to present.

### **HIST 585. Topics in the History of the Sixties (3)**

Prerequisite: Upper division standing.

Variable topics in the history of the 1960s may include: America in the 1960s, Africa in the 1960s, politics and protests in 1960s, Europe in the 1960s. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

## **GRADUATE COURSES**

All graduate courses in the Department of History have a prerequisite of 12 units of upper division courses in history, or consent of the instructor.

### **HIST 601. Seminar in Historical Methods (3)**

Historical methodologies, historiography, and critical analysis.

### **HIST 620. Directed Readings in European History (3)**

Prerequisite: Consent of instructor.

Selected readings in historical literature and primary sources in a designated area of European history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **HIST 630. Directed Readings in United States History (3)**

Prerequisite: Consent of instructor.

Selected readings in historical literature and primary sources in a designated area of United States history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **HIST 640. Directed Readings in Latin American History (3)**

Prerequisite: Consent of instructor.

Selected readings in historical literature and primary sources in a designated area of Latin American history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **HIST 650. Directed Readings in Asian History (3)**

Prerequisite: Consent of instructor.

Selected readings in historical literature and primary sources in a designated area of Asian history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **HIST 665. Seminar in History (3)**

Prerequisites: History 601; six units selected from History 620, 630, 640, or 680, three units of which may be taken concurrently; six additional units in history appropriate to student's program.

Directed research on topics selected from a designated area of history. Maximum credit six units applicable to a master's degree.

### **HIST 680. Directed Reading in Selected Topics (3)**

Prerequisite: Consent of instructor.

Selected readings in comparative, interdisciplinary, and topical history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **HIST 696. Special Topics in History (1-3)**

Prerequisite: Consent of instructor.

Intensive study in specific areas of history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### **HIST 795. Area Studies in History (1-3) Cr/NC**

Prerequisite: Advancement to candidacy.

Preparation for the comprehensive examinations in the major and minor fields of history for those students taking the M.A. under Plan B. Maximum credit three units applicable to a master's degree.

### **HIST 797. Research (3) Cr/NC/RP**

Prerequisite: Advancement to candidacy and written approval of the History Department graduate adviser.

Independent research in a specialized subject in history.

### **HIST 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

### **HIST 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

### **HIST 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

### **HIST 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Interdisciplinary Studies

**OFFICE: Centennial Hall 3320**  
**TELEPHONE: (619) 594-5215**  
**FAX: (619) 594-0189**  
**E-MAIL: gra@mail.sdsu.edu**

Administered by the Graduate Division

## General Information

When the existing advanced degree programs of the University do not adequately meet certain special needs and interests, a student may propose a Master of Arts or Master of Science degree in Interdisciplinary Studies. This degree program provides the unusually well-qualified student an opportunity for individualized graduate study composed of coursework in at least two but not more than three departments or schools at SDSU. The Graduate Division administers this program following procedures established by the Graduate Council.

The proposed program must not be substantially available in a current graduate program offered at the University, and it must have adequate focus and coherence in cognate disciplines. Prerequisite courses will be required to support the courses in the student's program of study.

A graduate supervisory committee and a field of study shall be chosen, subject to the approval of the Dean of the Graduate Division, in consultation with the Student Affairs Committee of the Graduate Council. The supervisory committee shall consist of not less than three full-time faculty representative of the areas in which the student intends to pursue the degree. The graduate dean or designee shall serve as an ex officio member of the committee.

Since the inception of this program in 1977, individual students have undertaken graduate programs in such subjects as animal behavior, environmental economics, environmental resource management, folklore and mythology, homeland security, infant development, learning interface design molecular biology, museum studies, paleobiology, primitive Christianity, and sports psychology.

## Admission to Graduate Study

In addition to satisfying the requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, the student must (1) possess an academic background appropriate to the proposed program and have achieved an undergraduate grade point average of 3.0; and (2) complete the GRE General Test with a satisfactory score on the verbal and quantitative sections. Since an approved course of study is required for classified admission of this major, applicants may be admitted to the University in conditionally classified status pending formal approval of a program of study. Students admitted conditionally must meet with the Associate Dean of the Graduate Division as soon as possible after admission to the program. If the proposed curriculum is not approved, the student will have the option of applying for admission to an alternative advanced degree program.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu> and the following documentation as a complete package:

- (1) Two sets of official transcripts (in sealed envelopes) from each university attended;
- (2) A statement of purpose describing proposed study plan.

Mail or deliver your complete admissions package to:

Associate Dean, Graduate Division  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-8020

## Advancement to Candidacy

In addition to satisfying the general requirements of the University for advancement to candidacy, as stated in Part Two of this bulletin, the student must satisfy the special requirements for advancement defined by the supervisory committee in the official program of study.

## Specific Requirements for the Master's Degree

(Major Code: 49993)

1. In addition to satisfying the requirements for classified graduate standing and the basic requirements for the master's degree, as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units of courses acceptable for advanced degree credit.
2. The official program of study must reflect careful and deliberate planning. The selection and level of courses will be based on the best standards and practices of the disciplines involved. Normally no more than six units taken prior to approval of the official program of study may apply to the degree.
3. In consultation with the supervisory committee, the student will determine the subject of the research for a thesis that will be completed as the culminating experience in partial fulfillment of the requirements for the degree.

## General Procedures for the Program

1. After meeting with the Associate Dean of the Graduate Division, a student interested in being formally considered for the Interdisciplinary Studies program should complete and follow the instructions on the form, "Request for Permission to Pursue an Interdisciplinary Studies Master's Degree," which is available in the Graduate Division. The applicant must initially seek out a potential faculty adviser and two additional faculty members who have the expertise and interest in advising and supporting the applicant in the proposed program of study.
2. When the student's portion of the form has been completed, the major adviser selected, and other potential supervisory committee members contacted, an appointment with the Associate Dean of the Graduate Division should be arranged. In some instances, both the applicant and the proposed major adviser should be present at this meeting. Other proposed committee members are welcome to participate in these discussions.

3. Following this meeting and after making any modifications to the proposed program eventuating from it, the student must present for approval the "Request for Permission to Pursue an Interdisciplinary Studies Master's Degree" to the chairs of departments in which courses are being proposed and to the deans of colleges responsible for these academic units.
4. The student will then present the "Request," endorsed with appropriate departmental and college recommendations, to the Graduate Division, where it will be reviewed by the Student Affairs Committee of the Graduate Council. Upon the recommendation of that committee, the "Request" will be forwarded to the Associate Dean, whose final endorsement will certify that the "Request" has been approved as an official program of study, that the supervisory committee has been formally appointed, and that the student has been granted classified graduate standing for the purpose of pursuing the interdisciplinary major.
5. Virtually all other requirements for this major are the same as those for other master's degree programs, as specified in this bulletin. Special questions should be directed to the chair of the supervisory committee or to the Graduate Division.

### GRADUATE COURSES (INT S)

#### **INT S 797. Research (1-3) Cr/NC/RP**

Prerequisite: Advancement to candidacy.

Independent research in a specialized subject. Maximum six units applicable to a master's degree.

#### **INT S 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of instructor.

Independent study. Maximum credit six units applicable to a master's degree.

#### **INT S 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

#### **INT S 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

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# Kinesiology

In the Department of Exercise and Nutritional Sciences  
In the College of Professional Studies and Fine Arts

**OFFICE: Exercise and Nutritional Sciences 351**  
**TELEPHONE: (619) 594-5541**

## Faculty

Barbara E. Ainsworth, Ph.D., M.P.H., Professor of Exercise and Nutritional Sciences, Chair of Department  
Peter M. Aufmesser, Ph.D., Professor of Exercise and Nutritional Sciences  
Thomas L. McKenzie, Ph.D., Professor of Exercise and Nutritional Sciences  
Robert A. Mechikoff, Ph.D., Professor of Exercise and Nutritional Sciences  
Robert Moore, Ph.D., Professor of Exercise and Nutritional Sciences  
Patricia Patterson, Ph.D., Professor of Exercise and Nutritional Sciences  
Brent S. Rushall, Ph.D., Professor of Exercise and Nutritional Sciences  
Roger Simmons, Ph.D., Professor of Exercise and Nutritional Sciences  
Larry S. Verity, Ph.D., Professor of Exercise and Nutritional Sciences (Graduate Adviser)  
Kathryn J. LaMaster, Ph.D., Associate Professor of Exercise and Nutritional Sciences  
Denise A. Wiksten, Ph.D., Associate Professor of Exercise and Nutritional Sciences  
James Yaggie, Ph.D., Associate Professor of Exercise and Nutritional Sciences  
David Kahan, Ph.D., Assistant Professor of Exercise and Nutritional Sciences  
Susan S. Levy, Ph.D., Assistant Professor of Exercise and Nutritional Sciences  
Simon J. Marshall, Ph.D., Assistant Professor of Exercise and Nutritional Sciences

## Associateships

Graduate teaching associateships in exercise and nutritional sciences are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the department or the graduate adviser.

## General Information

The Department of Exercise and Nutritional Sciences offers graduate study leading to the Master of Arts degree in kinesiology.

The Master of Arts degree permits the selection, under advisement, of a program of study which may be oriented either towards a generalist approach or with a specialization in one of two areas. This program is appropriate for individuals who require a broad theoretical foundation that might be applied to teaching, coaching, and administration in fields that involve the acquisition of gross motor skills and the enhancement of physical activity and/or fitness. The generalist program allows students to combine courses that best fit their interests. The two areas of specialization offered by the department are Biomechanics and Sport Psychology. Each specialization has a strong theoretical component that provides a basis for students who seek employment in the academic, public, or private sectors, or who intend to pursue a doctoral degree within the area of specialization.

The faculty includes researchers who are professionally active in each of the areas of specialization. The department also has several clinical facilities that provide the opportunity for students and faculty to work with students, patients and subjects. In addition, newly renovated facilities for biomechanics, motor control, teaching and coaching, and kinanthropometry are available for teaching and for student and faculty research. A variety of other health and education-related projects are routinely conducted in conjunction with local educational and medical institutions.

## Master of Arts Degree in Kinesiology

### Admission to Graduate Study

Students will be admitted to the graduate program in kinesiology only after careful consideration of their qualifications by the kinesiology graduate adviser.

Students will be admitted in BOTH fall and spring semesters, with the exception of the Specialization in Exercise and Sport Psychology. Submit applications no later than February 1 for the fall and no later than October 1 for spring.

All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin. In addition, a student applying for admission to the graduate program in kinesiology must meet the following requirements:

1. A bachelor's degree in kinesiology. Applicants who do not have an undergraduate major in kinesiology may be admitted to conditionally classified graduate standing on the recommendation of the departmental graduate adviser. They will be required to complete the minimum requirements for an undergraduate major in physical education (i.e. up to 18 units of upper division exercise and nutritional sciences coursework) in addition to the minimum of 30 units required for the master's degree.
2. A grade point average of not less than 3.0 in the last 60 units attempted.
3. A minimum score of 475 on each of the verbal and quantitative sections of the Graduate Record Examination (General Aptitude Test).

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Exercise and Nutritional Sciences:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) Two letters of reference;
- (4) Letter of intent: 1-2 pages describing applicant's background and research interests and goals.

Mail or deliver your complete admissions package to:

Department of Exercise and Nutritional Sciences  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7251

### Advancement to Candidacy

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

### Specific Requirements for the Master of Arts Degree

(Major Code: 08351)

In addition to meeting the requirements for classified graduate standing the student must satisfy the basic requirements for the master's degree, described in Part Two of this bulletin. The 30-unit program includes a minimum of 21 units in exercise and nutritional sciences selected from courses listed in this bulletin as acceptable on master's degree programs, of which at least 18 units must be in 600- and 700-numbered courses. Exercise and Nutritional Sciences 601, 602, 684, and 799 are required. A final oral examination on the field of the thesis/project and on the implications of the thesis research for the broader field of physical education is also required.

Students seeking a Master of Arts degree in kinesiology are required to develop and sign a formal plan of study which must be approved by the graduate adviser before being forwarded to the Graduate Division. The approved plan of study should be developed in consultation with a faculty member who teaches graduate coursework of interest to the student.

The generalist program allows students to combine courses that best fit their interests. The department's graduate coordinator counsels students in the general degree program before suggesting a program adviser. Students are required to take mandated core courses as well as being able to select a number of electives. The offerings in a specialization allow a student to identify certain curricula and competencies that have been achieved once the degree has been completed.

The department expects a student to complete the degree within seven years. Failure to complete the degree requirements within seven years will result in dismissal from the program.

#### Specialization in Biomechanics

Applications of the science of mechanics to the study of the human musculoskeletal system and to a wide variety of gross motor activities relevant to exercise, medical and industrial sciences.

Required courses (12 units):

- ENS 630 Advanced Biomechanics: Kinematics (3)
- ENS 631 Advanced Biomechanics: Kinetics (3)
- ENS 660 Advanced Kinesiology (3)
- ENS 673 Advanced Principles of Motor Control (3)

Electives: Six units to be chosen in consultation with a specialization adviser.

#### Specialization in Exercise and Sport Psychology

Students take coursework that develops a knowledge base for the application of psychology in exercise and sports settings. Students with previous experience in coaching, health or fitness settings, or psychology will find the program of particular interest. (*NOTE: Only fall semester admissions are accepted with a February 1 deadline.*)

Required courses (12 units):

- ENS 671 Seminar in Advanced Sport Psychology (3)
- ENS 688 Applied Psychology of Effective Coaching (3)
- ENS 689 Applied Psychology for Superior Performance (3)
- ENS 793 Sport Psychology and Pedagogy Internship (1-3) Cr/NC

Electives: Six units to be chosen in consultation with a specialization adviser.

### Courses Acceptable on Master's Degree Programs in Kinesiology (ENS)

#### UPPER DIVISION COURSE Exercise and Nutritional Sciences Course

##### ENS 596. Selected Topics in Exercise and Nutritional Sciences (1-3) I, II

Selected topics in exercise and nutritional sciences. May be repeated with new content and approval of instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

#### GRADUATE COURSES Exercise and Nutritional Sciences Courses

##### ENS 601. Experimental Methods in Exercise and Nutritional Sciences (3)

Prerequisite: Undergraduate statistics course.  
Experimental methods in exercise and nutritional science.

##### ENS 602. Research Evaluation in Exercise and Nutritional Sciences (3)

Prerequisite: Exercise and Nutritional Sciences 601.  
Techniques in designing, conducting, and reporting research in exercise and nutritional science. Qualitative and quantitative paradigms examined. Ethical consideration of human research.

##### ENS 630. Advanced Biomechanics: Kinematics (3)

Prerequisites: Exercise and Nutritional Sciences 306.  
Kinematic analysis of human movement using videography, together with automated data reduction procedures.

##### ENS 631. Advanced Biomechanics: Kinetics (3)

Prerequisite: Exercise and Nutritional Sciences 306.  
Two- and three-dimensional kinetics. Theoretical and practical aspects of force measurement techniques involving mechanical properties of components of musculoskeletal system, and kinetic aspects of gross motor activities and human-machine systems.

##### ENS 644. Scientific Basis of Therapeutic Exercise (3)

Prerequisite: Exercise and Nutritional Sciences 463.  
Mechanical and neurophysiological principles related to application of therapeutic exercise techniques.

##### ENS 660. Advanced Kinesiology (3)

Prerequisites: Exercise and Nutritional Sciences 303 and 306.  
Tissue structure, neuromuscular function and performance. Electromyography and movement analysis.

##### ENS 664. Seminar in Anthropometry and Motor Performance (3)

Prerequisites: Exercise and Nutritional Sciences 301 and 303.  
Relationships between body structure and motor performance as compared through the techniques of anthropometry, somatotyping and body composition.

##### ENS 667. Seminar in Adapted Physical Education (3)

Prerequisites: Exercise and Nutritional Sciences 348 and 363.  
Trends, programs and crucial problem areas in adapted physical education as they relate to the organization, planning and implementation of these programs.

##### ENS 671. Seminar in Advanced Sport and Exercise Psychology (3)

Prerequisite: Exercise and Nutritional Sciences 461.  
Research and theory of psychological behavior in sport and physical activity. Theoretical models, research issues, and applications.

##### ENS 672. Perceptual Motor Learning (3)

Prerequisite: Exercise and Nutritional Sciences 307.  
Basic psychological parameters underlying perceptual motor impairment. Emphasis on utilizing these concepts to evaluate and remediate perceptual motor problems in the young child.

**ENS 673. Advanced Principles of Motor Control (3)**

Prerequisite: Exercise and Nutritional Sciences 307.

Investigation of the control of human movement using electromyography, biomechanics, and neurophysiology.

**ENS 684. Behavior Change in Sport and Exercise (3)**

Prerequisite: Exercise and Nutritional Sciences 307.

Principles and applications of operant psychology to the development and maintenance of behavior in physical education and sport environments. Behavioral techniques to manage and motivate learners in diverse physical activity settings.

**ENS 688. Applied Psychology of Effective Coaching (3)**

Controlling physical performance in training and competitions. Psychological procedures which improve sporting performances.

**ENS 689. Applied Psychology for Superior Performance (3)**

Prerequisite: Exercise and Nutritional Sciences 688.

Psychological factors for preparing superior athletes to compete, with particular emphasis on the day of competition.

**ENS 696. Advanced Topics in Exercise and Nutritional Sciences (3)**

Intensive study in specific areas of exercise and nutritional sciences. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**ENS 793. Sport Psychology and Pedagogy Internship (1-3) Cr/NC**

Three hours of supervision per unit.

Prerequisites: Exercise and Nutritional Sciences 671, 684, 689, and consent of instructor.

Supervised field work involving assessment and evaluation of psychological and pedagogical variables in sport, physical education, fitness, and health settings. Maximum credit six units, three units applicable to a master's degree.

**ENS 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of department chair.

Individual study. Maximum credit six units applicable to a master's degree.

**ENS 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**ENS 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.

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

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# Latin American Studies

In the College of Arts and Letters

OFFICE: Storm Hall 146  
TELEPHONE: (619) 594-1104  
<http://latinamericanstudies.sdsu.edu/>

## Faculty Committee for Latin American Studies

James B. Gerber, Ph.D., Professor of Economics, Chair of Committee (Graduate Coordinator)

Joseph W. Ball, Ph.D., Professor of Anthropology

Kathee M. Christensen, Ph.D., Professor of Speech, Language, and Hearing Sciences

Barbara E. Fredrich, Ph.D., Professor of Geography

Ricardo Griswold del Castillo, Ph.D., Professor of Chicana and Chicano Studies

Lawrence A. Herzog, Ph.D., Professor of Public Administration and Urban Studies

D. Emily Hicks, Ph.D., Professor of Chicana and Chicano Studies

Kathleen V. Kish, Ph.D., Professor of Spanish

Lois K. Lippold, Ph.D., Professor of Anthropology

Brian E. Loveman, Ph.D., Professor of Political Science

Gail L. Robinson, Ph.D., Professor of Spanish

Malcolm N. Silverman, Ph.D., Professor of Spanish and Portuguese

John R. Weeks, Ph.D., Professor of Geography

Carlos G. Wilson, Ph.D., Professor of Spanish

Catalina Amuedo-Dorantes, Ph.D., Associate Professor of Economics

David V. Carruthers, Ph.D., Associate Professor of Political Science

Stephen A. Colston, Ph.D., Associate Professor of History

María De la Luz Ibarra, Ph.D., Associate Professor of Chicana and Chicano Studies

Adelaida R. Del Castillo, Ph.D., Associate Professor of Chicana and Chicano Studies

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Doreen J. Mattingly, Ph.D., Associate Professor of Women's Studies

William A. Nericcio, Ph.D., Associate Professor of English and Comparative Literature

Norma Ojeda, Ph.D., Associate Professor of Sociology and Chicana and Chicano Studies

Cristina Rivera-Garza, Ph.D., Associate Professor of History

José D. Rodríguez, Ph.D., Associate Professor of Chicana and Chicano Studies

Fernando Bosco, Ph.D., Assistant Professor of Geography

Gregory A. Talavera, M.D., Associate Professor of Public Health

Claudia V. Angelelli, Ph.D., Assistant Professor of Spanish

Terry E. Carrilio, Ph.D., Assistant Professor of Social Work

Paula S. DeVos, Ph.D., Assistant Professor of History

Jill Esbenshade, Ph.D., Assistant Professor of Sociology

Juan M. Godoy, Ph.D., Assistant Professor of Spanish

Jonathan Graubart, Ph.D., Assistant Professor of Political Science

Kristen Hill-Maher, Ph.D., Assistant Professor of Political Science

Irene Lara, B.A., Assistant Professor of Women's Studies

María Irene Moyna, Ph.D., Assistant Professor of Spanish

Hugo Murillo, Ph.D., Assistant Professor of History

Darlene Muzquiz-Guerreiro, Ph.D., Assistant Professor of Spanish

Ramona L. Pérez, Ph.D., Assistant Professor of Anthropology

Brett A. Rosenberg, Ph.D., Assistant Professor of Spanish

Nora Strejilevich, Ph.D., Assistant Professor of Spanish

Francisco Zabaleta, Ph.D., Assistant Professor of Spanish

Paul Ganster, Ph.D., Director, Institute for Regional Studies of the Californias

Mary Ann Lyman-Hager, Ph.D., Director, Language Acquisition Resource Center

Wayne Stromberg, Ph.D., Operations Director, Language Acquisition Resource Center

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## Master of Arts Degree in Latin American Studies

### General Information

Since 1976 the Center for Latin American Studies has been designated a National Resource Center for Latin American Studies (one of only eleven in the nation) by the United States Department of Education and funded through a Title VI grant. The Master of Arts degree administered by the center is an interdisciplinary program drawing on the expertise of an outstanding Latin Americanist faculty from the following departments: Anthropology, Art, Comparative Literature, Economics, Geography, History, Political Science, Public Administration and Urban Studies, Sociology, Spanish and Portuguese Languages and Literatures, Women's Studies, and the College of Business Administration. Emphasis in the program is placed on the central issue of "Modernization and Urbanization" in Latin America and offered through nine courses from nine different departments.

Research interests and areas of expertise of the faculty include: demography, economic development, folk art, Indians and peasants, land tenure systems, the Latin American press, mental health and aging in Mexico, militarism and guerrilla warfare, Spanish American prose, poetry and criticism, theatre, U.S.-Latin American relations, and the U.S.-Mexico border.

### Admission to Graduate Study

In addition to meeting the requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, the student must present the Bachelor of Arts degree with not less than 18 units of courses of Latin American content in three areas. A student whose preparation is deemed insufficient by his graduate adviser or by the Latin American Studies committee will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Center for Latin American Studies:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) Three letters of reference;
- (4) A personal statement.

Mail or deliver your complete admissions package to:

Center for Latin American Studies  
(Attention: Graduate Coordinator)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4446

## Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy described in Part Two of this bulletin. Moreover, students must demonstrate an oral and reading proficiency in Spanish through either the satisfactory completion of an oral and a written examination, or: (1) satisfactory completion of Spanish 103 and 202, and a reading examination administered by the Department of Spanish and Portuguese Languages and Literatures, or (2) satisfactory completion of three units of 500-level or graduate coursework in Spanish. In addition, students must complete satisfactorily (with a grade of B or better) Portuguese 101. Coursework at or above the 500 level may be included as a part of the official program with the approval of the graduate coordinator.

## Specific Requirements for the Master of Arts Degree

(Major Code: 03081)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Two of this bulletin, the student must complete at least 30 units of upper division and graduate coursework, including Latin American Studies 601, with not less than 24 units in courses of Latin American content selected from those listed below and distributed as follows:

	600- and 700-numbered Courses	500-, 600- and 700-numbered Courses
Department A.....	6 units	6 units
Department B.....	3 units	3 units
Department C.....	3 units	3 units
	12 units	12 units

The total program shall include a minimum of 18 units in 600- and 700-numbered courses. Students may select either Plan A or Plan B in consultation with the graduate adviser. In addition to meeting the distribution requirements given above, students electing Plan A must complete the 799A (Thesis) course. Students electing Plan B must pass a comprehensive written and oral examination in lieu of the thesis.

All programs will be approved by the Latin American Studies committee.

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

### General Information

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

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

### Admission to Graduate Study

Since this program combines disparate disciplines, applicants are required to submit GMAT scores and should have substantial academic backgrounds in the humanities and social sciences. Applicants

should also have a background in Spanish or Portuguese language and literature. It is expected that all students in the concurrent degree program will be full time, so that all requirements will be satisfied in an acceptable time period.

## Specific Requirements for the MBA/MA Degree

(Major Code: 49061)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete an officially approved course of study consisting of 70 units as outlined below.

- The college expects students entering the Master of Business Administration/MA in Latin American Studies program to be proficient in several areas. These include proficiency in statistics, mathematical skills, basic economics and in the use of personal computers, including spreadsheets and word processing. The students are responsible for insuring that they possess these skills before beginning the program.
- Complete the following core of eight courses (19 units):
  - BA 650. Financial Reporting and Analysis I (2)
  - BA 651. Organizational Behavior (2)
  - BA 652. Statistical Analysis (3)
  - BA 653. Managerial Economics (2)
  - BA 655. Marketing (3)
  - BA 660. Managerial Accounting (2)
  - BA 662. Operations Management (2)
  - BA 665. Financial Management I (3)

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

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

#### Interpersonal Skills Theme

- IDS 705. Communication Strategies (3)
- MGT 669. Human Resource Management (3)
- MGT 720. Seminar in Behavioral Sciences for Management (3)
- MGT 721. Seminar in Group Processes and Leadership (3)
- MGT 741. Seminar in Organization Power and Politics (3)
- MKTG 763. Seminar in Sales Management (3)

#### Environment Theme

- FIN 604. Legal Environment for Executives (3)
- MGT 626. Competitive Analysis of Industries (3)
- MGT 722. Seminar in Business Ethics and Social Institutions (3)
- MGT 740. Seminar in Business Management and the Natural Environment (3)
- MGT 742. Seminar in Business and the Good Society (3)
- MKTG 765. Seminar in Marketing and Public Policy (3)

- Complete 15 units in Business Administration to include:
  - FIN 654. Seminar in International Business Finance (3)
  - MGT 710. Seminar in World Business Environment (3)
  - MGT 723. Seminar in International Strategic Management (3)
  - MGT 731. Seminar in Strategic Management of Technology and Innovation (3)
  - MKTG 769. Seminar in International Marketing (3)
- Complete 24 units in courses of Latin American content, including the following required courses:
  - LATAM 696. Interdisciplinary Seminar (3)
  - LATAM 798. Special Study (3) Cr/NC/RP

- HIST 640. Directed Readings in Latin American History (3)\*  
 POL S 661. Seminar in the Political Systems of the Developing Nations (3)\*  
 POL S 667. Seminar in Latin American Political Systems (3)\*

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

### Latin American Studies Courses (LATAM)

- LATAM 560. Latin America After World War II (3)  
 LATAM 576. Frida Kahlo and Her Circle: Mexican Artists and the Challenge of Modernity (3)  
 LATAM 798. Special Study (3) Cr/NC/RP

### Economics Course (ECON)

- ECON 565. North American Economic Relations (3)

### History Courses (HIST)

- HIST 550. Colonial Mexico (3)  
 HIST 551. Modern Mexico (3)  
 HIST 552. Brazil (3)  
 HIST 558. Latin America in World Affairs (3)  
 HIST 640. Directed Reading in Latin American History (3)  
 HIST 795. Area Studies in History (3) Cr/NC\*\*

### Political Science Courses (POL S)

- POL S 564. Environmental Politics in Global Perspective (3)  
 POL S 566. Political Change in Latin America (3)  
 POL S 567. Political Systems of Latin America (3)  
 POL S 568. Mexican Politics (3)  
 POL S 655. Seminar in General Comparative Political Systems (3)\*\*  
 POL S 675. Seminar in International Relations (3)\*\*  
 POL S 795. Problem Analysis (3)\*\*

### California Western School of Law Courses\*\*\*

452. International Protection of Human Rights  
 498. Mexican Law  
 610. Immigration Law  
 625. International Business Transactions  
 636. International Organizations  
 643. Private International Law  
 644. Public International Law  
 703. Latin American Law

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

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

\* Repeatable with new content and approval of advisory committee.

\*\* Acceptable when of relevant content.

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

## Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. In addition, 1) the student will be required to complete Spanish 302 (or its equivalent), or Portuguese 401 (or its equivalent), and pass an oral and written examination administered by the Department of Spanish and Portuguese Languages and Literatures; 2) all core courses in

business and Latin American studies must be completed prior to advancement with a minimum grade point average of 3.0 and no grade less than a B- in any core course; 3) have been recommended for advancement by the combined advisory committee; 4) have a thesis proposal approved by the combined faculty advisory committee.

Upon advancement to candidacy, the student will enroll in Management 797 (Research) and BA 799A (Thesis). A thesis (Plan A) incorporating theory, method, and analytic techniques from both disciplines is the culminating experience for the concurrent program leading to the MBA and MA degrees.

## Courses Acceptable on Master's Degree Programs in Latin American Studies (LATAM)

### UPPER DIVISION COURSES Latin American Studies Courses

#### LATAM 530. Civilization and Culture of Pre-Columbian America (3)

Prerequisite: Upper division standing.  
 Indigenous cultures of U.S./Mexico border region, Mexico, Central America from a multidisciplinary perspective. Geographical, religious, political, economic, and social realities.

#### LATAM 560. Latin America After World War II (3)

Prerequisites: Latin American Studies 101; History 115, 116; and Political Science 566.

Major socioeconomic and political changes in Latin America since World War II and inter-American relations during the same period. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

#### LATAM 575. Art and Culture in the U.S./Mexico Border Region (3)

Prerequisite: Upper division standing.  
 Settlement and culture along the U.S./Mexican border seen through a multi-disciplinary study of art, architecture, artists, and patronage.

#### LATAM 576. Frida Kahlo and Her Circle: Mexican Artists and the Challenge of Modernity (3)

Prerequisite: Upper division standing.  
 Work and life of Frida Kahlo, her influence on artists and thinkers who shared her world, and influence she continues to have on art of Mexico and the U.S.

#### LATAM 580. Special Topics (1-4)

Prerequisite: Six upper division units in Latin American content courses.

Interdisciplinary study of selected Latin American topics. Credit will vary depending on the scope and nature of the topic. Whenever appropriate, the course will be taught by a team of instructors representing two or more disciplines. May be repeated with different content. See Class Schedule for specific content. Maximum credit eight units.

### Anthropology Courses (ANTH)

- ANTH 508. Medical Anthropology (3)  
 ANTH 582. Regional Anthropology (3)\*  
 ANTH 583. Topical Anthropology (3)\*

### Art Courses (ART)

- ART 557. Art of the Nineteenth Century (3)  
 ART 577. History of Architecture (3)  
 ART 596. Advanced Studies in Art and Art History (1-4)\*

### Communication Courses (COMM)

- COMM 591. International Telecommunications (3)  
 COMM 596. Selected Topics (1-4)\*

**Comparative Literature Courses (C LT)**

- C LT 561. Fiction (3)
- C LT 562. Drama (3)
- C LT 563. Poetry (3)
- C LT 571. Literary Use of Legend (3)
- C LT 594. Topics in Literature and the Arts (3)
- C LT 596. Topics in Comparative Literature (3)\*

**Economics Courses (ECON)**

- ECON 561. International Trade (3)
- ECON 565. North American Economic Relations (3)
- ECON 592. International Monetary Theory and Policy (3)
- ECON 596. Experimental Topics (3)\*

**English Courses (ENGL)**

- ENGL 501. Literature for Children (3)
- ENGL 502. Adolescence in Literature (3)

**Geography Courses (GEOG)**

- GEOG 507. Geography of Natural Vegetation (3)
- GEOG 509. Regional Climatology (3)
- GEOG 545. Arid Lands (3)
- GEOG 554. World Cities: Comparative Approaches to Urbanization (3)
- GEOG 596. Advanced Topics in Geography (1-3)\*

**History Courses (HIST)**

- HIST 550. Colonial Mexico (3)
- HIST 551. Modern Mexico (3)
- HIST 552. Brazil (3)
- HIST 558. Latin America in World Affairs (3)
- HIST 596. Selected Studies in History (1-4)\*

**Law**

With the permission of the graduate adviser and the approval of the Graduate Division, classified graduate students may take a maximum of nine units of law at California Western School of Law through an affiliation agreement between the two institutions. San Diego State students must be enrolled for graduate courses at San Diego State University in the semester they are taking courses at California Western School of Law.

Please consult with the graduate adviser for a listing of the specific law courses offered.

**Political Science Courses (POL S)**

- POL S 531. Interest Groups and Political Movements (3)
- POL S 555. Comparative Political Systems (3)
- POL S 560. Comparative Public Policy (3)
- POL S 566. Political Change in Latin America (3)
- POL S 567. Political Systems of Latin America (3)
- POL S 568. Mexican Politics (3)
- POL S 577. Principles of International Law (3)

**Portuguese Course (PORT)**

- PORT 535. Brazilian Literature (3)

**Public Administration Course (P A)**

- P A 580. Comparative Public Administration (3)

**Sociology Courses (SOC)**

- SOC 522. The Family in Comparative and Cross-Cultural Perspectives (3)
- SOC 596. Current Topics in Sociology (1-3)\*

**Spanish Courses (SPAN)**

- SPAN 515. Mexican Literature (3)
- SPAN 520. Caribbean Area Countries Literature (3)
- SPAN 596. Selected Studies in Spanish (3)\*

**Television, Film and New Media Course (TFM)**

- TFM 562. Documentary and Propaganda Film/Television (3)

**Women's Studies Courses (WMNST)**

- WMNST 515. Women: Mythology and Ritual (3)
- WMNST 521. Life Cycles of Women (3)
- WMNST 553. Women Writers (3)\*
- WMNST 565. Women, Health, and Medicine (3)
- WMNST 580. Women and International Development (3)
- WMNST 596. Topics in Women's Studies (3)\*

\* Acceptable when of relevant content.

**GRADUATE COURSES**

**Latin American Studies Courses**

**LATAM 601. Seminar on Methodology of Latin American Studies (3)**

Prerequisite: Graduate standing.  
Theories and methodologies of Latin American Studies.

**LATAM 696. Experimental Topics (3)**

Prerequisite: Graduate standing.  
Intensive study in specific areas of Latin American studies. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units of 696 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**LATAM 700. Current Issues in Latin American Politics (3)**

Prerequisites: Graduate standing, Latin American Studies 601, and six upper division units in either history or political science.  
Directed research on topics selected from a designated area of Latin American politics and history. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**LATAM 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of staff, to be arranged with the director and instructor.  
Individual study. Maximum credit six units applicable to a master's degree.

**LATAM 799A. Thesis (3) Cr/NC/RP**

Prerequisite: An officially appointed thesis committee and advancement to candidacy.  
Preparation of a project or thesis for the master's degree.

**LATAM 799B. Thesis Extension (0) Cr/NC**

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

**Anthropology Courses (ANTH)**

- ANTH 600. Seminar (3)\*
- ANTH 603. Seminar in Ethnology (3)
- ANTH 621. Seminar in Topical Anthropology (3)
- ANTH 797. Research (3) Cr/NC/RP
- ANTH 798. Special Study (1-3) Cr/NC/RP
- ANTH 799A. Thesis (3) Cr/NC/RP
- ANTH 799B. Thesis Extension (0) Cr/NC

**Art Courses (ART)**

- ART 760. Seminar in Twentieth Century Art (3)
- ART 798. Special Study (1-3) Cr/NC/RP
- ART 799A. Thesis or Project (3) Cr/NC/RP
- ART 799B. Thesis or Project Extension (0) Cr/NC

### Communication Course (COMM)

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

### Economics Courses (ECON)

ECON 696. Experimental Topics (3)\*  
ECON 700. Seminar in Microeconomic Applications (3)\*  
ECON 720. Seminar in Development and Planning (3)  
ECON 730. Seminar in Macroeconomic Policy (3)  
ECON 740. Seminar in Applied Economic Research (3)\*  
ECON 750. Seminar in Economic History and Institutions (3)\*  
ECON 797. Research (3) Cr/NC/RP  
ECON 798. Special Study (1-3) Cr/NC/RP  
ECON 799A. Thesis (3) Cr/NC/RP  
ECON 799B. Thesis Extension (0) Cr/NC

### English Courses (ENGL)

ENGL 601. Literary Study in a Multicultural World (3)\*  
ENGL 604. A Literary Period or Movement (3)\*  
ENGL 606. A Literary Type (3)\*  
ENGL 626. Comparative Literature (3)\*  
ENGL 696. Special Topics (3)\*  
ENGL 700. Seminar: A Major Author or Authors (3)\*  
ENGL 726. Seminar: Issues in Comparative Literature (3)\*  
ENGL 798. Special Study (1-3) Cr/NC/RP

### Geography Courses (GEOG)

GEOG 696. Advanced Special Topics in Geography (3)\*  
GEOG 740. Seminar in Human Geography (3)\*  
GEOG 760. Seminar in Behavioral and Social Geography (3)\*  
GEOG 797. Research (1-3) Cr/NC/RP  
GEOG 798. Special Study (1-3) Cr/NC/RP  
GEOG 799A. Thesis (3) Cr/NC/RP  
GEOG 799B. Thesis Extension (0) Cr/NC

### History Courses (HIST)

HIST 640. Directed Reading in Latin American History (3)  
HIST 795. Area Studies in History (1-3) Cr/NC\*  
HIST 797. Research (3) Cr/NC/RP  
HIST 798. Special Study (1-3) Cr/NC/RP  
HIST 799A. Thesis (3) Cr/NC/RP  
HIST 799B. Thesis Extension (0) Cr/NC

### Political Science Courses (POL S)

POL S 655. Seminar in General Comparative Political Systems (3)\*  
POL S 658. Seminar in Post-Communist Political Systems (3)  
POL S 661. Seminar in the Political Systems of the Developing Nations (3)\*

POL S 667. Seminar in Latin American Political Systems (3)  
POL S 675. Seminar in International Relations (3)\*  
POL S 676. Seminar in International Political Economy (3)  
POL S 795. Problem Analysis (3)\*  
POL S 797. Research in Political Science (3) Cr/NC/RP  
POL S 798. Special Study (1-3) Cr/NC/RP  
POL S 799A. Thesis (3) Cr/NC/RP  
POL S 799B. Thesis Extension (0) Cr/NC

### Public Administration and Urban Studies Course (P A)

P A 798. Special Study (1-3) Cr/NC/RP

### Sociology Courses (SOC)

SOC 696. Experimental Topics (3)\*  
SOC 730. Seminar in Social Institutions (3)  
SOC 798. Special Study (1-3) Cr/NC/RP

### Spanish Courses (SPAN)

SPAN 601. Seminar in Hispanic Literary Theory (3)  
SPAN 695. Contemporary Spanish American Prose Fiction (3)  
SPAN 696. Selected Topics (3)\*  
SPAN 750. Seminar in Spanish American Literature (3)  
SPAN 755. Seminar in Spanish American Culture and Thought (3)  
SPAN 798. Special Study (1-3) Cr/NC/RP  
SPAN 799A. Thesis (3) Cr/NC/RP  
SPAN 799B. Thesis Extension (0) Cr/NC

### Television, Film and New Media Course (TFM)

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

### Women's Studies Courses (WMNST)

WMNST 601. Foundations of Feminist Scholarship (3)  
WMNST 602. Seminar: Methods of Inquiry in Women's Studies (3)  
WMNST 603. Seminar: Advanced Feminist Theory (3)  
WMNST 604. Seminar: Gender, Culture, and Representation (3)  
WMNST 605. Seminar: Women, Relationships, and Social Policy (3)  
WMNST 696. Selected Topics in Women's Studies (3-6)\*  
WMNST 701. Seminar in Women's Studies (3)\*  
WMNST 798. Special Study (1-3) Cr/NC/RP

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\* Acceptable when of relevant content.

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# Liberal Arts and Sciences

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In the College of Arts and Letters

## Faculty

Stephen B.W. Roeder, Ph.D., Professor of Physics and Chemistry,  
Director, MALAS Program  
Susan E. Cayleff, Ph.D., Professor of Women's Studies  
Laurie D. Edson, Ph.D., Professor of English and Comparative  
Literature  
Ricardo Griswold del Castillo, Ph.D., Professor of Chicana and  
Chicano Studies  
Alan E. Kilpatrick, Ph.D., Professor of American Indian Studies  
Harry Polkinhorn, Ph.D., Professor of English  
Alan R. Sweedler, Ph.D., Professor of Physics  
Stephen A. Colston, Ph.D., Associate Professor of History  
Elizabeth A. Colwill, Ph.D., Associate Professor of History  
JoAnne Cornwell, Ph.D., Associate Professor of French and Africana  
Studies  
Adelaida R. Del Castillo, Ph.D., Associate Professor of Chicana and  
Chicano Studies  
Craig P. Dunn, Ph.D., Associate Professor of Management  
Ellen Quandahl, Ph.D., Associate Professor of Rhetoric and Writing  
Studies  
José D. Rodríguez, Ph.D., Associate Professor of Chicana and  
Chicano Studies

## John R. Adams Professorship in Graduate Interdisciplinary Studies

The Adams Professorship was named in honor of the late John R. Adams, who came to San Diego State University in the 1920s as a professor of humanities. He served for many years as the Director of the Humanities Division, and then as the university archivist.

## Committee on Graduate Liberal Arts and Sciences

The Master of Arts degree in Liberal Arts and Sciences is administered by its director and advised by the Graduate Liberal Arts and Sciences Committee. Faculty assigned to teach courses in the program are drawn from departments throughout the University.

## General Information

The College of Arts and Letters offers a Graduate Interdisciplinary Studies program, leading to a Master of Arts degree in Liberal Arts and Sciences. An alternative approach to graduate education, the program offers coursework that crosses disciplinary boundaries, emphasizing a strong grounding in interdisciplinary methods for problem-solving, while at the same time providing students with a unique opportunity to attain their educational goals through a highly individualized graduate program.

The Graduate Interdisciplinary Studies/Master of Arts in Liberal Arts and Sciences student body is drawn from diverse backgrounds, thus adding to the unique character of the program.

## Admission to Graduate Study

Applicants seeking admission to the program leading to the Master of Arts degree in Liberal Arts and Sciences should contact the program coordinator requesting appropriate application materials. Detailed information concerning application procedures will be sent to the applicant along with the appropriate application forms.

In addition to satisfying the requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin, the student seeking admission must: (1) have a grade point average of 3.0 or better on work completed during the last 60 units for the baccalaureate degree, (2) have a score of 1000 or better on the GRE General Test (combined verbal and quantitative), and (3) complete a statement of purpose essay. A personal interview with a member of the Graduate Liberal Arts and Sciences Committee is recommended.

Students who do not meet all of the above requirements for admission with classified graduate standing may be admitted with conditional classified graduate standing upon the recommendation of the MALAS director and Graduate Liberal Arts and Sciences Committee. Students so admitted will be advised as to the nature of their deficiency and the time to be allowed to achieve full classified graduate standing.

## Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Two of this bulletin. In addition, the students must (1) satisfactorily complete 12 units, with a minimum grade point average of 3.0, including 9 units of core seminars as stipulated (MALAS 600A, 600B, 600C, 600D) and (2) if selecting Plan A, have a thesis or project proposal which has received the approval of the Graduate Liberal Arts and Sciences Committee and its director.

## Specific Requirements for the Master of Arts Degree in Liberal Arts and Sciences

**(Major Code: 49017)**

In addition to meeting the basic requirements for the Master of Arts degree in Liberal Arts and Sciences as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units in residence at San Diego State University in the MALAS program, of which at least 15 must be in 600- and 700-numbered courses. The total program must include:

1. Nine units of either MALAS 600A, 600B, 600C, or 600D.
2. Three units of MALAS 601.

3. A theme of study composed of 15 units of graduate course work, selected with the approval of the MALAS director which normally must be in at least two of the following areas: social sciences, humanities, natural sciences, and fine arts, with no more than six units in any given discipline. Some 500 level courses may be used in partial fulfillment of this requirement, if approved by the MALAS director. MALAS 798, where applicable, may be included as satisfying 3 of the 15 units for the thematic component. Under special circumstances, and with permission of the MALAS director, a student may compose a theme that deviates in structure from the criteria stipulated above. This theme may include up to a maximum of 12 units of 600A, 600B, 600C, and 600D, in any combination.

Students may select either Plan A or Plan B in consultation with the MALAS director. In addition to meeting the distribution requirements given above, students electing Plan A must complete MALAS 799A (Thesis or Project). Students electing Plan B must complete MALAS 795 (Studies in the Liberal Arts and Sciences) and pass a written comprehensive examination in lieu of the thesis.

All programs must be approved by the MALAS director in consultation with the Graduate Liberal Arts and Sciences Committee.

### Courses Acceptable on Master's Degree Program in Liberal Arts and Sciences (MALAS)

#### GRADUATE COURSES

#### **MALAS 600A-600B-600C-600D. Interdisciplinary Study in Liberal Arts and Sciences (3-3-3-3)**

Prerequisites: Admission to Master of Arts degree in Liberal Arts and Sciences program and consent of MALAS director.

Interdisciplinary seminars to explore issues that require integration of the perspective of various areas of the liberal arts and sciences. Each course may be repeated with new content. See Class Schedule for specific content.

- A. Social Sciences and Humanities
- B. Social Sciences and Natural Sciences
- C. Humanities and Natural Sciences
- D. Fine Arts and Social Sciences, Humanities, or Natural Sciences

#### **MALAS 601. Seminar in Interdisciplinary Thinking (3)**

Prerequisite: Admission to Master of Arts degree in Liberal Arts and Sciences program and approval of director.

Introduction to MALAS curriculum and interdisciplinary commitment, especially to connection between fine arts, humanities, sciences, and social sciences. See Class Schedule for specific content.

#### **MALAS 795. Studies in Liberal Arts and Sciences (1-3) Cr/NC**

Prerequisite: An officially appointed examining committee and advancement to candidacy.

Individual preparation for comprehensive examination for students taking the Master of Liberal Arts and Sciences under Plan B. Maximum credit three units.

#### **MALAS 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Advancement to candidacy and consent of MALAS director

Individual study on a given topic through interdisciplinary perspectives. Maximum credit three units.

#### **MALAS 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisite: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for Master of Arts degree in Liberal Arts and Sciences.

#### **MALAS 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.

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

#### **MALAS 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Linguistics

**OFFICE: Business Administration 327**  
**TELEPHONE: (619) 594-5268**  
**FAX: (619) 594-4877**  
<http://www.rohan.sdsu.edu/dept/linguist/lol.html>

In the Department of Linguistics and Oriental Languages  
In the College of Arts and Letters

## Faculty

Jeffrey P. Kaplan, Ph.D., Professor of Linguistics, Chair of Department  
Zev Bar-Lev, Ph.D., Professor of Linguistics  
Soonja Choi, Ph.D., Professor of Linguistics (Graduate Adviser)  
Jean Mark Gawron, Ph.D., Professor of Linguistics  
Yoshiko Higurashi, Ph.D., Professor of Japanese  
(Director, Japanese Language Program)  
Gail L. Robinson, Ph.D., Professor of Linguistics  
Robert Underhill, Ph.D., Professor of Linguistics  
Ryu Kitajima, Ph.D., Associate Professor of Japanese  
Deborah Poole, Ph.D., Associate Professor of Linguistics  
Betty T. R. Samraj, Ph.D., Associate Professor of Linguistics  
Charlotte Webb, Ph.D., Associate Professor of Linguistics  
(Certificate Adviser)  
Zheng-sheng Zhang, Ph.D., Associate Professor of Chinese  
Eniko Csomay, Ph.D., Assistant Professor of Linguistics  
Robert P. Malouf, Ph.D., Assistant Professor of Linguistics  
Ghada Osman, Ph.D., Assistant Professor of Arabic  
Ruey-Juan Regina Wu, Ph.D., Assistant Professor of Chinese

## Associateships

Graduate teaching associateships in linguistics are offered each semester to a limited number of qualified students to teach the composition courses for international students. Those interested should send a letter of application to the graduate adviser.

## General Information

The Department of Linguistics and Oriental Languages offers graduate study leading to the Master of Arts degree in linguistics. The interdisciplinary program provides broad educational opportunities through three specializations: 1) General Linguistics, for those planning to pursue a doctorate in theoretical areas (e.g., syntax or phonology) or for those who plan to work in a language-related field in industry or education; 2) ESL/Applied, for students planning to pursue a doctorate in applied linguistics, or intending to teach or design curriculum for ESL/EFL classrooms; 3) Computational Linguistics, for those planning a career in business or industry in computational linguistics, or a doctorate in this area. In addition to completing coursework for one of the specializations and demonstrating proficiency in a foreign language, students are required to submit a thesis (Plan A) or pass a comprehensive examination (Plan B).

All students who complete the required program will receive a Master of Arts degree in linguistics. If requested, the department will provide a letter designating a student's specialization for purposes of employment or application for further study. The specializations and language research interests of faculty members in this program are:

**Zev Bar-Lev** – ESL, discourse analysis, linguistics and computers; Hebrew, Arabic, and Russian.

**Soonja Choi** – Psycholinguistics, first and second language acquisition, cognition and language, ESL, materials development; Korean, French.

**Eniko Csomay** – ESL, corpus linguistics, discourse analysis, language variation, classroom discourse, research methods.

**Thomas S. Donahue** – American dialectology, sociolinguistics, historical linguistics; old English, middle English.

**Yoshiko Higurashi** – Phonology, accent and intonation, syllable structure, speech pathology, intercultural communication, Japanese language teaching.

**Jeffrey P. Kaplan** – Syntax, semantics, pragmatics, discourse, language and law; Swahili.

**Robert P. Malouf** – Computational linguistics, statistical natural language processing, machine learning, constraint-based grammar formalisms.

**Deborah Poole** – Classroom interaction, discourse analysis, cross-cultural interaction, ESL methods and materials.

**Gail L. Robinson** – Second language methodology, second language and culture acquisition, psycholinguistics; Spanish.

**Betty T. R. Samraj** – Discourse analysis, writing in the disciplines, ESL methods and materials, systemic-functional linguistics.

**Robert Underhill** – Descriptive linguistics, phonology, syntax, discourse; Turkish, Native American languages, Southeast Asian languages.

**Charlotte Webb** – Phonology, second Language acquisition, sociolinguistics; Spanish, Chinese, Lapp.

**Ruey-Juan Regina Wu** – Conversation analysis, pragmatics, and functional linguistics, with particular emphasis on Mandarin Chinese; language assessment; teaching methodologies, and language pedagogy.

## Admission to Graduate Study

In addition to meeting the requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, the student must have a Bachelor of Arts degree in linguistics or a related field that would demonstrate adequate preparation for the program.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Linguistics:

- (1) Two sets of official transcripts (in sealed envelopes). The grade point average required for admission to the M.A. program in linguistics is 3.0 in the last 60 semester units attempted;
- (2) GRE scores (official notification). All students are required to have GRE scores of 1050 or better on the combined verbal/quantitative portions of the test (with a minimum of 500 on each part);
- (3) TOEFL scores: Students who have a B.A. from a university where English is not the primary medium of instruction are required to have TOEFL scores of 570 or better. The TWE (Test of Written English) is also required, and will primarily be used to advise students regarding their program of courses;
- (4) Candidates must also submit with the application a statement of purpose (250-500 words) which demonstrates an understanding of the SDSU program and which show interest in an area of research that is within the department's scope of expertise;

- (5) Applicants should arrange two letters of recommendation be sent directly from the recommenders (who can evaluate the applicant's academic potential) to the Department of Linguistics graduate adviser.

A student who is deficient in any of the above requirements may be considered for conditional admission. A candidate may be required to complete specified courses within a specific time period in addition to completing the minimum 30 units required for the degree.

The fall semester graduate application deadline for the Department of Linguistics is May 15. The spring semester graduate application deadline is November 1. In order to ensure consideration, you must have ALL application materials to both the Office of Graduate Admissions and the department by the deadline.

Mail or deliver your complete admissions package to:

Department of Linguistics (Business Administration 327)  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7727

For additional information, contact Yasmine Panahi at ypanahi@mail.sdsu.edu and request an M.A. information packet.

### Advancement to Candidacy

All candidates must satisfy the general requirements for advancement to candidacy as described in Part Two of this bulletin. In addition to the requirements listed, students must demonstrate reading or speaking knowledge of at least one foreign language prior to advancement to candidacy.

### Specific Requirements for the Master of Arts Degree

(Major Code: 15051)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units of 500-, 600-, and 700-level courses including Linguistics 622 and 795. A minimum of 15 of the units taken must be from 600- or 700-level courses.

Students selecting the General Linguistics specialization must complete Linguistics 621 and six units from the following: Linguistics 610, 620, 640, 651, 654, and 660.

Students selecting the ESL/Applied specialization must complete either Linguistics 521 or 621, Linguistics 652, and at least six units from the following: Linguistics 623, 650, 653, and 655. An internship, Linguistics 740, is required of all students selecting this specialization who have not taught ESL previously.

Students selecting the Computational Linguistics specialization must complete Linguistics 571, 581, 582, either 521 or 621, and nine units selected from Linguistics 596 (when offered with computational linguistics content), 620, 654, 681, 682, 696 (when offered with computational linguistics content); Computer Science 550, 560, 562, 596 (when offered with computational linguistics content), 620A, 650 (when offered with computational linguistics content), 696 (when offered with computational linguistics content). **A prerequisite to the Computational Linguistics specialization is completion of Linguistics 570 or equivalent.**

Students selecting one specialization may enroll in courses from the other specialization as electives.

With the approval of the graduate adviser, a maximum of six units selected from the following courses will be accepted for graduate credit in linguistics: Anthropology 604; Communication 530, 584, 765; Rhetoric and Writing Studies 602; Russian 580; Spanish 561, 770; Speech, Language, and Hearing Sciences 790, 793.

### Plan A or Plan B

With approval of the graduate adviser, a student may choose either Plan A, the normal option which requires a thesis, or in special circumstances and with the prior approval of the graduate adviser, Plan B, which requires a written comprehensive examination. Plan A students must select a committee of three faculty, two of whom are from the department, to supervise the thesis. In consultation with the graduate adviser, students select one of two options upon approval of an official program and advancement to candidacy.

### Advanced Certificate in Applied Linguistics and English as a Second Language (ESL)

The Department of Linguistics and Oriental Languages offers a Basic and an Advanced Certificate in Applied Linguistics and English as a Second Language (ESL). The Advanced Certificate requires Linguistics 652; two courses from Linguistics 650, 653, 655, and 795 (when offered with applied linguistics content); and one course from Linguistics 530, 622, 623, 651, 654, and 795. Students must obtain a 3.0 GPA overall in the courses for the advanced certificate. The prerequisite to the Advanced Certificate is the Basic Certificate or its equivalent. A student's entire program comprising Basic and Advanced Certificates must include at least one course from Linguistics 530, 622, and 623. 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. For information on the Basic Certificate, please see the *General Catalog*.

### Courses Acceptable on Master's Degree Programs in Linguistics (LING)

#### UPPER DIVISION COURSES

#### LING 520. Fundamentals of Linguistics (3)

Prerequisite: Upper division standing.

Principles of modern linguistics, with attention to English grammar (syntax, morphology, phonology). Language change, dialects, sociolinguistics, psycholinguistics, language acquisition.

#### LING 521. Phonology (3)

Prerequisite: Linguistics 420 or 520.

Introduction to the theoretical principles of transformational-generative phonology.

#### LING 522. Syntax (3)

Prerequisite: Linguistics 420 or 520.

Introduction to the theoretical principles of transformational-generative syntax.

#### LING 524. American Dialectology (3)

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.

#### LING 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.

#### LING 530. English Grammar (3)

Prerequisite: Six upper division units in linguistics.

English morphology, syntax, and discourse structure, including simple and complex sentence structure; lexical categories and sub-categories; discourse functions of selected constructions. Problems and solutions in teaching English grammar.

**LING 550. Theory and Practice of English as a Second Language (3)**

Prerequisite: Linguistics 420 or 520.

The nature of language learning; evaluation of techniques and materials for the teaching of English as a second language.

**LING 551. Sociolinguistics (3)**

Prerequisite: A course in introductory linguistics.

Investigation of the correlation of social structure and linguistic behavior.

**LING 552. Psycholinguistics (3)**

Prerequisite: Linguistics 420 or 520.

Psychological and mental processes related to comprehension, production, perception, and acquisition of language in adults and children.

**LING 553. Bilingualism (3)**

Prerequisite: Linguistics 420 or 520 or Communicative Disorders 300.

Bilingual societies; language choice by bilinguals; bilingual language acquisition; effects of bilingualism on language structure and use.

**LING 554. Child Language Acquisition (3)**

Prerequisite: Linguistics 420 or 520.

Theories and research methods in child language acquisition; quantitative and qualitative analyses of data at various levels of grammar (phonology, morphology, lexicon, syntax, and discourse) using language and acquisition corpora.

**LING 555. Practical Issues in Teaching English as a Second Language (3)**

Prerequisite: Linguistics 420 or 520; and credit or concurrent registration in Linguistics 550.

Practical approaches to applications of the theory of English as a Second Language (ESL) and methodology for speaking, reading, listening, writing; techniques for facilitating growth of communicative competence.

**LING 570. Mathematical Linguistics (3)**

Prerequisites: Two linguistics courses.

Mathematical tools for linguistics: set theory; basic algebraic structures such as groups, lattices, and Boolean algebras; formal language theory; propositional and 1st-order logic. Some emphasis on proofs. Applications to linguistics.

**LING 571. Computational Corpus Linguistics (3)**

Prerequisites: Two linguistics courses.

Practical introduction to computation with text corpora and introduction to Perl. Tokenizing, part-of-speech tagging, and lemmatizing (stemming) large corpora. Writing of Perl programs required.

**LING 581. Computational Linguistics (3)**

(Same course as Computer Science 581.)

Prerequisites: Linguistics 570 or Mathematics 245; Linguistics 571 or Computer Science 320.

Basic concepts in computational linguistics including regular expressions, finite-state automata, finite-state transducers, weighted finite-state automata, and n-gram language models. Applications to phonology, orthography, morphology, syntax. Probabilistic models. Statistical techniques for speech recognition.

**LING 582. Computational Syntax and Semantics (3)**

Prerequisites: Linguistics 522 and 581.

Review of finite-state and context free languages; unification grammars; problems of meaning and intention in computational systems. Example applications from information retrieval, dialogue, and machine translation systems.

**LING 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****LING 610. Topics in Historical Linguistics (3)**

Prerequisite: Three upper division units in linguistics, preferably Linguistics 410, 520, or 521.

Methods and principles used in historical study of language; processes of language change in phonology, syntax, and semantics; linguistics reconstruction; origin of language; language families; development of writing. Analysis of Indo-European, Old English, or Middle English. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**LING 620. Advanced Formal Syntax (3)**

Prerequisite: Linguistics 522.

Advanced study of formal syntactic theory.

**LING 621. Advanced English Phonology (3)**

Prerequisite: Linguistics 521.

English phonetics, phonemics, and phonological rules. Phonological differences among American English dialects. Survey of contemporary approaches to phonology.

**LING 622. Discourse and Syntax (3)**

Prerequisite: Linguistics 522.

Functional and discourse-oriented approaches to syntax and syntactic approaches to discourse.

**LING 623. Immigrant Languages (3)**

Prerequisite: Linguistics 420 or 520.

Contrastive structure of selected languages representing significant immigrant populations in San Diego; emphasis on phonological, orthographic, morphological, lexical and syntactic features.

**LING 640. Field Methods in Linguistics (3)**

Prerequisites: Linguistics 521 and credit or concurrent registration in Linguistics 622.

Principles and techniques of linguistic analysis working directly with native informants, including phonemic, grammatical, and syntactic analysis and text collection and interpretation.

**LING 650. Materials Development in Applied Linguistics (3)**

Prerequisite: Linguistics 550.

Materials development and adaptation for teaching English as a second language and foreign language.

**LING 651. Sociology of Language (3)**

Prerequisite: Linguistics 551.

Public and private reasons for planned language behavior. Creoles, personal speech interaction patterns, bilingualism, cultural diversity in language use, social-theoretical background, language planning, and social uses of sexism in language.

**LING 652. Second Language Acquisition (3)**

Prerequisites: Linguistics 452, 552 or 554; and 550.

Analyses of theories of second language acquisition; theoretical and empirical bases of current second language teaching methodologies.

**LING 653. ESL Reading and Writing (3)**

Prerequisite: Linguistics 550.

Application of discourse and reading theory to the teaching and testing of ESL reading and writing. Issues of coherence, process-product, genre studies.

**LING 654. Language and Cognition (3)**

Prerequisite: Linguistics 552.

Language production, comprehension, and acquisition, as these relate to human cognition.

**LING 655. English for Specific Purposes and Content-Based Instruction (3)**

Prerequisites: Linguistics 420 or 520, and 550.

Theory, practice, and history of these two related approaches to ESL/EFL.

**LING 660. History of Linguistics (3)**

Prerequisite: Two courses in linguistics or equivalent background.

Background and development of modern linguistic theory.

**LING 681. Statistical Methods in Computational Linguistics (3)**

Prerequisite: Linguistics 581.

Statistical methods for computational linguistics. Markov chains, hidden Markov models, statistical estimators for n-gram models, finding collocation and subcategorization frames, collecting selectional preferences, part-of-speech tagging, word sense disambiguation, probabilistic context-free grammars.

**LING 682. Computational Sentence and Discourse Semantics (3)**

Prerequisite: Linguistics 582.

Computational issues in logical representations of sentence and discourse semantics. Semantic components of unification-based natural language understanding systems: compositional rules, syntactic and semantic processing, contextual pragmatic resolution, translation to application semantics. Quantifier scope, anaphora, ellipsis, reference resolution, conjunction.

**LING 696. Advanced Topics in Linguistics (1-3)**

Prerequisite: Consent of instructor.

Advanced study in specific areas of linguistics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of Linguistics 596 and 696 applicable to a 30-unit master's degree.

**LING 740. Internship in English as a Second Language and Foreign Language Teaching (3) Cr/NC**

Prerequisite: Linguistics 550.

Internship in teaching English as a second language and English as a foreign language, offering work experience with practicing professionals.

**LING 750. Directed Language Study (3)**

Prerequisite: Consent of instructor.

Directed independent study of a foreign language not offered at San Diego State University with aim of acquiring a developing competency in the language. May include speaking, listening, reading, writing, and grammar. May be repeated with approval of graduate adviser.

**LING 795. Seminar in Linguistics (3)**

Prerequisite: Completion of three units of 600- and 700-numbered courses in the master's program for linguistics.

Research in linguistics, course content varying according to instructor. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**LING 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

**LING 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**LING 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

**LING 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Mathematics

In the Department of Mathematics and Statistics  
In the College of Sciences

**OFFICE: Geology/Mathematics/Computer Science 413**  
**TELEPHONE: (619) 594-6191**

## Faculty

### Mathematics and Applications

F. David Lesley, Ph.D., Professor of Mathematics, Chair of Department  
José E. Castillo, Ph.D., Professor of Mathematics (M.S. Computational  
Science Graduate Adviser)  
T. Marc Dunster, Ph.D., Professor of Mathematics (Coordinator)  
John D. Elwin, Ph.D., Professor of Mathematics  
Tunc Geveci, Ph.D., Professor of Mathematics  
Robert D. Grone, Ph.D., Professor of Mathematics  
(M.A. Mathematics Graduate Adviser)  
Stefen Hui, Ph.D., Professor of Mathematics  
(M.S. Applied Mathematics Graduate Adviser)  
Donald A. Lutz, Ph.D., Professor of Mathematics  
Joseph M. Mahaffy, Ph.D., Professor of Mathematics  
Stephen J. Pierce, Ph.D., Professor of Mathematics  
Peter Salamon, Ph.D., Professor of Mathematics  
(Coordinator and M.S. Applied Mathematics Graduate Adviser)  
Stephen J. Kirschvink, Ph.D., Associate Professor of Mathematics  
Peter Blomgren, Ph.D., Assistant Professor of Mathematics  
Ricardo Carretero, Ph.D., Assistant Professor of Mathematics  
Marcus Greferath, Ph.D., Assistant Professor of Mathematics  
Michael O'Sullivan, Ph.D., Assistant Professor of Mathematics  
Antonio Palacios, Ph.D., Assistant Professor of Mathematics  
Roxana N. Smarandache, Ph.D., Assistant Professor of Mathematics

### Mathematics Education

Larry K. Sowder, Ph.D., Professor of Mathematics  
Janet Sue Bowers, Ph.D., Associate Professor of Mathematics  
(Coordinator)  
Joanne Lobato, Ph.D., Associate Professor of Mathematics  
Chris L. Rasmussen, Ph.D., Associate Professor of Mathematics  
Susan Nickerson, Ph.D., Assistant Professor of Mathematics  
(M.A.T.S. Graduate Adviser)

## Associateships

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

## General Information

The Department of Mathematics and Statistics offers graduate study leading to the Master of Arts degree in mathematics, the Master of Arts degree for teaching service with a concentration in mathematics, the Master of Science degree in applied mathematics, the Master of Science degree in statistics (see the Statistics section of this bulletin for a description of the statistics program and courses), the Master of Science degree in Applied Mathematics with a Concentration in Mathematical Theory of Communications Systems, and the Master of Science degree in Applied Mathematics with a Concentration in Dynamical Systems.

Faculty active in research direct theses and research projects in most general areas of the mathematical sciences: in complex analysis, differential equations, graph theory, group theory, matrix theory, number theory, numerical analysis, operator theory; in cognitive

science, computer education and problem solving within mathematics education; in control theory, mathematical physics, modeling and optimization, financial mathematics, mathematics of communication, and computational mathematics within applied mathematics.

Opportunities for research in mathematics education are available through research facilities in the Center for Research in Mathematics and Science Education.

## Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin.

Students applying for admission should electronically submit the University application available at <http://www.csummentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Mathematics and Statistics:

- (1) Application;
- (2) Two sets of official transcripts (in sealed envelopes);
- (3) GRE scores (official notification: SDSU code 4682);
- (4) TOEFL test score (if postsecondary instruction is in a language other than English);

Mail or deliver your complete admissions package to:

Department of Mathematics and Statistics  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7720

## Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Two of this bulletin. In addition, the student must have passed a qualifying examination in some programs.

## Specific Requirements for the Master of Arts Degree in Mathematics

**(Major Code: 17011)**

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

1. Complete 30 units of approved 500, 600, and 700 level courses, of which at least 24 units must be in mathematics (including computer science). At least 21 units must be at the 600 level or above. Mathematics 600, 601, and 602 may not be part of this degree. No more than six units of Mathematics 797 and 798 will be accepted toward the degree.
2. Among the 30 units of coursework, students must include at least two courses in the area of algebra chosen from courses 623, 627A, 627B, and at least two courses in analysis chosen from courses 630A, 630B, 631A, 631B.

- Before entering the program, students should have completed the following courses or their equivalents: Mathematics 521B, 524, 532, 534B. If a student has not had these courses before entering the program, they must be taken during the first year. (A maximum of two of these courses may be applicable toward the degree course requirements.)
- With departmental approval, students may select Plan A and complete Mathematics 799A or Plan B requiring a written comprehensive examination based on materials to be selected by the department from among Mathematics 623, 627A, 627B, 630A, 630B, 631A, 631B.

Plan A is encouraged for most students since it provides an introduction to independent reading and is a natural pathway to independent research.

### Specific Requirements for the Master of Science Degree in Applied Mathematics

(Major Code: 17031)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree described in Part Two of this bulletin, the student must meet the following requirements:

- Have completed before entering the program, the following courses or their equivalents: Mathematics 524, 534A, 534B, 537, 541; Statistics 551A; and programming proficiency in a computer language. Admission to the program as conditionally classified may be granted without some of the coursework above, contingent on the student removing any deficiencies by the end of the first year in the program. (Only one of these courses can count toward the degree course requirements.)
- Complete a minimum of 30 units of approved 500-, 600-, and 700-numbered courses. All programs must include at least 21 units in mathematical science (with the possible exception of a student whose main interest is mathematical modeling) and at least 18 units selected from 600- and 700-numbered courses. No more than six units in Mathematics 797 and 798 will be accepted for credit toward the degree. A program of study must be approved by the graduate adviser.
- The student must select Plan A and complete Mathematics 799A, Thesis. The student must also have an oral defense of their thesis or research, open to the public.

#### Concentration in Dynamical Systems

This concentration focuses on interdisciplinary applications of dynamical systems and nonlinear modeling in biology, chemistry, engineering, and physics. Students with interests in modeling and analyzing real life problems through mathematics will benefit from this concentration. To enter the program, students must possess a bachelor's degree with a strong mathematical background. In addition to completing the specific requirements for the Master of Science degree in applied mathematics, students pursuing this concentration will complete the following 15 units of core courses: Mathematics 531, 537, 538, 636, and 638; 12 units of electives and three units of Mathematics 799A (Thesis/Project). Possible electives include Mathematics 696, Special Topics in Dynamical Systems (Nonlinear Waves, Pattern Formation, Applied Bifurcation of Dynamical Systems, Nonlinear Time Series, Numerical Experiments and Methods in Dynamical Systems, Fractal Geometry, Mathematical Biology/Neural Modeling) to be offered depending on demand and resources. Other recommended electives include Mathematics 542, 623, 637, 668, 693A, 693B, 797; Computer Science 553; Physics 580 and 585. Depending on the student's interests and background, electives from other departments may be approved by the adviser.

#### Concentration in Mathematical Theory of Communication Systems

This concentration focuses on the area of mathematics relevant to the transmitting and processing of information by digital or analog methods. In addition to meeting the requirements for classified standing in the Master of Science program in applied mathematics, students pursuing this concentration should also have completed Mathematics 521A or its equivalent before entering the program. Students must complete Mathematics 525, 626, 668; two courses selected from Mathematics 528, 625 or 667, and two courses selected from Mathematics 623, 627A, 627B, 630A-630B, 631A-631B. Two additional courses in mathematics or in a related area may be selected with the approval of the program adviser. Either Mathematics 797 (Research) or 799A (Thesis) are required of students in this degree program.

#### Communications Systems Certificate

The Communication Systems Certificate provides mathematicians and engineers with the specialized training in the areas of coding, cryptography, and signal processing relevant for the understanding of modern communication systems. This certificate is designed for individuals who need the knowledge this certificate program provides to participate in projects in the area of communication systems and signal processing.

This is an advanced academic certificate at the postbaccalaureate level. The admission requirement is a bachelor's degree in mathematics, engineering, or a closely related field. Individuals with knowledge of the background materials through work or self-study may also be accepted into this program at the discretion of the program director.

Course requirements for the certificate program are the following courses completed with a grade point average of 3.0 or above: Mathematics 522, 525, 626, 667, and 668.

For information on the application process, contact the Department of Mathematics and Statistics or call (619) 594-6191.

#### Courses Acceptable on Master's Degree Programs in Applied Mathematics, Mathematics, and Statistics (MATH)

##### General UPPER DIVISION COURSES

**NOTE:** Proof of completion of prerequisites required for all upper division courses: Copy of transcript.

##### **MATH 509. Computers in Teaching Mathematics (3)**

Two lectures and three hours of laboratory.

Prerequisite: Mathematics 252.

Solving mathematical tasks using an appropriate computer interface, and problem-based curricula. Intended for those interested in mathematics teaching.

##### **MATH 510. Introduction to the Foundations of Geometry (3) I, II**

Prerequisite: Mathematics 122 or 151.

The foundations of Euclidean and hyperbolic geometries. Highly recommended for all prospective teachers of high school geometry.

##### **MATH 511. Projective Geometry (3)**

Prerequisite: Mathematics 254.

Geometry emphasizing relationships between points, lines, and conics. Euclidean geometry and some non-Euclidean geometries as special cases of projective geometry.

##### **MATH 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.

**MATH 521A. Abstract Algebra (3) I, II**

Prerequisites: Mathematics 245 and 252.

Abstract algebra, including elementary number theory, groups, and rings.

**MATH 521B. Abstract Algebra (3) II**

Prerequisite: Mathematics 521A.

Continuation of Mathematics 521A. Rings, ideals, quotient rings, unique factorization, noncommutative rings, fields, quotient fields, and algebraic extensions.

**MATH 522. Number Theory (3) I**

Prerequisites: Mathematics 245 and 252.

Theory of numbers to include congruences, Diophantine equations, and a study of prime numbers; cryptography.

**MATH 523. Mathematical Logic (3)**

Prerequisite: Mathematics 245.

Propositional logic and predicate calculus. Rules of proof and models. Completeness and the undecidability of arithmetic. Not open to students with credit in Philosophy 521.

**MATH 524. Linear Algebra (3) I, II**

Prerequisites: Mathematics 245 and 254; or 342A.

Vector spaces, linear transformations, orthogonality, eigenvalues and eigenvectors, normal forms for complex matrices, positive definite matrices and congruence.

**MATH 525. Algebraic Coding Theory (3) I**

Prerequisite: Mathematics 254.

Linear codes, perfect and related codes, cyclic linear codes, BCH codes, burst error-correcting codes.

**MATH 528. Information Theory and Data Compression (3)**

Prerequisites: Mathematics 245 and 254.

Fundamental of discrete probability and information theory: joint and conditional distributions, Bayes' theorem, entropy, channel capacity. Noiseless coding theorem and data compression algorithms: Huffman codes, arithmetic coding, Ziv-Lempel codes. Information theory in error correction coding and cryptography.

**MATH 531. Partial Differential Equations (3) II**

Prerequisites: Mathematics 252 and 337.

Boundary value problems for heat and wave equations: eigenfunction expansions, Sturm-Liouville theory and Fourier series. D'Alembert's solution to wave equation; characteristics. Laplace's equation, maximum principles, Bessel functions.

**MATH 532. Functions of a Complex Variable (3) I**

Prerequisite: Mathematics 252.

Analytic functions, Cauchy-Riemann equations, theorem of Cauchy, Laurent series, calculus of residues, and applications.

**MATH 533. Vector Calculus (3)**

Prerequisite: Mathematics 254 or 342A.

Scalar and vector fields; gradient, divergence, curl, line and surface integrals: Green's, Stokes' and divergence theorems. Green's identities. Applications to potential theory or fluid mechanics or electromagnetism.

**MATH 534A. Advanced Calculus I (3) I, II, S**

Prerequisites: Mathematics 245 and 254; or 342A.

Completeness of the real numbers and its consequences, sequences of real numbers, continuity, differentiability and integrability of functions of one real variable.

**MATH 534B. Advanced Calculus II (3) II**

Prerequisite: Mathematics 534A.

Series and sequences of functions and their applications, functions of several variables and their continuity, differentiability and integrability properties.

**MATH 537. Ordinary Differential Equations (3)**

Prerequisite: Mathematics 337.

Theory of ordinary differential equations: existence and uniqueness, dependence on initial conditions and parameters, linear

systems, stability and asymptotic behavior, plane autonomous systems, series solutions at regular singular points.

**MATH 538. Discrete Dynamical Systems and Chaos (3) II**

Prerequisite: Mathematics 337.

One- and two-dimensional iterated maps, equilibria and their stability, sensitive dependence on initial conditions, Lyapunov exponents, horseshoe maps, period doubling, chaotic attractors, Poincare maps, Lorenz systems, chaos in differential equations, stable manifolds and crises. Applications in biology, chemistry, physics, engineering, and other sciences. Bifurcation theory.

**MATH 541. Introduction to Numerical Analysis and Computing (3) I, II, S**

Prerequisites: Mathematics 254 or 342A; and Computer Science 106 or 107 or 205.

Solution of equations of one variable, direct methods in numerical linear algebra, least squares approximation, interpolation and uniform approximation, quadrature.

**MATH 542. Introduction to Numerical Solutions of Differential Equations (3) II**

Prerequisites: Mathematics 337 and 541.

Initial and boundary value problems for ordinary differential equations. Partial differential equations. Iterative methods, finite difference methods, and the method of lines.

**MATH 543. Numerical Matrix Analysis (3)**

Prerequisite: Mathematics 541.

Gaussian elimination, LU factorizations and pivoting strategies. Direct and iterative methods for linear systems. Iterative methods for diagonalization and eigensystem computation. Tridiagonal, Hessenberg, and Householder matrices. The QR algorithm.

**MATH 544. Computational Finance (3)**

Prerequisites: Mathematics 531 and Statistics 550.

Numerical procedures for evaluating financial derivatives. Discretization of partial differential equations. Monte Carlo simulation techniques.

**MATH 561. Applied Graph Theory (3) I**

Prerequisite: Mathematics 245 or 254.

Undirected and directed graphs, trees, Hamiltonian circuits, classical problems of graph theory including applications to linear systems.

**MATH 562. Mathematical Methods of Operations Research (3) II**

Prerequisites: Mathematics 252 and 254.

Theory and applications concerned with optimization of linear and non-linear functions of several variables subject to constraints, including simplex algorithms, duality, applications to game theory, and descent algorithms.

**MATH 579. Combinatorics (3) II**

Prerequisite: Mathematics 245.

Permutations, combinations, generating functions, recurrence relations, inclusion-exclusion counting. Polya's theory of counting, other topics and applications.

**MATH 580. Risk Management: Stocks and Derivative Securities (3)**

Prerequisite: Mathematics 337, Statistics 550, or 551A.

Theory of derivative securities with focus on evolution of stock prices and pricing of options.

**MATH 581. Risk Management: Portfolio Selection and Other Features of Finance Markets (3)**

Prerequisite: Mathematics 337, Statistics 550 or 551A, Mathematics 580.

Derivatives and term structures, method of principal components, theory of portfolio optimization, some numerical methods.

### **MATH 596. Advanced Topics in Mathematics (1-4) I, II**

Prerequisite: Consent of instructor.

Selected topics in classical and modern mathematical sciences. May be repeated with the approval of the instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

#### **General GRADUATE COURSES**

### **MATH 623. Linear Algebra and Matrix Theory (3)**

Prerequisite: Mathematics 524.

Characteristic and minimal polynomials, Cayley-Hamilton theorem, canonical forms, hermitian matrices, Sylvester's law, norms, singular values, stability, non-negative matrices.

### **MATH 625. Algebraic Coding Theory (3)**

Prerequisites: Mathematics 525 and Mathematics 521B or 522.

Algebraic theory of error correction codes and decoding algorithms used in modern communications systems. Reed-Solomon codes and algebraic decoding algorithms. Code duality, MacWilliams's identities and the linear programming bound. Probabilistic decoding of convolutional codes, low-density parity-check codes and turbo codes.

### **MATH 626. Cryptography (3)**

Prerequisites: Mathematics 521A and 522.

Design of secure cryptosystems with applications. Classical and public key cryptosystems. Primality testing, factoring, discrete log problem, and knapsack problem.

### **MATH 627A. Modern Algebra I (3)**

Prerequisite: Mathematics 521B.

Group theory, including isomorphism theorems, permutation groups, and simplicity of  $A_n$ , finite abelian groups, and Sylow theorems. Rings, ideals, principal ideal domains, and unique factorization.

### **MATH 627B. Modern Algebra II (3)**

Prerequisite: Mathematics 627A.

Modules and the Wedderburn-Artin theorem, field extensions, splitting fields, Galois theory, finite fields, the fundamental theorem of algebra.

### **MATH 630A-630B. Functions of a Real Variable (3-3)**

Prerequisites: Mathematics 524 and 534B. Mathematics 630A is prerequisite to Mathematics 630B.

Lebesgue measure and integration, metric spaces, Banach spaces, Hilbert spaces, spectral theory.

### **MATH 631A-631B. Functions of a Complex Variable (3-3)**

Prerequisites: Mathematics 532 and 534B. Mathematics 631A is prerequisite to 631B.

Theory of analytic functions. Elementary functions and power series, Cauchy's theorem and its consequences. Entire functions, conformal mappings, Riemann mapping theorem. Harmonic functions.

### **MATH 636. Mathematical Modeling (3) I**

Prerequisites: Mathematics 254 and 337 or Mathematics 342A and 342B or Engineering 280.

Advanced models from the physical, natural, and social sciences. Emphasis on classes of models and corresponding mathematical structures. (Formerly numbered Mathematics 536.)

### **MATH 637. Theory of Ordinary Differential Equations (3)**

Prerequisites: Mathematics 524, 532, 534B, and either Mathematics 531 or 537.

Existence, uniqueness, and continuation of solutions from an advanced standpoint. Linear systems and their stability and asymptotic behavior, regular and irregular singularities, and regular boundary value problems.

### **MATH 638. Continuous Dynamical Systems and Chaos (3)**

Prerequisite: Mathematics 337.

Nonlinear systems of differential equations, potential fields, periodic solutions, Lyapunov functions. Chaos in differential equations, Lyapunov exponents, chaotic attractors, Poincaré maps. Lorenz and Rossler attractors, forced oscillators, Chua's circuit, stable manifolds. Bifurcations. Applications in science and engineering.

### **MATH 662. Advanced Optimization Theory (3)**

Prerequisites: Mathematics 524 and 562.

Formulating the optimization problem and constructing proper models. Sequential optimization: linear programming, integer programming, dynamic programming, nonlinear programming. Duality theory and sensitivity analysis. Sample applications and numerical implementation.

### **MATH 667. Mathematical Aspects of Systems Theory (3)**

Prerequisites: Mathematics 524 and 537.

Linear and nonlinear systems, nonlinear differential equations, equilibrium equations. Linearization, state transition matrix, stability theory, feedback control systems.

### **MATH 668. Applied Fourier Analysis (3)**

Prerequisites: Mathematics 524, 534A, 532 or 534B.

Discrete and continuous Fourier transform methods with applications to statistics and communication systems.

### **MATH 693A. Advanced Numerical Analysis (3)**

Prerequisites: Mathematics 524 and 542 or 543.

Numerical optimization, Newton's methods for nonlinear equations and unconstrained minimization. Global methods, nonlinear least squares, integral equations.

### **MATH 693B. Advanced Numerical Analysis (3)**

Prerequisites: Mathematics 531, 537, and 693A.

Methods for differential equations. Elliptic and parabolic partial differential equations. Stiff ordinary differential equations.

### **MATH 696. Selected Topics in Mathematical Sciences (3)**

Prerequisite: Graduate standing.

Intensive study in specific areas of mathematical sciences. May be repeated with new content. See Class Schedule for specific content. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### **MATH 720. Seminar (1-3)**

Prerequisite: Consent of instructor.

An intensive study in advanced mathematics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **MATH 790. Practicum in Teaching of Mathematics (1) Cr/NC**

Prerequisite: Award of graduate teaching associateship in mathematics.

Supervision in teaching mathematics. Lecture writing, style of lecture presentation and alternatives, test and syllabus construction, and grading system. Not applicable to an advanced degree. Required for first semester GTA's. Maximum credit four units applicable to a master's degree.

### **MATH 797. Research (1-3) Cr/NC/RP**

Prerequisite: Six units of graduate level mathematics.

Research in one of the fields of mathematics. Maximum credit six units applicable to a master's degree.

### **MATH 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

### **MATH 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**MATH 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.

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

**MATH 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

**Mathematics Education Program (MATH)  
GRADUATE COURSES**

**MATH 600. Geometrical Systems (3)**

Prerequisites: Mathematics 521A and an upper division course in geometry.

Ordered and affine geometries, decompositions, dilations. Projectivities and projective space. Absolute geometry, isometries, groups generated by inversions.

**MATH 601. Topics in Algebra (3)**

Prerequisites: Mathematics 521A and 534A.

Unique factorization domains, rings and ideals, groups, algebraic field extensions. A course designed for secondary school teachers.

**MATH 602. Topics in Analysis (3)**

Prerequisites: Mathematics 521A and 534A.

Topics in analysis, including the real number system, convergence, continuity, differentiation, the Riemann-Stieltjes integral, complex analysis, designed to give the secondary teacher a broad understanding of the fundamental concepts.

For additional courses useful to mathematicians see the sections under:

- Computer Science
- Mathematics and Science Education
- Statistics

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# Mathematics and Science Education

In the College of Sciences and  
In the College of Education

For further information regarding programs, consult the following:

Ph.D. Program ..... CRMSE  
6475 Alvarado Rd., #206  
(619) 594-5090  
e-mail: mathsciphd@sdsu.edu

M.A. Program ..... Mathematics and Statistics  
(619) 594-6191  
Teacher Education  
(619) 594-6131

## Mathematics and Science Education Faculty

Joanne Lobato, Ph.D., Associate Professor of Mathematics,  
Coordinator for Ph.D. Program

Nadine S. Bezuk, Ph.D., Professor of Teacher Education

Kathleen M. Fisher, Ph.D., Professor of Biology, Director, Center for  
Research in Mathematics and Science Education

Fred M. Goldberg, Ph.D., Professor of Physics

G. Brian Greer, Ph.D., Professor of Mathematics

Sandra P. Marshall, Ph.D., Professor of Psychology

Cheryl L. Mason, Ph.D., Professor of Teacher Education

Alan McCormack, Ed.D., Professor of Teacher Education

Walter C. Oechel, Ph.D., Professor of Biology

Randolph A. Philipp, Ph.D., Professor of Teacher Education

Stephen K. Reed, Ph.D., Professor of Psychology

Janet S. Bowers, Ph.D., Associate Professor of Mathematics

Victoria R. Jacobs, Ph.D., Associate Professor of Teacher Education

Chris L. Rasmussen, Ph.D., Associate Professor of Mathematics

Rafaela M. Santa Cruz, Ph.D., Associate Professor of Teacher  
Education

Randy K. Yerrick, Ph.D., Associate Professor of Teacher Education

Alexander W. Chizhik, Ph.D., Assistant Professor of Teacher Education

Lisa L. Clement, Ph.D., Assistant Professor of Teacher Education

Rachelle Feiler, Ph.D., Assistant Professor of Teacher Education

Diane K. Masarik, Ph.D., Assistant Professor of Teacher Education

Eric M. Riggs, Ph.D., Assistant Professor of Geological Sciences

Gillian H. Roehrig, Ph.D., Assistant Professor of Chemistry  
(Graduate Adviser)

Donna L. Ross, Ph.D., Assistant Professor of Teacher Education

## Committee for Mathematics Education

Nadine S. Bezuk, Ph.D., Professor of Teacher Education

G. Brian Greer, Ph.D., Professor of Mathematics

Randolph A. Philipp, Ph.D., Professor of Teacher Education

Janet S. Bowers, Ph.D., Associate Professor of Mathematics

Victoria R. Jacobs, Ph.D., Associate Professor of Teacher Education

Joanne Lobato, Ph.D., Associate Professor of Mathematics

Rafaela Santa Cruz, Ph.D., Associate Professor of Teacher Education

Lisa L. Clement, Ph.D., Assistant Professor of Teacher Education

Rachelle Feiler, Ph.D., Assistant Professor of Teacher Education

Diane K. Masarik, Ph.D., Assistant Professor of Teacher Education

## Section I. Master's Degree Program

### General Information

The Department of Mathematics and Statistics offers two specializations in its program of graduate study leading to a Master of Arts degree for teaching service. The specialization for community college teaching offers candidates a program designed to provide them with the mathematical breadth necessary to teach a wide variety of lower-division collegiate mathematics courses, while also providing them with a better understanding of the issues involved in teaching and learning mathematics. The specialization for secondary teaching offers coursework designed to strengthen the mathematical background of secondary teachers, to provide teachers with a deeper understanding of learning and teaching mathematics in grades 7-12, and to allow teachers the opportunity to analyze curriculum and evaluation efforts in a manner that can lead them to make reasoned judgments about curricular, testing, and instructional issues in grades 7-12 mathematics.

Courses described in this section may also be of interest to students seeking the Master of Arts degree in education with concentrations in elementary curriculum and instruction or secondary curriculum and instruction, offered by the School of Teacher Education.

### Associateships

Graduate teaching associateships in mathematical sciences are available to qualified students. Support for qualified candidates may also be available through the School of Teacher Education, through the Center for Research in Mathematics and Science Education or through employment on faculty research grants. Applications are available from the appropriate campus offices.

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin.

## Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Two of this bulletin. In addition, students seeking the Master of Arts degree for teaching service in the Department of Mathematics and Statistics must have passed a qualifying examination in mathematics education.

## Specific Requirements for the Master of Arts Degree for Teaching Service in the Department of Mathematics and Statistics

(Major Code: 17011)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the students must complete a graduate program of at least 30 units, 24 of which must be from the Department of Mathematics and Statistics. At least 15 of the 24 must be 600- and 700-numbered courses. A student's program must be prepared in conference with and approved by the graduate adviser.

The two specializations leading to the Master of Arts for teaching service require completion of a specific pattern of graduate units described below.

**Specialization in Mathematics for Community College Teaching.** This specialization is designed to satisfy the requirements for teaching service at the community college level. Students must have completed a bachelor's degree in mathematics (or equivalent) before entering the program and must have completed six units selected from Mathematics 521A, 524, and 534A. The third course can be taken prior to entrance to the program or as part of the 30-unit degree requirements.

**Plan A** requires Mathematics 600, 601, 602, and Mathematics Education 603; six units selected from Mathematics 509, 720, Mathematics Education 604, 605, 606; nine units of electives selected with the approval of the adviser; and Mathematics 799A, Thesis.

**Plan B** requires Mathematics 600, 601, 602, and Mathematics Education 603; nine units selected from Mathematics 509, 720, Mathematics Education 604, 605, 606; and nine units of electives selected with the approval of the adviser. In addition, students must pass a comprehensive examination in mathematics education.

**Specialization in Mathematics for Secondary Teaching.** This specialization is designed to strengthen the mathematical background of secondary teachers, while providing coursework to better understand the learning and teaching of mathematics in grades 7-12. Students should have the equivalent of a bachelor's degree in mathematics before entering the program.

**Plan A** requires Mathematics 524; Mathematics Education 603; three units selected from Mathematics 510, 511, 512, or 600; three units selected from Mathematics 521A or 601; three units selected from Mathematics 534A or 602; six units selected from Mathematics 509, 720, Mathematics Education 604, 605, 606; six units of electives selected with the approval of the adviser; and Mathematics 799A, Thesis.

**Plan B** requires Mathematics 524; Mathematics Education 603; three units selected from Mathematics 510, 511, 512, or 600; three units selected from Mathematics 521A or 601; three units selected from Mathematics 534A or 602; nine units selected from Mathematics 509, 720, Mathematics Education 604, 605, 606; and six units of electives selected with the approval of the adviser. In addition, students must pass a comprehensive examination in mathematics education.

## Section II. Doctoral Program

<http://crmse.sdsu.edu/mseed>

## General Information

(Major Code: 08997)

San Diego State University and the University of California, San Diego, offer jointly a doctoral program in mathematics and science education. The program faculty at SDSU are members of the College of Sciences and the College of Education and are affiliated with the Center for Research in Mathematics and Science Education (CRMSE). They represent a number of different disciplines, including biology, geological sciences, mathematics, physics, psychology, and teacher education. The program faculty at UCSD, also an interdisciplinary group, are members of the Division of Natural Sciences (biology, chemistry, mathematics, and physics) or the Division of Social Sciences (cognitive science, philosophy, and sociology). The program is administered under the College of Sciences at SDSU and under the Division of Natural Sciences at UCSD.

The research interests of the participating faculty members cover a wide range of issues in the learning and teaching of mathematics and the sciences. Graduates of the program will be qualified to take a variety of professional positions, including faculty appointments in universities, colleges, and community colleges; specialist positions in public school districts; and out-of-school employment in settings that require expertise in mathematics and science education.

## Doctoral Faculty

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

### San Diego State University:

Coordinator: Joanne Lobato

Graduate Adviser: Joanne Lobato

Doctoral Program Members: Bezuk, Bowers, Branca, Clement, Chizhik, Fisher, Goldberg, Greer, Jacobs, Lobato, Marshall, Mason, Oechel, Philipp, Reed, Riggs, Roehrig, J. Sowder, L. Sowder, Yerrick

### University of California, San Diego:

Coordinator: Alfred Manaster

Graduate Adviser: Guershon Harel

Doctoral Program Members: Appelbaum, Batali, Case, Cole, Churchland, Evans, Harel, Jones, Magde, Manaster, Mehan, Rabin, Sawrey, Smith, Wienhausen

## Admission to Doctoral Study

Applicants for admission to the doctoral program in mathematics and science education must meet the general requirements for admission to both universities with classified graduate standing as outlined in the respective current catalogs. Applicants must also meet the special requirements of this program. These include: (a) an acceptable baccalaureate degree in mathematics or science (or a related discipline); (b) a master's degree, or its equivalent, in biology, chemistry, physics, or mathematics; (c) a GPA of at least 3.25 in the last 30 semester (or 45 quarter) units of upper division work and at least a 3.5 in the graduate work attempted; (d) good standing in the last institution attended; (e) suitable scores in both the quantitative and verbal sections of the Graduate Record Examinations.

## Mathematics and Science Education

Students applying for admission to the doctoral program should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the office of Mathematics and Science Education:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) Application for doctoral program in mathematics and science education ([http://www.sci.sdsu.edu/crmse/crmse\\_app02.pdf](http://www.sci.sdsu.edu/crmse/crmse_app02.pdf));
- (3) GRE scores (received within the past five years);
- (4) Mathematics and Science Education recommendation form as cover sheet ([http://www.sci.sdsu.edu/crmse/rec\\_form.pdf](http://www.sci.sdsu.edu/crmse/rec_form.pdf));
- (5) At least three letters of recommendation.

Mail or deliver your complete admissions package to:

Mathematics and Science Education Ph.D. Program  
CRMSE, San Diego State University  
6475 Alvarado Road, Suite 206  
San Diego, CA 92120-5013

### Specific Requirements for the Doctor of Philosophy Degree

**Residency Requirements.** After formal admission to the doctoral program, the student must spend at least one academic year in full-time residence on each of the two campuses. The definition of residence must be in accord with the regulations of San Diego State University and the University of California, San Diego.

**Language Requirement.** There is no formal language requirement for the program.

**Course Requirements.** All students admitted into the doctoral program will fulfill the following requirements. Any alternative method of fulfilling these requirements must be approved by the graduate advisers.

- A. Two core courses on research orientation:  
MSE 801  
MSE 802
- B. Core courses in Mathematics or Science Education.  
Select:  
UCSD: MSED 296A, 296B, 296C and  
SDSU: MTHED 603 *or* NSCI 600.  
Mathematics Education students must select two of the following additional courses:  
SDSU: MTHED 604, 605, 606.
- C. Three courses on statistics and research design.  
Select one of the following sequences:  
UCSD: PSYC 201A, 201B *or*  
SDSU: PSY 670A, 670B *or* 770A, 770B, *and* one of the following courses:  
SDSU: MSE 810 *or* UCSD: SOC/A 108A.
- D. Two courses in cognitive psychology:  
SDSU: PSY 587 *or* UCSD: PSYCH 218A.  
One upper division or graduate UCSD cognitive science course.
- E. Three research courses:  
SDSU: MSE 820 *or* UCSD: MSED 298  
SDSU: MSE 830  
SDSU: MSE 899 *or* UCSD: MSED 299
- F. At least one of the following courses at UCSD:  
PHIL 124, 145, 146, 147, 209A; SOC/G 168J, 270
- G. Two of the following practicum courses:  
SDSU: MSE 805, 806, 807  
UCSD: TEP 129A; Discipline 500

Beyond these requirements, no specified number of courses is required for the doctoral degree. It is expected, however, that all the doctoral students will supplement the requirements with electives that contribute to individual career objectives.

**Examinations.** Students in the doctoral program will be evaluated at the following levels:

- (1) **First Year Evaluation.** The student's ability to master graduate level course material may be assessed after completion of no more than 24 semester units of coursework. This evaluation may take place not later than the third semester of the student's enrollment in the program. The evaluation will be based on the student's performance in coursework and on indicated research competence, and it will be undertaken by the student's advisory committee together with instructors from the student's first year courses.
- (2) **Comprehensive Examinations.** At the end of the second year, the student will take a written comprehensive examination in general cognition and an oral examination on issues of learning pertinent to the student's area of specialization.
- (3) **Oral Examination.** During the third year in the program, the student will make an oral presentation to the dissertation committee to accompany a written proposal for the doctoral thesis. The student will be questioned on both the topic of the investigation and on the proposed research methodology. Upon successful completion of this presentation, the student will be recommended for advancement to candidacy for the doctoral degree.
- (4) **Dissertation Defense.** After completion of the dissertation, the candidate will present a public defense of the doctoral dissertation. A copy of the dissertation must be made available to the doctoral faculty at both institutions four weeks prior to the defense. Copies of the abstract of the dissertation, along with the announcement of the defense, must be publicly available four weeks before the defense. The student's dissertation committee will make a recommendation to the graduate deans to pass or fail the student.

**Faculty Advisers.** Upon admission to the doctoral program, the program directors will assign each student a faculty adviser at both universities. The faculty advisers will serve as advisers until the student's dissertation committee is appointed.

**Dissertation Committee.** The dissertation committee will be composed of five members with at least two faculty members from each campus. The student will select members of the dissertation committee in consultation with program faculty and the graduate advisers.

**Dissertation.** Following the successful completion of all prescribed coursework and qualifying examinations, the major remaining requirement for the Ph.D. degree will be the satisfactory completion of a dissertation consisting of original research carried out under the guidance of the major professor. Approval of the completed dissertation attests that an organized investigation that expands the frontiers of knowledge and understanding in mathematics and science education has been carried out.

**Award of the Degree.** The Doctor of Philosophy degree in Mathematics and Science Education will be awarded jointly by the Regents of the University of California and the Trustees of The California State University in the names of both cooperating institutions.

### Financial Support

San Diego State University and the University of California, San Diego have a number of research and teaching associateships available to support students admitted to the Joint Doctoral Program. All students applying to the program will be considered for financial support.

**Section III.  
Certificate Program**

**Mathematics Specialist Certificate**

The mathematics specialist certificate program, offered through the College of Extended Studies, prepares credentialed teachers to become mathematics specialists in the elementary grades. Two different certificates are offered, one focusing on the primary grades and the other on the upper elementary grades. Persons earning the certificates will develop special expertise in the teaching of mathematics in elementary schools. For application or further information, contact Dr. Nadine S. Bezuk (nbezuk@mail.sdsu.edu) or Dr. Nicholas Branca (nbranca@sunstroke.sdsu.edu).

Prerequisites for admission include the following:

1. Teaching credential.
2. Two years of classroom teaching experience.
3. Two letters of recommendation.

Requirements for the primary mathematics specialist certificate (12 units):

1. Six units of mathematics courses to include Mathematics 281A-281B, 496 entitled "Foundations of Quantitative Reasoning," and 496 entitled "Foundations of Algebraic Thinking."

2. Six units of education courses to include Teacher Education 600 and 604.

Requirements for the upper elementary mathematics specialist certificate (12 units):

1. Six units of mathematics courses to include Mathematics 281A-281B, 383, 384.

2. Six units of education courses to include Teacher Education 605 and 607.

Students must pass all courses with Cr/NC grading or receive at least a C (2.0) in all courses taken for a letter grade. With consent of the adviser, six units of education coursework may be applied toward a master's degree in education.

Refer to the Mathematics section in the General Catalog for a listing of courses for the certificate program.

**Courses Acceptable on the Master's Degree Program in Mathematics Education (MTHED)**

**UPPER DIVISION COURSE  
IN MATHEMATICS EDUCATION**

**MTHED 502. Technology in Teaching and Learning Mathematics: Grades K-8 (3)**

Prerequisites: Classified graduate standing; consent of instructor for undergraduates.

Research in use of technology in learning and teaching mathematics in grades K-8. Major focus devoted to use of applications. Other uses for technology addressed include simulations, communication, and calculational speed. (Formerly numbered Mathematics Education 602.)

**GRADUATE COURSES  
IN MATHEMATICS EDUCATION**

**MTHED 600. Teaching and Learning Mathematics in the Early Grades (Pre-K to 4) (3)**

Prerequisites: Mathematics Education 603 or 604 or Teacher Education 610A and K-12 teaching experience.

Research in teaching and learning mathematics in preschool through grade four. Innovative early childhood mathematics curricula, promising instructional practices. Assessment techniques to guide instruction.

**MTHED 601. Teaching and Learning Mathematics in the Middle Grades (3)**

Prerequisites: Mathematics Education 604 or Teacher Education 610A and K-12 teaching experience.

Research on teaching and learning mathematics in grades five through eight. Innovative middle grades mathematics curricula, promising instructional practices. Assessment techniques to guide instructions.

**Courses Acceptable on the Master's and Doctoral Degree Programs in Mathematics and Science Education (MTHED) (MSE)**

**GRADUATE COURSES  
IN MATHEMATICS AND SCIENCE  
EDUCATION (MTHED)**

**MTHED 603. Seminar on Research in Mathematics Learning and Instruction (3)**

Prerequisite: Consent of instructor or graduate adviser.

The learning and teaching of mathematics, with emphasis on applications of current psychological theories to mathematics learning, and research on mathematics teaching.

**MTHED 604. Seminar on Curriculum and Evaluation Issues in Mathematics (3)**

Prerequisite: Consent of instructor or graduate adviser.

Curriculum projects in mathematics, and evaluation as it pertains to mathematics curricula, to programs, and to mathematics students and teachers.

**MTHED 605. Algebra in the 7-14 Curriculum (3)**

Prerequisite: Consent of instructor or graduate adviser.

Curricular change in algebra, with attention to experimental curricula, to research on learning of algebra, and to influences of technology. Implications for instruction.

**MTHED 606. Selected Topics in 7-14 Mathematics Curriculum (3)**

Prerequisite: Consent of instructor or graduate adviser.

Curricular change in school mathematics, to include geometry, probability, and statistics, with attention to contemporary curricula, to research on learning and teaching in those areas, and to the influences of technology. Implications for instruction.

**GRADUATE COURSES  
IN MATHEMATICS AND SCIENCE  
EDUCATION (MSE)**

**MSE 801. Faculty Research (1) Cr/NC**

Prerequisite: Admission to doctoral program in Mathematics and Science Education.

Issues of learning with reference to how they are addressed by doctoral faculty. Students will interview and write a one-page statement of research interests for each of eight doctoral faculty members.

**MSE 802. Orientation Practicum (1-3) Cr/NC**

Prerequisite: Admission to doctoral program in Mathematics and Science Education.

Experience with research programs will introduce students to a variety of research questions and approaches. One research program per unit; minimum three units required in program.

**MSE 805. Supervised Teaching of Teacher Preparation Courses (3) Cr/NC/RP**

Prerequisite: Admission to doctoral program in Mathematics and Science Education.

Students will plan and teach, under supervision, a course that prepares prospective teachers to teach mathematics or science at either the elementary or secondary level.

## Mathematics and Science Education

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### **MSE 806. Supervised School Practicum (3) Cr/NC/RP**

Prerequisite: Admission to doctoral program in Mathematics and Science Education.

School-based project focusing on inservice of teachers or on curriculum development, or work with a school district administrator or mathematics or science.

### **MSE 807. Specially Designed Practicum (3) Cr/NC/RP**

Prerequisite: Admission to doctoral program in Mathematics and Science Education.

Practical experience to assist students in gaining experience in career they have selected.

### **MSE 810. Seminar in Research Design (3)**

Prerequisite: Admission to doctoral program in Mathematics and Science Education; Psychology 670A, and consent of instructor.

Issues such as analysis of protocols, problems of measurement in evaluation of learning, development, and assessment of cognitive models in learning in mathematics and science.

### **MSE 820. Research Project (3-6) Cr/NC/RP**

Prerequisite: Admission to doctoral program in Mathematics and Science Education.

Participation in an ongoing research project and development of a related study.

### **MSE 830. Research Seminar (3)**

Prerequisite: Successful completion of qualifying examination.

Students and faculty present ongoing research for discussion and critique.

### **MSE 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Mathematics and Science Education 820.

Independent investigation in general field of the dissertation.

### **MSE 898. Doctoral Special Study (1-8) Cr/NC/RP**

Prerequisite: An officially constituted doctoral committee and advancement to candidacy.

Individual study in the field of specialization.

### **MSE 899. Doctoral Dissertation (1-15) Cr/NC/RP**

Prerequisite: An officially constituted dissertation committee and advancement to candidacy.

Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

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For additional courses applicable to the Master of Arts degree for Teaching Service see:

Mathematics 600. Geometrical Systems

Mathematics 601. Topics in Algebra

Mathematics 602. Topics in Analysis

For additional courses related to mathematics education see:

Teacher Education 511. Diagnosis and Remediation of Difficulties in Mathematics

Teacher Education 610A. Seminar in Mathematics Education—Elementary School

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# Music

In the School of Music and Dance  
In the College of Professional Studies and Fine Arts

**OFFICE: Music 112**  
**TELEPHONE: (619) 594-6031**  
**FAX: (619) 594-1692**  
**E-MAIL: music.dance@sdsu.edu**

## Faculty

Martin J. Chambers, M.M., Professor of Music,  
Director of School of Music and Dance  
(Graduate Adviser)  
Brenton P. Dutton, M.M., Professor of Music  
Karen J. Follingstad, D.M.A., Professor of Music  
Jane M. Kolar, Ph.D., Professor of Music  
Marian Liebowitz, D.M.A., Professor of Music  
Jack D. Logan, Ph.D., Professor of Music  
Terry L. O'Donnell, D.M.A., Professor of Music  
Lewis E. Peterman, Jr., Ph.D., Professor of Music  
Thomas D. Stauffer, M.A., M.M., Professor of Music  
Bill Yeager, M.M., Professor of Music  
Kevin M. Delgado, Ph.D., Assistant Professor of Music  
Richard A. Helzer, M.F.A., Assistant Professor of Music  
Felix Olschofka, M.M., Assistant Professor of Music  
Richard Thompson, M.M., Assistant Professor of Music  
Joseph Waters, Ph.D., Assistant Professor of Music

### Applied Music Instruction

**Piano:** Darby, Follingstad, Kolar

**Harpsichord:** Paul

**Organ:** Plimpton

**Voice:** Chambers, Latour, MacKenzie, Nikkel, Tweed, Westbrook

**Flute:** Bell, Payne

**Oboe:** Reed, Rosenwein

**Clarinet:** Liebowitz

**Saxophone:** Masek, Rekevics

**Early Instruments:** Peterman

**Bassoon:** Schmidke

**French Horn:** Gref, Lorge

**Trumpet:** Glasson, Price

**Trombone:** Fellingner, Yeager

**Baritone Horn:** Dutton

**Tuba:** Dutton

**Percussion:** Flood

**Violin:** Constantino, Olschofka

**Viola:** Campbell, Gerard

**Cello:** Stauffer

**Contrabass:** G. Biggs

**Harp:** Mashkovtseva

**Classical Guitar:** Benedetti, Romero, Svoboda, Wetzel

**Composition:** Dutton, Stauffer, Waters

**Non-Western Instruments:** Specialists from specific cultures as available each semester

**Jazz Studies:** Helzer, Thompson, Yeager

**Opera:** Evans-O'Connor

## Scholarships

Information on music scholarships may be obtained by writing to the Chair, Music Scholarship Committee, School of Music and Dance, San Diego State University.

## General Information

The School of Music and Dance offers graduate study leading to the Master of Arts degree in music and the Master of Music degree.

With approval of the school, students electing to pursue the Master of Arts degree may specialize in one of the following fields: ethno-musicology; musicology; piano pedagogy and theory. Master of Music students may specialize in performance, composition, jazz or conducting.

Specializations of the music faculty include:

**Composition and theory:** Aesthetics; comprehensive musicianship; contemporary music; relationships among the arts.

**Conducting:** Literature and score analysis, hand techniques, rehearsal techniques, general preparation and performance in both the choral and instrumental areas.

**Ethnomusicology:** African, African-American, American folk, East Asian, European, South Asian, and Southeast Asian musics. Students may elect research in other areas with approval of the faculty adviser.

**Musicology:** With the approval of the faculty, students may select a topic in medieval, renaissance, baroque, classical, romantic, twentieth century music, or American music.

**Performance:** Performance studies are offered on all instruments and voice.

**Piano pedagogy:** Techniques in training the piano teacher for the child, adolescent and adult.

The 78,000 square-foot music building, completed 1970, includes a 200-seat recital hall, rehearsal rooms for instrumental and choral organizations, an electronic music studio, three class-piano rooms, a listening library with a collection of over 13,000 titles available for faculty/student study, 71 individual practice rooms, and approximately 160 pianos and 800 other musical instruments. The University library contains an extensive collection of over 75,000 music books and scores.

The School of Music and Dance has established a 24 station student computer laboratory. This lab provides facilities for computer assisted instruction in music theory and ear training, word processing programs for essays and term papers, programs for graphics and composing music, a program for a MIDI sequencer from an electric keyboard, and programs for printing music.

The electronic music studio has been completely renovated and includes the latest electronic music equipment available.

The School of Music and Dance houses numerous ethnic instruments including Balinese and Javanese Gamelans and numerous other musical instruments of the world. The school's holdings also include an extensive collection of early Western musical instruments.

The School of Music and Dance has the following scholarship funds and endowments: Nadine Bolles Piano, Elsie Hiland Fox Memorial, M. H. Golden Memorial, Lois Greeno Memorial, Joseph E. Johnson, Kiwanis Club, Lieber-Flower, Jan Lowenbach Musicology, Music Fund, Bessie S. Purdy Memorial, Edith Savage Memorial, SDSU Opera Theatre, Sigma Alpha Iota Alumni, SPEBQSA, Christine Springston Memorial, Paul C. Stauffer Memorial, University Band, Marvin Yerkey Memorial.

### Admission to Graduate Study in Music

- (1) Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.
- (2) The following materials should be compiled in one envelope and sent directly to:  

Music Graduate Adviser  
School of Music and Dance  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7902
- (a) Two sets of official transcripts from each university/college attended (in sealed envelopes). For foreign applications, please include official English translations of transcripts;
- (b) General GRE results (if not already submitted electronically to the University);
- (c) TOEFL or the CBTOEFL scores for foreign students (if not already submitted electronically to the University);
- (d) Two letters of reference;
- (e) A one-page statement of personal aims and goals.

**DO NOT SEND A PARTIAL PACKET. NO APPLICATIONS WILL BE REVIEWED UNTIL A COMPLETE PACKET HAS BEEN RECEIVED.**

- (3) Applicants must have completed a bachelor's degree with a major in music including full preparation in performance, theory music history and literature, or hold a bachelor's degree from an accredited institution and present sufficient evidence of study and experience in music to demonstrate the equivalency of a bachelor's degree with a major in music.
- (4) All domestic students must demonstrate a minimum 2.85 GPA. All foreign students must demonstrate a minimum 3.0 GPA and in cases where the primary instruction was in a language other than English, a minimum TOEFL (Test of English as a Foreign Language) score of 550. Foreign applicants taking the Computer-Based Test of English as a Foreign Language (CBTOEFL) must achieve a minimum score of 213.
- (5) After taking placement examinations in Western music history, Western music theory, and performance studies (where applicable), applicants will be admitted to the program with conditional graduate standing. Normally, one semester will be allowed to remove deficiencies indicated by these placement examinations through no-credit remedial work in the form of undergraduate courses or other project and instruction.

### Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Two of this bulletin, and must have removed any deficiencies assigned on the basis of the placement examinations.

### Admission to Master of Arts Degree in Music

In addition to meeting the admission requirements listed above, students who seek a specialization in piano pedagogy must pass an audition. The Master of Arts degree in music is available with the following specializations: ethnomusicology, musicology, music theory, and piano pedagogy.

### Specific Requirements for the Master of Arts Degree

(Major Code: 10051)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a 30-unit graduate program of which at least 18 must be in 600- and 700-numbered courses and which includes the following core: Music 613, 614 or 615, 652, 653 or 654, and 690.

Plan A is required of those students electing programs in theory and musicology. Students are required to enroll in Music 799A, Thesis or Project, and to pass a final oral comprehensive examination on the thesis.

Students whose field is ethnomusicology or piano pedagogy may choose either Plan A or Plan B. Students in Plan B are required to enroll in Music 766, Graduate Lecture Recital. A final oral comprehensive examination and written document are required of all students electing Plan B.

Master of Arts candidates in ethnomusicology and musicology must have a reading ability in an approved foreign language.

In addition to the requirements stated above, students must complete requirements in the selected specialization.

#### Ethnomusicology

**Core:** Music 615, 654, 690.

**Program:** Music 561 (6 units), 610, 651 (6 units); 766 (Plan B) or 799A (Plan A).

Electives: Two units.

#### Musicology

**Core:** Music 615, 652, 690.

**Program:** Music 611; three additional units from Music 652; nine units selected from Music 554, 590, 651 (1-4 units), 654, 670; 799A.

Electives: Three units.

#### Music Theory

**Core:** Music 613, 652, 690.

**Program:** Six additional units selected from Music 613 and 614; nine units selected from Music 569-589 (1-4 units), 590, 592, 615, 654; 799A.

Electives: Three units.

#### Piano Pedagogy

**Core:** Music 613, 652, 690.

**Program:** Music 541A, 542A, 554G, 554H, 641 or 642; 651 (4 units); 766 (Plan B) or 799A (Plan A).

Electives: Two units.

Refer to Music Graduate Student Handbook for further details.

### Admission to Master of Music

In addition to meeting the admission requirements listed above, students who seek a performance specialization must pass an audition. Students seeking a composition specialization must submit musical scores of their original work. Those seeking a conducting specialization must submit evidence (programs, videotape) of their conducting expertise. The Master of Music is available with the following specializations: composition, conducting, performance and jazz studies. Please consult the School of Music and Dance for further information concerning admission.

### Specific Requirements for the Master of Music Degree

(Major Code: 10041)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a 30-unit graduate program, of which at least 18 must be in 600- and 700-numbered courses.

In order to be advanced to candidacy, students in Vocal Performance must satisfy either a music foreign language examination or attain a satisfactory grade in an introductory college level course in French, German and Italian. A final oral comprehensive examination is required for all Master of Music candidates.

In addition to the requirements stated above, students must complete requirements in the specific program selected:

**Composition**

**Core:** Music 613, 652, 690.

**Program:** Music 507; three additional units from Music 613; three additional units from Music 613, 614 or 615; 651 (9 units); 767.

Electives: Two units.

**Conducting**

**Core:** Music 613, 652, 690.

**Program:** Music 554, 569-589 (2 units), 651 (9 units); 767.

Electives: Five units.

**Jazz Studies**

**Core:** Music 614, 653, 690.

**Program:** Music 651 (9 units), six units selected from Music 507, 566A-566B, 570-589 (1-3 units), 590, 767.

Electives: Three units.

**Performance**

**Core:** Music 613, 652, 690.

**Program:** Music 554, 569-589 (3 units), 651 (9 units), 767.

Electives: Four units.

Refer to Music Graduate Student Handbook for further details.

**Courses Acceptable on Master's Degree Programs in Music (MUSIC)**

**UPPER DIVISION COURSES**

**MUSIC 507. Composition Laboratory (1)**

Three hours of laboratory.

Prerequisites: Music 207 with a grade of C (2.0) or better and consent of instructor.

Continuation of Music 207. Maximum credit two units.

**MUSIC 515. Professional Orientation for Music Performers (2)**

One lecture and two hours of activity.

Prerequisites: Twelve units of upper division or graduate standing in B.M. or M.M. degree. Others by consent of instructor.

Conditions met in professional music world as well as opportunities available. Auditions, contracts, legal and tax responsibilities, media and press promotion, grants, professional management, apprenticeships.

**MUSIC 516. Performance Practice Forum (1)**

Two hours of activity.

Prerequisite: Consent of instructor.

Musical style, repertoire, presentation, and evaluation as embodied in a musical performance. May be repeated with new content. Maximum credit four units.

**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

**C.** Voice

**MUSIC 542. Performance Studies Laboratory (2)**

One lecture and three hours of laboratory.

Prerequisites: For 542A: Music 541A with a grade of C (2.0) or better. For 542C: Music 541C with a grade of C (2.0) or better.

Practical experience in the teaching of individual or group lessons.

**A.** Piano

**C.** Voice

**MUSIC 543. Diction (1)**

Principles of pronunciation and enunciation. Application to song and opera in English, Italian, German, and French.

**MUSIC 554. Music Literature (2) I, II**

Prerequisite: Music 205B with a grade of C (2.0) or better.

Study of literature in areas listed. Analysis of scores and recordings. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**A.** Chamber Music Literature

**B.** Orchestral Literature

**C.** Band Literature

**D.** Song Literature

**E.** Choral Literature

**G.** Keyboard Literature (Seventeenth Century through Beethoven)

**H.** Keyboard Literature (Schubert to the Present)

**MUSIC 561. Area Studies: Ethnomusicology (3)**

Prerequisite: Music 305B with a grade of C (2.0) or better.

Music of a specific culture. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**MUSIC 566A-566B. Jazz Arranging and Composition (2-2)**

Prerequisite: Music 305B with a grade of C (2.0) or better.

Analysis of jazz compositions and arrangements; arranging and composing for large and small jazz ensembles.

**MUSIC 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.

**MUSIC 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, vocal, and mixed ensemble groups of three or more players. May be repeated with new course content. See Class Schedule for specific content. Maximum credit four units.

**MUSIC 576. Wind Symphony (1) I, II**

Five hours.

Prerequisite: Consent of instructor.

Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

**MUSIC 577. 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.

**MUSIC 580. Symphony Orchestra (1) I, II**

Five hours.

Prerequisite: Consent of instructor.

Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

**MUSIC 584. Opera Theatre (2)**

Six or more hours per week.

Prerequisite: By audition.

Interpretation and characterization of light and grand opera. Specific work in coordination of opera ensemble. Maximum credit eight units of which six units are applicable to a master's degree.

**MUSIC 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.

**MUSIC 586. Chamber Singers (1) I, II**

Five hours.

Prerequisite: Consent of instructor.

Study and public performance of representative literature for the ensemble. Practical experience in rehearsal technique. Maximum credit four units.

**MUSIC 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.

**MUSIC 590. Advanced Practicum in Music (3)**

Prerequisite: Consent of instructor in area of practicum.

Students will be assigned to appropriate class sections within selected undergraduate area as instructional assistants under staff supervision.

**MUSIC 592. Analogs in Music, Art, and Literature (3)**

Prerequisite: At least one survey course in music history or appreciation, art history, or comparative literature.

Cross-influences and correspondences in the arts from the stand-points of style, texture, rhythm, and form.

**MUSIC 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**

**MUSIC 610. Seminar in Ethnomusicology (3)**

Prerequisite: Completion of undergraduate comprehensive musicianship core.

Ethnomusicology with emphasis on its relationship to research, field work, transportation and analysis, classification of instruments and musical styles, and cultural context.

**MUSIC 611. Seminar in Musicology (3)**

Systematic study of music based upon application of scientific investigation, philosophical speculation, modern historiography, and related academic disciplines in humanities and social sciences.

**MUSIC 613. Seminar in Music Theory (3)**

Current advanced analytic techniques in various areas of music. Maximum credit nine units applicable to a master's degree. (Formerly numbered Music 613A, 613B, 613C.)

**MUSIC 614. Seminar in Music Theory: Conceptual Analysis of the Jazz Idiom (3)**

Current advanced analytic techniques in the jazz idiom. (Formerly numbered Music 613G.)

**MUSIC 615. Seminar in Music Theory: Ancient and Modern Notational Systems of the World (3)**

Current advanced analytic techniques in ancient and modern world music through the study of diverse notational systems. (Formerly numbered Music 613H.)

**MUSIC 641. Piano Pedagogy: The Adolescent (3)**

Two lectures and three hours of laboratory.

Prerequisite: Music 542A.

Study of music through the piano for the adolescent with analysis and application of appropriate teaching procedures and learning theories. Analysis of literature with corresponding techniques, musical skills and creativity. Supervised teaching.

**MUSIC 642. Piano Pedagogy: The Adult (3)**

Two lectures and three hours of laboratory.

Prerequisites: Music 541A and 542A.

Study of music for teaching the advanced teenager, college student or adult student. Analysis of solo and ensemble literature. Problem solving and practice. Supervised fieldwork.

**MUSIC 651. Advanced Performance Studies (1-3)**

Fifteen one-half hour private lessons (1 unit); fifteen one-hour private lessons (2 units); twenty-two hours private lessons (3 units).

Prerequisite: Audition before music faculty. Music 651B for one unit includes M.F.A. in drama students.

Advanced studies in technical, stylistic, and aesthetic elements of artistic performance culminating in a graduate recital. Maximum credit nine units, four to six of which are applicable to a master of arts degree. Music 651M will include regular ensemble conducting experience.

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|--------------------------|---|
| <b>A.</b> Keyboard       | <b>H.</b> Harp                            |
| <b>B.</b> Voice          | <b>I.</b> Jazz Instrument                 |
| <b>C.</b> Woodwind       | <b>J.</b> Medieval/Renaissance Instrument |
| <b>D.</b> Brass          | <b>K.</b> Non-Western Instrument          |
| <b>E.</b> Percussion     | <b>L.</b> Composition                     |
| <b>F.</b> Strings        | <b>M.</b> Conducting                      |
| <b>G.</b> Classic Guitar |   |

**MUSIC 652. Seminar in Music History (3)**

Intensive study of music history. Maximum credit nine units applicable to a master's degree. (Formerly numbered Music 652A, 652B, 652C, 652D, 652E.)

**MUSIC 653. Seminar in Music History: Jazz (3)**

Intensive historical study of the jazz idiom. (Formerly numbered Music 652G.)

**MUSIC 654. Seminar in Music History: Interrelationships in World Music History (3)**

Intensive historical study of the interrelationships of world cultures. (Formerly numbered Music 652H.)

**MUSIC 670. Seminar: Interpretation of Early Music (3)**

Prerequisites: Completion of Music 652 is recommended.

Performance practice in Medieval, Renaissance and Baroque music; projects in music editing; reports; performance on historical instruments. Participation in the Collegium Musicum required.

**MUSIC 690. Seminar in Research Procedures in Music (3)**

Reference materials, bibliography, investigation of current research in music, processes of thesis topic selection and techniques of scholarly writing.

**MUSIC 696. Special Topics in Music (1-3)**

Prerequisite: Graduate standing.

Intensive study in specific areas of music. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**MUSIC 766. Graduate Lecture Recital (3) Cr/NC**

Prerequisites: Advancement to candidacy. Consent of school director.

For students in M.A. in Music, Plan B. Lecture and recital program for at least one hour in length based upon a written document dealing with a musical problem in history, theory, pedagogy or ethnomusicology showing evidence of original research. Public presentation and an examination before a graduate committee of music faculty.

**MUSIC 767. Graduate Recital (3) Cr/NC**

Prerequisites: Advancement to candidacy. Consent of school director.

Selection of literature for recital program of at least one hour in length; theoretical analysis and historical study of scores chosen; preparation and public performance; and examination before a graduate committee of music department faculty. Conductors must conduct a public performance.

**MUSIC 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of staff; to be arranged with school director and instructor.

Individual study. Maximum credit six units applicable to a master's degree.

**MUSIC 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for a master's degree.

**MUSIC 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.

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

**MUSIC 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Natural Science

In the College of Sciences

OFFICE: Physics 131  
TELEPHONE: (619) 594-6240

Program Coordinator: Phoebe E. Roeder, Ph.D.

## Faculty

Kathleen M. Fisher, Ph.D., Professor of Biology

Fred M. Goldberg, Ph.D., Professor of Physics

Eric M. Riggs, Ph.D., Assistant Professor of Geological Sciences

Gillian H. Roehrig, Ph.D., Assistant Professor of Chemistry

## General Information

The natural science program offers advanced coursework in natural science and science education. Graduate courses in natural science and science education may be used to fulfill requirements for advanced degrees in other departments with the approval of the student's graduate adviser. For information on master's and doctoral programs see Mathematics and Science Education.

### UPPER DIVISION COURSE (N SCI)

#### **N SCI 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 (N SCI)

#### **N SCI 600. Seminar in Science Education (3)**

An intensive study in advanced science education. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

#### **N SCI 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of staff; to be arranged with coordinator and instructor.

Individual study. Maximum credit six units applicable to a master's degree.

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# Nursing

In the College of Health and Human Services

**OFFICE: Hardy Tower 58**  
**TELEPHONE: (619) 594-5357**  
**FAX: (619) 594-2765**

## Faculty

Patricia R. Wahl, Ph.D., F.A.A.N., Professor of Nursing,  
Director of School

Janet L. Blenner, Ph.D., F.A.A.N., Professor of Nursing

Janet R. Heineken, Ph.D., Professor of Nursing

Sandra Lookinland, Ph.D., Professor of Nursing

Carolyn L. Walker, Ph.D., Professor of Nursing

Dolores A. Wozniak, Ed.D., Professor of Nursing, Dean of the College of  
Health and Human Services

Gwenievere W. Anderson, Ph.D., Associate Professor of Nursing,  
Associate Director for Research

Lorraine T. Fitzsimmons, D.N.S., F.N.P., Associate Professor of Nursing

Lorraine Freitas, Ph.D., Associate Professor of Nursing,  
Associate Director for Undergraduate Program

Sue A. Hadley, D.N.S., A.N.P., G.N.P., Associate Professor of Nursing  
(Graduate Adviser)

Richard C. Reed, Ed.D., Associate Professor of Nursing, Assistant  
Dean for Student Affairs of the College of Health and Human  
Services

Lembi Saarmann, Ed.D., Associate Professor of Nursing, Associate  
Director for Graduate Program

Major L. King, Ph.D., Assistant Professor of Nursing

Nancy Sweeney, D.N.Sc., Assistant Professor of Nursing

## General Information

The School of Nursing offers a two-year graduate curriculum leading to the Master of Science degree in nursing.

Graduates of the program will be prepared to function as middle or executive-level nursing administrators, school nurses, nurse midwives clinical specialists, community health nurses, and nurse practitioners. There are three concentrations: Community Health Nursing, Advanced Practice Nursing of Adults and the Elderly, and Nursing Systems Administration. Students in the Community Health Nursing Concentration may specialize in Nurse Midwifery, Community Health, or School Nursing. Students in Advanced Practice Nursing of Adults and the Elderly are prepared as adult/geriatric nurse practitioners and clinical nurse specialists and may specialize in Acute Care/Critical Care. The graduate program requires a minimum of 39 units. The program is designed for either full- or part-time study. All graduates of the program are prepared for beginning roles as nurse researchers and for further educational opportunities in doctoral studies.

A multitude of research opportunities are available to students in the program. The School of Nursing has clinical contracts with all of the leading research and clinical teaching health care agencies within the county. Furthermore, all graduate faculty are doctorally prepared, and students may have the opportunity to be involved in ongoing faculty research projects.

## Application for Admission

Students applying for admission to the Master of Science degree in nursing should submit an application to the School of Nursing and to the University. Applications for the School of Nursing and University are available at <http://nursing.sdsu.edu> and <http://www.csumentor.edu>.

Detailed instructions, including application procedures, accompany the School of Nursing application form.

***Students for the Nurse Midwife and CA OB/GYN Nurse Practitioner and for the Advanced Practice Nursing of Adults and Elderly programs are admitted for fall semester only and applications must be received by January 15 for fall admission.***

***Students for all other programs are admitted in the fall and spring semesters of each year. All applicants must file an Application for Admission to the San Diego State University Office of Graduate Admissions and to the School of Nursing.***

## Admission to Graduate Study

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

1. Have a baccalaureate degree with a major in nursing from a program accredited by the National League for Nursing or Commission on Collegiate Nursing Education. Graduates from baccalaureate programs not having an upper division major in nursing or who have deficiencies will be considered on an individual basis and may be required to enroll in designated undergraduate courses and graduate courses beyond the minimum units necessary for advanced degrees.
2. Have a minimum cumulative grade point average of 3.0 on a 4.0 scale in undergraduate upper division courses.
3. Must have satisfactory score on GRE General Test.
4. Have a California license to practice registered nursing.
5. Have a minimum of one year full-time nursing experience in a hospital, ambulatory care facility, or public health agency. For Nurse Midwife and CA OB/GYN Nurse Practitioner applicants, the experience must be in labor and delivery. For the Advanced Practice Nursing of Adults and Elderly, three years of related experience is highly recommended.
6. Have satisfactorily completed Nursing 500, Advanced Health Assessment and Health Promotion, or equivalent physical assessment in undergraduate program with a grade of C or better. (N.S.A. students are exempt from this requirement). Students in the School Nursing Specialization must also have satisfactorily completed Speech, Language, and Hearing Sciences 540, Hearing Conservation and Audiometry for School Nurses.
7. Have satisfactorily completed a course in statistics. (Statistics 250 or equivalent with a grade of C or better.)
8. Submit three letters of recommendation attesting to capability to do graduate work in nursing.
9. Submit a personal statement.

**Conditional Admission**

Students who do not satisfy all admission requirements to the School of Nursing may, with special consideration, be admitted in a conditionally classified graduate standing. At the deadline date specified on the conditional form (at time of acceptance), the faculty of the School of Nursing shall recommend to the graduate dean that the student:

1. Be disqualified from further study in the program, or
2. Be continued in conditionally classified status, or
3. Be granted full graduate classified standing.

**Special Instructions**

Students enrolled in the graduate program in nursing are required to provide their own professional liability insurance (minimum \$1,000,000) and transportation to off-campus health care agencies.

**Advancement to Candidacy**

All students must satisfy the general requirements for advancement to candidacy as described in Part Two of this bulletin. Students must satisfactorily complete all four core courses (Nursing 604A, 604B, 608, and 684) with a minimum grade point average of 3.0, and no less than a B- grade in each of the four core courses, and be recommended by the graduate faculty.

**Specific Requirements for the Master of Science Degree**

(Major Code: 12031)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree, as described in Part Two of this bulletin, the student must complete an officially approved 39-57 unit course of study. The program includes:

1. Twelve units of core courses to include Nursing 604A, 604B, 608, and 684.
2. A minimum of 18-45 units of graduate courses in the area of concentration or specialization.
3. Zero to six units of electives.
4. Nursing 799A, Thesis, *OR* Plan B Option, Comprehensive Examination, Nursing 798.

Students in all concentrations may choose between Plan A, Thesis or Project, or Plan B, Comprehensive Examination. The choice of Plan A or Plan B should be made early in the program. Students should consult with the graduate adviser and the concentration chair for current policies. Up to 12 semester units may be accepted in transfer from an accredited School of Nursing.

**Community Health Nursing Concentration**

Required courses for the Master of Science degree with a concentration in community health nursing are as follows:

<b>Core Courses</b>		<i>Units</i>
NURS 604A	Theoretical and Research Bases of Nursing . . . . .	3
NURS 604B	Theoretical and Research Bases of Nursing . . . . .	3
NURS 608	Nursing in the Health Care System . . . . .	3
NURS 684	Information Systems for Nursing . . . . .	3
		12

**Area of Concentration Courses**

		<i>Units</i>
PH 601	Epidemiology . . . . .	3
NURS 630	Community Health Nursing Theory . . . . .	3
NURS 631	Community Health Nursing Practicum . . . . .	3
NURS 730	Advanced Community Health Nursing . . . . .	3
NURS 732	Advanced Community Health Nursing Practicum . . . . .	3
NURS 736	Seminar in Community Health Problems . . . . .	3
		18
Electives:	. . . . .	6
NURS 799A	Thesis <i>OR</i> NURS 798 . . . . .	3
		39

**Specialization as a Nurse Midwife and California OB/GYN Nurse Practitioner**

Graduates meet requirements for certification by the California Board of Registered Nursing, the Nurses Association of the American College of Obstetrics and Gynecology, and the American College of Nurse Midwives. Graduates are eligible to apply for certification as an OB/GYN Nurse Practitioner and Certified Nurse Midwife by the California Board of Registered Nursing. The program is accredited by the American College of Nurse Midwives and graduates are eligible to sit for the national certification examination as a certified nurse midwife (CNM) by the American College of Nurse Midwives. Required courses for the Master of Science degree with a specialization as a CA OB/GYN Nurse Practitioner and Certified Nurse Midwife are as follows:

**Core Courses**

		<i>Units</i>
NURS 604A	Theoretical and Research Bases of Nursing . . . . .	3
NURS 604B	Theoretical and Research Bases of Nursing . . . . .	3
NURS 608	Nursing in the Health Care System . . . . .	3
NURS 684	Information Systems for Nursing . . . . .	3
		12

**Community Health Nursing Concentration Courses**

		<i>Units</i>
NURS 630	Community Health Nursing Theory . . . . .	3
PH 651A	Legislation and Policy Affecting Women and Children's Health . . . . .	3
NURS 799A	Thesis <i>OR</i> NURS 798 . . . . .	3
		9

**Specialization as a Nurse Midwife and CA OB/GYN Nurse Practitioner Courses**

NURS 500	Advanced Health Assessment and Health Promotion . . . . .	4
NURS 610	Pathophysiology in Adults and Elderly . . . . .	3
NURS 634	Physiology of Pregnancy and Fetal Development . . . . .	3
NURS 635	Advanced Practice Nursing: GYN/Primary Care Practicum . . . . .	2
NURS 640	Principles of Nurse Midwifery I . . . . .	3
NURS 641	Certified Nurse Midwifery Clinical Practicum I . . . . .	6
NURS 654	Advanced Practice Nursing: Primary Care I . . . . .	3
NURS 658	Clinical Pharmacology for Advanced Practice . . . . .	3
NURS 742	Principles of Nurse Midwifery II . . . . .	3
NURS 743	Certified Nurse Midwifery Clinical Practicum II . . . . .	6
		36

Total Semester Units 57

**Specialization as a Family Nurse Practitioner**

No new students are being admitted to this program during the 2004-2005 academic year.

Required courses for the collaborative San Diego State University and University of California, San Diego, program of studies leading to a Master of Science degree with a specialization as a family nurse practitioner from San Diego State University and a Certificate as a Family Nurse Practitioner from the University of California, San Diego, School of Medicine are as follows:

**Core Courses (SDSU)**

	<i>Units</i>
NURS 604A Theoretical and Research Bases of Nursing . . . . .	3
NURS 604B Theoretical and Research Bases of Nursing . . . . .	3
NURS 608 Nursing in the Health Care System . . . . .	3
NURS 684 Information Systems for Nursing . . . . .	3
	12

**Community Health Nursing Concentration Courses (SDSU)**

	<i>Units</i>
NURS 610 Pathophysiology in Adults and the Elderly . . . . .	3
NURS 630 Community Health Nursing Theory . . . . .	3
NURS 730 Advanced Community Health Nursing . . . . .	3
	9

**Area of Specialization Courses (UCSD)**

	<i>Quarter Units</i>
N 232 Pharmacology . . . . .	3
N 240AC Family Primary Care I-Core . . . . .	3
N 240AS Family Primary Care I-FNP Spec . . . . .	2
N 240B Family Primary Care II . . . . .	4
N 240C Family Primary Care III . . . . .	4
N 241A Collaborative Role Development A . . . . .	1
N 241B Collaborative Role Development B . . . . .	1
N 258C Psychosocial and Cultural Issues in Family Health . . . . .	3
N 404 Clinical Residency . . . . .	6
N 404 Clinical Residency . . . . .	6
N 404 Clinical Residency . . . . .	6

	Quarter units converted to semester units 26.08
NURS 799A Thesis OR NURS 798 . . . . .	3
	Total Semester Units 50.08

Applicants to the Family Nurse Practitioner Specialization shall have completed Nursing 500 and 610, or equivalent course prior to beginning the UCSD specialization courses. Students accepted into the specialization have the option of taking Nursing PR 237 Health Assessment at UCSD.

**Specialization in School Nursing**

Students admitted to the School Nursing Specialization within the Community Health Nursing Concentration will pursue a program of studies leading to a Master of Science in nursing degree and a School Nurse Services Credential. In addition to the Master of Science degree curriculum, to receive the School Nurse Services Credential, students must complete Nursing 596 (Advanced Pediatric Assessment) and Speech, Language, and Hearing Sciences 540. Required courses are as follows:

**Core Courses**

	<i>Units</i>
NURS 604A Theoretical and Research Bases of Nursing . . . . .	3
NURS 604B Theoretical and Research Bases of Nursing . . . . .	3
NURS 608 Nursing in the Health Care System . . . . .	3
NURS 684 Information Systems for Nursing . . . . .	3
	12

**Community Health Concentration Courses**

	<i>Units</i>
NURS 630 Community Health Nursing Theory . . . . .	3
NURS 631 Community Health Nursing Practicum . . . . .	3
NURS 736 Seminar in Community Health Problems . . . . .	3
PH 601 Epidemiology . . . . .	3
NURS 799A Thesis OR NURS 798 . . . . .	3
	15

**Area of Specialization Courses**

	<i>Units</i>
NURS 670 School Nursing Management Practices . . . . .	3
NURS 672 Primary Health Care of the School Aged Child . . . . .	3
NURS 674 Health Education for School Nurses . . . . .	3
SPED 500 Human Exceptionality . . . . .	3
	12
	Total Units 39

**Advanced Practice Nursing of Adults and the Elderly Concentration**

**(Nurse Practitioner and Clinical Nurse Specialist Preparation)**

**Specialization in Acute/Critical Care Nursing**

All graduates meet requirements for nurse practitioner and clinical nurse specialist certification in California and are eligible to sit for select national certification examinations.

Required courses for the Master of Science degree with a concentration in advanced practice nursing of adults and the elderly and a specialization in acute/critical care nursing are as follows:

**Core Courses**

	<i>Units</i>
NURS 604A Theoretical and Research Bases of Nursing . . . . .	3
NURS 604B Theoretical and Research Bases of Nursing . . . . .	3
NURS 608 Nursing in the Health Care System . . . . .	3
NURS 684 Information Systems for Nursing . . . . .	3
	12

**Advanced Practice Nursing of Adults and the Elderly Concentration Courses**

	<i>Units</i>
NURS 500 Advanced Health Assessment and Health Promotion . . . . .	4
NURS 610 Pathophysiology in Adults and the Elderly . . . . .	3
NURS 654 Advanced Practice Nursing: Primary Care I . . . . .	3
NURS 655 Advanced Practice Nursing: Primary Care Practicum I . . . . .	6
NURS 656 Advanced Practice Nursing: Primary Care II . . . . .	3
NURS 657 Advanced Practice Nursing: Primary Care Practicum II . . . . .	6
NURS 658 Clinical Pharmacology for Advanced Practice Nursing . . . . .	3
Prescribed Electives: Three units selected with the approval of the concentration chair . . . . .	3
NURS 799A Thesis OR NURS 798 . . . . .	3
	34

**Area of Specialization Courses**

	<i>Units</i>
NURS 751 Advanced Practice Nursing: Acute/Critical Care Theory and Technology . . . . .	3
NURS 753 Advanced Practice Nursing: Acute and Critical Care Practicum . . . . .	3
	6
	Total Units 52

**Nursing Systems Administration Concentration**

Required courses for the Master of Science degree with a concentration in nursing systems administration are as follows:

<b>Core Courses</b>		<i>Units</i>
NURS 604A	Theoretical and Research Bases of Nursing . . . . .	3
NURS 604B	Theoretical and Research Bases of Nursing . . . . .	3
NURS 608	Nursing in the Health Care System . . . . .	3
NURS 684	Information Systems for Nursing . . . . .	3
		12
<b>Area of Concentration Courses</b>		<i>Units</i>
NURS 620	Foundations of Nursing Administration Practice . . . . .	3
NURS 622	Quality Improvement and Program Evaluation in Nursing Systems Organization . . . . .	3
NURS 624	Nursing Care Systems and Personnel Management . . . . .	3
NURS 724	Nursing Systems Administration Practicum . . . . .	3
NURS 726	Advanced Nursing Systems Administration Practicum . . . . .	3
NURS 797	Research . . . . .	3
PH 645	Health Economics . . . . .	3
PH 742B	Financing Health Systems and Services . . . . .	3
		24
Electives	. . . . .	3
NURS 799A	Thesis <i>OR</i> NURS 798 . . . . .	3
		42

**School Nurse Services Credential**

**(Credential Code: 00600)**

San Diego State University offers curricula leading to the School Nurse 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 School Nurse Services Credential has been approved by the Commission on Teacher Credentialing.

All applicants seeking admission to the School Nurse Services Credential program must be admitted to the University and accepted as a classified postbaccalaureate student. Satisfactory completion of the program requires an overall GPA of 3.0 with individual course grades above 2.0.

**Standards for Admission**

1. Baccalaureate degree in nursing or related field (including community health nursing).
2. Current California Registered Nurse License.
3. Required admission and planning interview with program adviser.
4. Have a minimum cumulative grade point average of 3.0 on a 4.0 scale in undergraduate upper division courses.
5. One year experience as a registered nurse within five years of application.
6. Undergraduate community health nursing course.

**Program**

The following program elements are required of all health services credential candidates:

	<i>Units</i>
NURS 500	Advanced Health Assessment and Health Promotion . . . . . 4
NURS 670	School Nursing Management Practices . . . . . 3
NURS 672	Primary Health Care of the School-Aged Child . . . . . 3
NURS 674	Health Education for School Nurses . . . . . 3
NURS 900	Current Concepts in Community Health Nursing . . . . . 3
NURS 901	Family Health Theory and Nursing Practice . . . . . 3
NURS 902	Primary Health Care School-Aged Child Practicum . . . . . 3
SLHS 540	Hearing Conservation and Audiometry for School Nurses . . . . . 3
SPED 500	Human Exceptionality . . . . . 3
Electives:	Three units to be selected with approval of adviser . . . 3
	Total Units 31

**Courses Acceptable on Master's Degree Programs in Nursing (NURS)**

**UPPER DIVISION COURSES**

**NURS 500. Advanced Health Assessment and Health Promotion (4) I**

Three lectures and three hours of laboratory. Prerequisite: Consent of graduate or credential adviser. Physical and psychosocial assessment techniques, health promotion strategies for select populations.

**NURS 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**

**NURS 604A. Theoretical and Research Bases of Nursing (3)**

Integration of theory and research in nursing. Focus on theory development, testing, and evaluation. Research process in nursing including design, analysis, and utilization for professional nursing practice. (Formerly numbered Nursing 604.)

**NURS 604B. Theoretical and Research Bases of Nursing (3)**

Prerequisite: Nursing 604A. Integration of theory and research in nursing. Focus on research ethics, measurement, publishing, and grant writing in professional nursing practice.

**NURS 608. Nursing in the Health Care System (3)**

Nursing in a changing health care delivery system. Organizational, economic, political, and professional concepts relevant to design and delivery of nursing care.

**NURS 610. Pathophysiology in Adults and the Elderly (3)**

Prerequisite: Consent of graduate adviser. Physiologic alterations associated with acute and chronic illness in adults and the elderly as a basis for primary prevention and medical and nursing interventions.

**NURS 620. Foundations of Nursing Administration Practice (3)**

Analysis of communication concepts appropriate to a variety of complex nursing and health care delivery systems.

**NURS 622. Quality Improvement and Program Evaluation in Nursing Systems Organizations (3)**

Evaluation theories and concepts within a nursing care delivery system and health care organization. Concepts of quality management, consistent with accreditation criteria and professional standards of practice.

**NURS 624. Nursing Care Systems and Personnel Management (3)**

Prerequisites: Nursing 604A and 608.

Issues related to personnel resources, staff development, staff utilization and collective bargaining in health care agencies and nursing care systems.

**NURS 630. Community Health Nursing Theory (3)**

Prerequisite: Nursing 604A.

Family and systems theory, group dynamics, change process, application of ethnoscience to nursing process in the community setting.

**NURS 631. Community Health Nursing Practicum (3)**

Nine hours per week.

Prerequisite: Concurrent registration in Nursing 630.

Experience working with individuals and families of a selected community group applying theoretical knowledge within framework of nursing process.

**NURS 634. Physiology of Pregnancy and Fetal Development (3)**

Prerequisite: Nursing 604A.

Analysis of physiologic alterations during pregnancy and fetal development as a basis for advanced health assessment and interventions in the childbearing population.

**NURS 635. Advanced Practice Nursing-GYN-Primary Care Practicum (2)**

Prerequisites: Nursing 500, 604A, 610, 658, 684. Concurrent registration in Nursing 654. Credit or concurrent registration in Nursing 604B, 608, 634.

Supervised laboratory and clinical experiences providing gynecological, primary, and well women care for adolescent and adult women throughout the lifespan in diverse clinical settings.

**NURS 640. Principles of Nurse Midwifery I (3)**

Prerequisites: Nursing 500, 604A, 604B, 608, 610, 634, 635, 654, 658, 684. Concurrent registration in Nursing 641. Credit or concurrent registration in Nursing 630.

Comprehensive assessment and management of women throughout the childbearing cycle and interconceptional period, with emphasis on prenatal care, labor and delivery, postpartum and the normal newborn.

**NURS 641. Certified Nurse Midwifery Clinical Practicum I (6)**

Prerequisites: Nursing 500, 604A, 604B, 608, 610, 634, 635, 654, 658, 684. Concurrent registration in Nursing 640. Credit or concurrent registration in Nursing 630.

Supervised laboratory and clinical experiences providing gynecological, well woman, primary, obstetric, postpartum and newborn care for adolescent and adult women throughout the lifespan in diverse clinical settings.

**NURS 654. Advanced Practice Nursing: Primary Care I (3)**

Prerequisites: Nursing 500, 604A, 610, 684. Concurrent registration in Nursing 655.

Primary care management of adults and elderly with acute and chronic health problems. Role of advanced practice nursing in health promotion and treatment of illness in primary care and specialized settings.

**NURS 655. Advanced Practice Nursing: Primary Care Practicum I (6)**

Eighteen hours of laboratory per week.

Prerequisite: Concurrent registration in Nursing 654.

Supervised clinical experiences providing primary care to adults and elderly in diverse clinical settings.

**NURS 656. Advanced Practice Nursing: Primary Care II (3)**

Prerequisites: Nursing 654 and 655. Concurrent registration in Nursing 657.

Primary care management of adults and elderly with acute and chronic health problems. Contemporary role and psychosocial issues in advanced practice nursing of adults and elderly.

**NURS 657. Advanced Practice Nursing: Primary Care Practicum II (6)**

Eighteen hours of laboratory per week.

Prerequisites: Nursing 654 and 655. Concurrent registration in Nursing 656.

Supervised clinical experiences providing primary care to adults and elderly in diverse clinical settings.

**NURS 658. Clinical Pharmacology for Advanced Practice Nursing (3)**

Prerequisite: Consent of graduate adviser.

Pharmacologic knowledge and skills needed to manage drug therapy in various clinical settings. Emphasis on factors affecting drug selection; parameters to be monitored to determine drug effectiveness; rationale for continuing, modifying or discontinuing drug therapy.

**NURS 670. School Nursing Management Practices (3)**

Prerequisite: Admission to master's degree program in nursing or health services credential.

Management of school health services program; designed for school nurse with emphasis on professional and organizational systems.

**NURS 672. Primary Health Care of the School Aged Child (3)**

Prerequisite: Nursing 500.

Primary health care of the child and adolescent with emphasis on common health problems, chronic illness, drugs, behavioral problems, and the battered child.

**NURS 674. Health Education for School Nurses (3)**

Prerequisite: Nursing 672.

Prepares school nurse to be an active participant in school health education with emphasis on planning and presentation of health instructional material focused on disease prevention and health promotion.

**NURS 684. Information Systems for Nursing (3)**

Two lectures and three hours of laboratory.

Information systems and information management in all aspects of nursing practice including client care, administration, research and education. Ethics of computer use and influence of information technology on client care. User skills.

**NURS 696. Seminar in Selected Topics in Nursing (1-3)**

Intensive study in specific areas of nursing. May be repeated with new content. See Class Schedule for specific content. Maximum credit three units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**NURS 724. Nursing Systems Administration Practicum (3)**

Nine hours of laboratory.

Prerequisites: Nursing 622 and concurrent registration in Nursing 624.

Provides observation and guided administrative experience specific to the role and function of the first level nurse manager in a selected health care system. Needs and individual objectives of the student are integrated into the experience.

### **NURS 726. Advanced Nursing Systems Administration Practicum (3)**

Nine hours of laboratory.  
Prerequisite: Nursing 724.

Provides observation and guided administrative experience specific to the role and function of the executive level manager in a selected health care system. Individual needs and objectives of the student are integrated into the experience.

### **NURS 730. Advanced Community Health Nursing (3)**

Prerequisite: Nursing 630.

Nursing assessment and analysis of community characteristics, including social, cultural and economic factors. Design of programs which meet the needs of particular ethnic groups and health aggregates for health promotion and disease prevention.

### **NURS 732. Advanced Community Health Nursing Practicum (3)**

Prerequisite: Concurrent registration in Nursing 730.

Leadership role and planning function of a community health nurse specialist in a selected community setting.

### **NURS 736. Seminar in Community Health Problems (3)**

Prerequisite: Advancement to candidacy in health related disciplines

Interdisciplinary analysis of community based health practice problems.

### **NURS 742. Principles of Nurse Midwifery II (3)**

Prerequisites: Nursing 630, 640, 641. Concurrent registration in Nursing 743.

Expands concepts and principles applied to management of pathophysiological and psychological issues complicating the child-bearing cycle and interconceptual periods. Contemporary issues in women's and newborn health care. Role of certified nurse midwife during complex situations emphasized.

### **NURS 743. Certified Nurse Midwifery Clinical Practicum II (6)**

Prerequisites: Nursing 630, 640, 641. Concurrent registration in Nursing 742.

Supervised laboratory and clinical experiences providing gynecological, well woman, primary, obstetric, postpartum and newborn care for adolescent and adult women throughout the lifespan in diverse clinical settings and in complex situations.

### **NURS 751. Advanced Practice Nursing: Acute/Critical Care Theory and Technology (3)**

Prerequisites: Nursing 656 and 657. Concurrent registration in Nursing 753.

Role of advanced practice nurse in acute/critical care settings. Problems and interventions with acutely and critically ill adults and elderly. Emphasis on research-based interventions, psychosocial responses, standards of practice, expanding technologies, and continuation of care to the home.

### **NURS 753. Advanced Practice Nursing: Acute and Critical Care Practicum (3)**

Nine hours of laboratory.

Prerequisite: Concurrent registration in Nursing 751.

Care management activities of acute and critical care advanced practice nurse: research-based care of select adult and elderly clients and families; consultation in coordination of client care; interdisciplinary collaboration; evaluation of care based on standards of practice.

### **NURS 797. Research (1-3) Cr/NC/RP**

Prerequisite: Advancement to candidacy.

Independent research in a specialized subject. Maximum six units applicable to a master's degree.

### **NURS 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of instructor.

Independent study. Maximum credit six units applicable to a master's degree. For students using Plan B, Comprehensive Examination is limited to three units.

### **NURS 799A. Thesis (3) Cr/NC/RP**

Prerequisite: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

### **NURS 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

### **NURS 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

### **NURS 900. Current Concepts in Community Health Nursing (3)**

Prerequisite: Consent of instructor.

Contemporary roles of community health nurse. Appropriate use of community resources for program development, strategies for inter-agency communication, networking, ethnic issues, family and systems theory, and major stressors affecting school community and families of the school-aged child and adolescent.

### **NURS 901. Family Health Theory and Nursing Practice (3)**

Prerequisite: Admission to health services credential program and Nursing 900.

Nursing interventions within the school setting for complex families with school-aged children and adolescents.

### **NURS 902. Primary Health Care of School-Aged Child Practicum (3)**

Twelve hours of practicum.

Prerequisites: Nursing 500 and 672.

Application of theory to a select population of school-aged children and adolescents. Provides direct experience in clinical nursing management of common health problems and developmental disabilities.

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# Nutritional Sciences

In the Department of Exercise and Nutritional Sciences  
In the College of Professional Studies and Fine Arts

**OFFICE: Exercise and Nutritional Sciences 351**  
**TELEPHONE: (619) 594-5541**

**Preprofessional Practice Program in Dietetics (AP4) is approved  
by the American Dietetic Association.**

## Faculty

Barbara E. Ainsworth, Ph.D., M.P.H., Professor of Exercise and  
Nutritional Sciences, Chair of Department  
Audrey A. Spindler, Ph.D., R.D., Professor of Exercise and  
Nutritional Sciences  
Larry S. Verity, Ph.D., Professor of Exercise and  
Nutritional Sciences (Graduate Adviser)  
Donna L. Beshgetoor, Ph.D., Associate Professor of Exercise and  
Nutritional Sciences  
Mark J. Kern, Ph.D., Associate Professor of Exercise and  
Nutritional Sciences  
Kiran B. Misra, Ph.D., Assistant Professor of Exercise and  
Nutritional Sciences

## Associateships and Assistantships

Graduate teaching associateships and graduate assistantships in nutritional sciences are available to a limited number of qualified students by the Department of Exercise and Nutritional Sciences. The graduate assistants primarily aid instruction of the upper division, undergraduate laboratory courses, and facilitate faculty research efforts. Application forms and additional information may be obtained from the Department of Exercise and Nutritional Sciences.

## General Information

The Department of Exercise and Nutritional Sciences offers graduate study leading to the Master of Science degree in nutritional sciences and a concurrent graduate program leading to a Master of Science degree in nutritional science and M.S. degree in exercise physiology.

### Master of Science Degree in Nutritional Sciences

## General Information

For information regarding graduate coursework and research experience leading to a Master of Science degree in nutritional sciences, contact the adviser in the Department of Exercise and Nutritional Sciences. The general program of study may include coursework in nutrition or food science. Thesis research in nutrition may be conducted using human subjects or experimental animals. Research activity of the faculty currently includes: nutritional status of children, elders, and ethnic groups; metabolic studies on cholesterol and energy balance; and factors affecting human lactation, body composition and obesity, athletic performance and fitness, composition of human milk and composition and stability of foods. Laboratories, including animal facilities and equipment, at SDSU support research conducted under the direct supervision of the nutritional

sciences graduate faculty. In addition, students may conduct research at other facilities in the community in conjunction with collaborative studies pursued by nutritional sciences faculty and researchers at other institutions in San Diego.

Graduates with the M.S. degree in nutritional sciences are employed as clinical and administrative dietitians, administrators or service providers of community nutrition programs, food service supervisors, and community college educators, as well as, in administrative, research, or quality control positions within industry and government.

## Admission to Graduate Study

All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin. In addition, students must have bachelor's degrees in foods and nutrition or related fields and satisfy the prerequisites of the courses selected. A course in computer and data processing (e.g., NUTR 207 or equivalent) taken as a part of the student's undergraduate work or demonstrated proof of competency in computers and data processing, as approved by the graduate adviser, is required as a prerequisite to taking program coursework. If students' undergraduate preparation is deemed insufficient, students will be required to complete specified courses in addition to the minimum of 30 units required for the master's degree in nutritional sciences. Students must have a grade point average of 3.0 in the last 60 semester units attempted, and a minimum score of 950 and not less than 475 on either verbal or quantitative sections of the GRE General Test.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Exercise and Nutritional Sciences:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) Two letters of reference;
- (4) Letter of intent: 1-2 pages describing applicant's background and research interests and goals.

Mail or deliver your complete admissions package to:

Department of Exercise and Nutritional Sciences  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7251

Students will be admitted ONLY in the fall semester. Submit applications no later than February 1.

## Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Two of this bulletin, have identified a thesis or project research adviser, taken Exercise and Nutritional Sciences 601 and 602, with a grade of B or better, and have had their research proposals approved by their committees.

### Specific Requirements for the Master of Science Degree

(Major Code: 13061)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units including at least 21 units from courses listed as acceptable to the master's degree program in nutritional sciences. At least 18 units must be in 600- and 700-numbered courses. A final oral examination on the field of the thesis and on the implications of the thesis research for the broader field of nutritional science is also required.

Required courses include six units selected from Nutrition 606, 607, 608, 610; either Nutrition 600 or 700; and Exercise and Nutritional Sciences 601 and 602. All course selections for the graduate program must be approved by the graduate adviser.

In Plan A, all students will include Nutrition 799A, Thesis.

The dietetic internship, a post-baccalaureate certificate program, administered by SDSU's College of Extended Studies in collaboration with the Department of Exercise and Nutritional Sciences, is accredited by the American Dietetic Association (ADA) and provides the supervised practice hours required to meet the performance criteria of entry-level dietitians. Those who successfully complete this program will be eligible to sit for the ADA Registration Examination – the third and final step towards becoming a Registered Dietitian, and an active member of ADA.

Students in the dietetic internship program may concurrently pursue the M.S. degree program in Nutritional Sciences at SDSU, but they must apply separately for admission to that degree program.

The department expects a student to complete the degree within seven years. Failure to complete the degree requirements within seven years will result in dismissal from the program.

### Master of Science Degree in Nutritional Science and Master of Science Degree in Exercise Physiology

#### Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin. In addition, a student applying for admission to the concurrent program in nutritional science and exercise physiology must meet the following requirements.

1. A grade point average (GPA) of at least 3.0 in the last 60 units of coursework.
2. A bachelor's degree in foods and nutrition, exercise science, kinesiology, physical education, or related fields. Students will be required to complete or have equivalent preparation in Biology 212, 336, Chemistry 100, 130, 160, Nutrition 302, 302L, and either Nutrition 204 or 311, and Exercise and Nutritional Sciences 303, 304, 304L, and an undergraduate statistics course.
3. A minimum score of 475 on each of the verbal and quantitative sections of the GRE General Test.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Exercise and Nutritional Sciences:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) Two letters of reference;
- (4) Letter of intent: 1-2 pages describing applicant's background and research interests and goals.

Mail or deliver your complete admissions package to:

Department of Exercise and Nutritional Sciences  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7251

Students will be admitted ONLY in the fall semester. Submit applications no later than February 1.

#### Advancement to Candidacy

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

### Specific Requirements for the Master of Science in Nutritional Science and Master of Science in Exercise Physiology

(Major Code: 08356)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete an officially approved course of study of not less than 48 units as outlined below.

ENS 601	Experimental Methods in Exercise and Nutritional Sciences (3)
ENS 602	Research Evaluation in Exercise and Nutritional Sciences (3)
ENS 632	Physiological Chemistry of Exercise (3)
ENS 659	Exercise Cardiology and Pathology (3)
ENS 661	Seminar in Advanced Physiology of Exercise (3)
ENS 662	Advanced Exercise Physiology Laboratory (3)
ENS 666	Adult Fitness: Exercise Prescription (3)
ENS 668	Adult Fitness: Exercise Leadership and Administration (3)
ENS 796	Exercise Specialist Internship (3) Cr/NC
ENS 798	Special Study (2) Cr/NC/RP
NUTR 600	Seminar: Foods and Nutrition (3)
NUTR 607	Child Nutrition (3)
NUTR 608	Geriatric Nutrition (3)
NUTR 610	Nutrition and Energy (3)
NUTR 700	Seminar in Nutrition (3)
NUTR 798	Special Study (1) Cr/NC/RP
ENS 799A	Thesis (3) Cr/NC/RP

OR

NUTR 799A Thesis (3) Cr/NC/RP

If a student, after entering the concurrent program leading to a Master of Science degree in nutritional science and a Master of Science degree in exercise physiology returns to a single degree program, all the requirements for the single degree program must then be met. A final oral examination in the field of the thesis and its implications to the broader fields of nutritional science and exercise physiology is also required.

The department expects the student to complete the degree requirements within seven years. Failure to complete the degree requirements within seven years will result in dismissal from the program.

## Courses Acceptable on Master's Degree Programs (NUTR)

### UPPER DIVISION COURSES Nutrition Courses

#### NUTR 510. Nutrition and Community Health (3) I, II

Two lectures and three hours of activity.

Prerequisites: Grade of C or better in Nutrition 302, 302L, Nutrition 207, and consent of instructor.

Nutritional problems in the community with consideration of their resolution. Field placement experience required.

#### NUTR 596. Advanced Studies in Nutrition (1-6)

Prerequisite: Nine upper division units in nutrition.

Advanced study of selected topics. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of nine units of 596. No more than six units of 596 may be applied to either the bachelor's or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### GRADUATE COURSES Nutrition Courses

#### NUTR 600. Seminar: Foods and Nutrition (3)

Prerequisites: Nutrition 301 and 302.

Introductory seminar of research and research publications in foods and nutrition.

#### NUTR 606. Physiological Bases of Diet Therapy (3)

Prerequisite: Nutrition 406. Recommended: Chemistry 361B or 560B.

Dietary modifications, adjunct to medical treatment, used to prevent and alleviate the biochemical and physiological symptoms of disease.

#### NUTR 607. Child Nutrition (3)

Prerequisite: Nutrition 302.

Nutrition, health, and biochemical growth in children. Conditions leading to malnutrition, prevention, and correction.

#### NUTR 608. Geriatric Nutrition (3)

Prerequisite: Nutrition 302.

Biomedical and psychosocial aspects of aging that affect food habits, nutritional status, and nutrient needs of elders.

#### NUTR 610. Nutrition and Energy (3)

Prerequisites: Nutrition 302 and 309.

Methods for measurement of energy intake and expenditure assessment, factors which control food intake and energy expenditure, and examination of normal and specialized needs of energy requirements.

#### NUTR 700. Seminar in Nutrition (3)

Prerequisite: Nutrition 302.

Reading and analyses of basic and applied research in nutrition.

#### NUTR 798. Special Study (1-3) Cr/NC/RP

Prerequisite: Consent of staff; to be arranged with the instructor and approval of graduate program adviser.

Individual study. Maximum credit six units applicable to a master's degree.

#### NUTR 799A. Thesis (3) Cr/NC/RP

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a thesis for the master's degree.

#### NUTR 799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

### Exercise and Nutritional Sciences Courses (ENS)

#### ENS 601. Experimental Methods in Exercise and Nutritional Sciences (3)

#### ENS 602. Research Evaluation in Exercise and Nutritional Sciences (3)

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# Oceanography and Marine Studies

Administered by the  
Department of Geological Sciences

OFFICE: Geology/Mathematics/Computer Science 237  
TELEPHONE: (619) 594-5586  
<http://www.geology.sdsu.edu>

## Faculty Committee for Marine Studies

Richard M. Gersberg, Ph.D., Professor of Public Health,  
Interim Director of Coastal and Marine Institute  
Clive E. Dorman, Ph.D., Professor of Geological Sciences  
Todd W. Anderson, Ph.D., Assistant Professor of Biology

## General Information

San Diego State University provides preparation for ocean-oriented careers by offering marine-related coursework, research opportunities and oceanographic experience within regular degree programs in the Departments of Biology, Chemistry and Biochemistry, Economics, Civil and Environmental Engineering, Mechanical Engineering, Geography, Geological Sciences, and the Graduate School of Public Health. Degrees in general oceanography or marine studies are not offered by the University. However, a Master of Arts or Master of Science degree may be earned as an Interdisciplinary Studies major (see the appropriate section in this bulletin).

Specific courses in oceanography (listed below) are offered with the cooperation of faculty from the participating departments. Advanced coursework and research in geological and physical oceanography are conducted in the Geological Sciences Department. Advanced courses and research in biological oceanography, marine biology, marine botany, and marine zoology are in the Department of Biology. The major areas of research under the joint doctoral program in ecology include coastal marine ecology, estuarine ecology and aquaculture. The Graduate School of Public Health also offers a Master of Science degree with a concentration in Environmental Health Science and a concentration in Toxicology with focus on water and soil contamination and management of hazardous wastes. Marine-related coursework and research are offered in the Departments of Economics, Geography and in the College of Engineering. Students who require advising in these areas should inquire at the Coastal and Marine Institute or the appropriate department.

The Coastal and Marine Institute coordinates work in the area of marine studies and provides special supporting services to the faculty, staff, and students which includes student advising, assistance in research and publication, and a boat operations and research diving program. The Director of the Coastal and Marine Institute reports to the Dean of the College of Sciences. The University also operates the Pacific Estuarine Research Laboratory for the study of estuarine and wetland ecology. (See the General Information section of this bulletin.)

### UPPER DIVISION COURSES

#### Oceanography Courses (OCEAN)

##### OCEAN 541. Oceanography (3)

Prerequisites: Biology 201A, 201B; Mathematics 121 and 122 or 150; Physics 180A or 195.

Multidisciplinary examination of physical, chemical, biological and geological aspects of marine environment and relationship of humans with the sea.

#### Biology Courses (BIOL)

Adviser: Anderson

- BIOL 515. Marine Invertebrate Biology (4)  
BIOL 517. Marine Ecology (4)  
BIOL 519. Aquaculture (3)  
BIOL 520. Ichthyology (4)

#### Economics Course (ECON)

Adviser: Adler

- ECON 696. Experimental Topics (3)\*

#### Civil Engineering Courses (CIV E)

Adviser: Noorany

- CIV E 632. Computational Hydraulics and Hydrology (3)  
CIV E 641. Advanced Foundation Engineering (3)

#### Geography Courses (GEOG)

Adviser: Stow

- GEOG 504. Coastal and Submarine Physiography (3)  
GEOG 508. Environmental Climatology (3)  
GEOG 588. Intermediate Remote Sensing of Environment (4)  
GEOG 670. Environmental and Resource Conservation Theory (3)  
GEOG 770. Seminar in Environmental and Resource Conservation (3)

#### Geological Sciences Courses (GEOL)

Adviser: Dorman

- GEOL 540. Marine Geology (3)  
GEOL 545. Descriptive Physical Oceanography (3)  
GEOL 615. Geology of Clays (3)  
GEOL 625. Paleocology (3)  
GEOL 640. Geotectonics (3)

#### Public Health Courses (P H)

Adviser: Gersberg

- P H 634. Environmental Protection (3)  
P H 637. Biological Mechanisms of Environmental Toxicants (3)  
P H 639. Water Quality Investigation (3)

\* Acceptable when of relevant content.

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# Philosophy

In the College of Arts and Letters

**OFFICE: Adams Humanities 4142**  
**TELEPHONE: (619) 594-5263**

## Faculty

Steven L. Barbone, Ph.D., Associate Professor of Philosophy,  
Chair of Department (Graduate Adviser)

J. Angelo Corlett, Ph.D., Professor of Philosophy

Andrew L. Feenberg, Ph.D., Professor of Philosophy

Stephen L. Weber, Ph.D., Professor of Philosophy,  
University President

Thomas S. Weston, Ph.D., Professor of Philosophy

Deborah G. Chaffin, Ph.D., Associate Professor of Philosophy

Robert M. Francescotti, Ph.D., Associate Professor of Philosophy

Darrel Moellendorf, Ph.D., Associate Professor of Philosophy

Mark R. Wheeler, Ph.D., Associate Professor of Philosophy

John A. Berteaux, Ph.D., Assistant Professor of Philosophy

## General Information

The Department of Philosophy offers a program of graduate studies leading to the Master of Arts degree in philosophy. This curriculum is designed to provide advanced study in the field of philosophy as a basis for further graduate work and to meet the needs of students who plan to teach in colleges or hold other positions of leadership.

## Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin. Students may be considered for admission to the graduate program in philosophy in one of two ways.

1. Admission with classified graduate standing requires:
  - a. An undergraduate major in philosophy or a minimum of 24 units of upper division work in philosophy.
  - b. A minimum grade point average of 3.0 in upper division work in philosophy.
2. Admission with conditional classified graduate standing requires:
  - a. Twelve units of upper division work in philosophy.
  - b. A minimum grade point average of 3.0 in upper division work in philosophy.

Students admitted with a grade point average below 2.0 acquire classified graduate standing by completing sufficient units of upper division work in philosophy to yield a total, with previous work, of at least 24 such units. Units earned to complete this undergraduate requirement do not fulfill unit requirements for the master's degree. A minimum grade point average of 3.0 is required for all units attempted after admission.

Units earned to satisfy requirements for a major do not fulfill unit requirements for the master's degree. Other units *may* fulfill such requirements if earned in courses acceptable on master's degree programs in philosophy.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted directly to the Department of Philosophy:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);

Mail or deliver your complete admissions package to:

Department of Philosophy  
(Attention: Steven L. Barbone)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-8142

## Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as stated in Part Two of this bulletin.

## Specific Requirements for the Master of Arts Degree

**(Major Code: 15091)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a program of 30 units of upper division and graduate courses selected with the approval of the graduate adviser.

Students must complete a minimum of 24 units from courses in philosophy listed below as acceptable on master's degree programs. The 24 units shall include (1) either 796 or 799A and (2) a minimum of 12 units in 600-numbered courses which must include Philosophy 600 and 610 or 620.

Students in the program may elect one of two plans, A or B, to complete the requirements for the degree. Plan A requires the writing of a thesis under Philosophy 799A as part of the outlined course program. If Plan B is elected, the student must pass a comprehensive examination, consisting of two written and one oral, and complete three units in Philosophy 796.

The master's examination shall be conducted by a committee of at least three members selected by the graduate adviser after consultation with the student. Each of the written parts of the examination will be based on a bibliography drawn up by the committee administering the examination after consultation with the student. The oral part of the examination will be in a specific problem area or on a major philosopher. At least three weeks prior to the end of the semester preceding the semester of the examination, the student will consult with his or her committee to determine the bibliographies for the written exams and the subject matter for the oral exam. This consultation must be completed no later than three days after the official close of the semester. A student will not be permitted to enroll in Philosophy 796 if this consultation has not been completed. The master's examination may be repeated only once.

## **Courses Acceptable on Master's Degree Program in Philosophy (PHIL)**

### **UPPER DIVISION COURSES**

#### **PHIL 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.

#### **PHIL 507. Twentieth Century Anglo-American Philosophy (3)**

Prerequisite: Six upper division units in philosophy.  
Major movements, issues, or figures of twentieth century Anglo-American philosophy. Course may be repeated with new content. Maximum credit six units.

#### **PHIL 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.

#### **PHIL 510. Philosophy of Law (3)**

Prerequisites: Three units from Philosophy 101, 102, or 103; and three units from philosophy or political science.

Nature of law and logic of legal reasoning. Review of certain key legal concepts such as causation, responsibility, personality, and property.

#### **PHIL 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.

#### **PHIL 521. Deductive Logic (3)**

Prerequisite: Philosophy 110 or 120. Recommended: 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.

#### **PHIL 523. Theory of Knowledge (3)**

Prerequisite: Six units in philosophy.  
The major theories of human knowledge: mysticism, rationalism, empiricism, pragmatism.

#### **PHIL 525. Metaphysics (3)**

Prerequisite: Six units in philosophy.  
Prominent theories of reality, e.g., realism and nominalism, materialism and idealism, teleology and determinism.

#### **PHIL 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.

#### **PHIL 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.

#### **PHIL 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.

#### **PHIL 535. Philosophy of Religion (3)**

Prerequisite: Six units in philosophy.  
Philosophical examination of issues raised by the religious impulse in man.

#### **PHIL 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.

#### **PHIL 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.

#### **PHIL 541. History of Aesthetics (3)**

Prerequisite: Philosophy 101, 102 or 103.  
Major documents in the history of aesthetics.

#### **PHIL 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.

#### **PHIL 543. Philosophy and Literary Theory (3)**

Prerequisites: Three upper division units in philosophy and three upper division units in literature.

Relations between philosophy and literary discourse. Strategies of interpretation offered by major contemporary thinkers.

#### **PHIL 555. Philosophy of Technology (3)**

Prerequisite: Six units in philosophy.  
Philosophy of technology in leading thinkers such as Marx, Heidegger and Marcuse.

#### **PHIL 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.

#### **PHIL 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.

#### **PHIL 599. Special Study (1-3)**

Prerequisite: Upper division or graduate standing and consent of instructor.

Directed individual study in philosophy on a theme or topic chosen in consultation with the instructor. Maximum credit six units. Maximum combined credit six units of Philosophy 599 and 798 applicable to the M.A. degree in Philosophy.

### **GRADUATE COURSES**

#### **PHIL 600. Seminar in the History of Philosophy (3)**

Prerequisite: Twelve upper division units in philosophy.  
A major philosopher, school, or problem. Their historical roots and subsequent historical significance. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master's degree.

#### **PHIL 610. Seminar in Philosophical Problems: Values (3)**

Prerequisite: Twelve upper division units in philosophy.  
Problems in such fields as ethics, politics, aesthetics. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**PHIL 620. Seminar in Philosophical Problems: Knowledge and Reality (3)**

Prerequisite: Twelve upper division units in philosophy.

A problem or group of problems in metaphysics, epistemology and logic. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**PHIL 630. Seminar in Current Philosophical Issues (3)**

Prerequisite: Twelve upper division units in philosophy.

Problems in current philosophical publications. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**PHIL 696. Seminar in Selected Topics (3)**

Prerequisite: Twelve upper division units in philosophy.

Intensive study in specific areas of philosophy. See Class Schedule for specific content. Maximum credit three units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**PHIL 796. Studies in Philosophy (1-3) Cr/NC**

Prerequisites: An officially appointed examining committee and advancement to candidacy.

Preparation for the comprehensive examination for students taking the M.A. under Plan B. Maximum credit three units applicable to a master's degree.

**PHIL 798. Special Study (1-3) Cr/NC/RP**

Prerequisites: Twelve upper division units in philosophy and consent of staff; to be arranged with department chair and instructor.

Individual study. Maximum credit six units applicable to a master's degree.

**PHIL 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**PHIL 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

**PHIL 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

**Physical Education**

Refer to "Kinesiology" in this section of the bulletin.

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# Physics

In the College of Sciences

OFFICE: Physics 131

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FAX: (619) 594-5485

E-MAIL: [physdept@sciences.sdsu.edu](mailto:physdept@sciences.sdsu.edu)

<http://www.physics.sdsu.edu>

## Faculty

Patrick J. Papin, Ph.D., Professor of Physics, Chair of Department

Jeffrey A. Davis, Ph.D., Professor of Physics,  
Director of Electro-Optics Program

Fred M. Goldberg, Ph.D., Professor of Physics

Richard H. Morris, Ph.D., Professor of Physics

Saul B. Oseroff, Ph.D., Professor of Physics

Donald E. Rehfuss, Ph.D., Professor of Physics

Stephen B. W. Roeder, Ph.D., Professor of Physics and Chemistry

Alan R. Sweedler, Ph.D., Professor of Physics,

Director of Center for Energy Studies

Milton S. Torikachvili, Ph.D., Professor of Physics (Graduate Adviser)

Matthew E. Anderson, Ph.D., Assistant Professor of Physics

Arlette R.C. Baljon, Ph.D., Assistant Professor of Physics

Calvin W. Johnson, Ph.D., Assistant Professor of Physics

Fridolin Weber, Ph.D., Assistant Professor of Physics

## Associateships

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

## General Information

The Department of Physics offers graduate study leading to the Master of Arts degree in physics, the Master of Science degree in physics, and the Master of Science degree in radiological health physics.

The Master of Arts degree emphasizes broad training and intensive coursework. This is a non-thesis program designed to lead the student to a comprehensive final examination. Specific courses, in both pure and applied physics, are chosen to complement the background of the individual student and achieve the desired educational goals.

The Master of Science degree emphasizes research experience in a chosen specialty. It is designed to augment the student's undergraduate training with a core curriculum of advanced courses, then followed by a period of research and preparation of a thesis. Thesis topics are encouraged in both pure and applied areas of physics.

Modern experimental laboratories are available for student and faculty research in the areas of acoustics, modern optics, holography, optical properties of solids, laser physics, solid-state physics, nuclear magnetic resonance, electron paramagnetic resonance, atomic physics, solar energy, nuclear, medical and health physics, microprocessor instrumentation, and image processing. Theoretical programs are available in condensed matter physics, electricity and magnetism, laser physics, gravitation, relativity, and mathematical physics.

The Master of Science degree in radiological health physics is designed to train physicists in the use of radioactive materials and radiation-producing devices such as those used in hospitals and related medical facilities, colleges and universities, industry, public health services, nuclear power installations, the military, the Department of Energy, the Environmental Protection Agency, and the Nuclear

Regulatory Commission. The program emphasizes techniques of radiation dosimetry, and instrumentation in addition to the fundamental physics of radiation production and protection.

## Master of Arts and Master of Science Degrees in Physics

### Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. In addition, the undergraduate preparation in physics must have substantially satisfied the undergraduate requirements for the bachelor's degree in physics. (Refer to the General Catalog for a description of these majors.) If the student's undergraduate preparation is deficient, he/she will be required to take courses for the removal of the deficiency. These courses are in addition to the minimum of 30 units for the master's degree.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the Department of Physics:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE General Test scores (official notification) and Physics Subject Test;
- (3) Two letters of recommendation;
- (4) A personal statement of interest.

Mail or deliver your complete admissions package to:

Department of Physics  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1233

### Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as stated in Part Two of this bulletin, and satisfactory completion of Physics 604A, 606, 608, and 610A.

### Specific Requirements for the Master of Arts Degree in Physics

(Major Code: 19021)

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Two of this bulletin. The student's graduate program must include Physics 604A, 606, 608, and 610A. Eighteen additional units of 500-, 600- or 700-numbered electives must be selected with the approval of the Physics Department graduate adviser. The Master of Arts degree in physics requires the completion of Plan B, a comprehensive written examination.

## Specific Requirements for the Master of Science Degree in Physics

(Major Code: 19021)

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Two of this bulletin.

The student must complete a graduate program to include Physics 604A, 606, 608, 610A, 797 (3 units) and 799A. Twelve additional units of 500-, 600-, or 700-numbered electives must be selected with the approval of the Physics Department graduate adviser. The student is required to pass a final oral examination on the thesis.

## Master of Science Degree in Radiological Health Physics

### Admission to Graduate Study

All students must satisfy the general requirements for admission to the Graduate Division with classified graduate standing, as described in Part Two of this bulletin under Admission to the Graduate Division. In addition, the undergraduate preparation in biology, chemistry, mathematics, and physics must have substantially satisfied the undergraduate requirements for a baccalaureate degree in the life sciences or the physical sciences so that satisfactory progress can be made toward the master's degree. If the student's undergraduate preparation is deficient, he will be required to take courses for the removal of the deficiency. These courses are in addition to the minimum of 30 units for the master's degree.

### Advancement to Candidacy

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

## Specific Requirements for the Master of Science Degree in Radiological Health Physics

(Major Code: 12251)

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

1. The student must complete a graduate program to include Physics 560, 561, 564, 660, and Biology 561. Fifteen additional units must be selected with the approval of the Physics Department graduate adviser.
2. The thesis option (Plan A) requires the approval of the graduate adviser. Students in Plan A must include Physics 797 and Physics 799A in the 30-unit program, and are required to pass a final oral examination on the thesis. Students in Plan B (non-thesis option) are required to pass a comprehensive written examination.

## Courses Acceptable on Master's Degree Programs in Physics (PHYS)

### UPPER DIVISION COURSES

#### PHYS 516. Theory of Scientific Instrumentation (3)

Prerequisites: Physics 311; Physics 340B or Mathematics 342B.

Fourier analysis with applications to scientific instrumentation, spectroscopy, and image processing; Z transforms and digital filtering; detection systems and their optimization of the signal-to-noise ratio.

#### PHYS 532. Condensed Matter Physics (3)

Prerequisite: Physics 410.

Elastic, thermal, electric, magnetic and optical properties of solids. Introduction to the energy band theory of solids, with applications to semiconductors and metals.

#### PHYS 533. Experimental Techniques in Condensed Matter Physics (3)

One lecture and six hours of laboratory.

Prerequisites: Physics 357 and credit or concurrent registration in Physics 532.

Experiments in various fields of condensed matter such as x-ray diffraction, Hall effect, superconductivity, and electron paramagnetic resonance.

#### PHYS 534. Colloquium in Condensed Matter Physics (1) Cr/NC

Prerequisite: Credit or concurrent registration in Physics 532.

Student and faculty research project presentations. Maximum credit three units.

#### PHYS 538. Polymer Science (3)

(Same course as Chemistry 538.)

Prerequisites: Physics 197; Chemistry 200 or 202; and Chemistry 410B or Physics 360 or Mechanical Engineering 350 or 352.

Structure, synthesis, physical properties, and utilities of polymers.

#### PHYS 552. Modern Optics and Lasers (3)

Prerequisites: Physics 406 with minimum grade of C; credit or concurrent registration in Physics 400B.

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.

#### PHYS 553. Modern Optics Laboratory (3)

One lecture and six hours of laboratory.

Prerequisites: Physics 357 with minimum grade of C; Physics 406 with minimum grade of C; credit or concurrent registration in Physics 552.

Experiments in various fields of modern optics such as holography, physics of lasers, Fourier transform spectroscopy, Raman spectroscopy, light modulation techniques, fiber optics, spatial filtering, diffraction grating spectroscopy, radiometry, and nonlinear optics.

#### PHYS 554. Colloquium in Optics Research (1) Cr/NC

Prerequisites: Concurrent registration in Physics 498A or 498B or 797 and consent of instructor.

Student and faculty research project presentations. Maximum credit three units.

#### PHYS 560. Radiological Physics and Dosimetry (3)

Prerequisite: Credit or concurrent registration in Physics 354.

Ionizing radiation fields, interactions of radiation with matter, cavity theory, external radiation dosimetry.

#### PHYS 561. Nuclear Instrumentation (3)

One lecture and six hours of laboratory.

Prerequisites: Physics 311 and 560.

Radiation detection, measurement, and spectroscopy. Ionization chambers, GM and proportional counters, scintillation and semiconductor detectors, and thermoluminescent dosimetry.

#### PHYS 564. Nuclear Physics (3)

Prerequisites: Physics 354; Physics 340B or Mathematics 342B.

Nuclear and elementary particle phenomena including nuclear structure, decay, and radioactivity. Nuclear reactions and devices. Experimental methods and applications.

### **PHYS 570. Relativity (3)**

Prerequisites: Physics 354 and 400B.

Relative coordinates, Lorentz transformation, covariant formulation of the laws of physics, applications of special relativity, introduction to curved space time, cosmology.

### **PHYS 580. Computational Physics (3)**

Prerequisites: Physics 354; Computer Engineering 160 or Computer Science 106; and credit or concurrent registration in Physics 400A.

Computer programming for numerical solution of problems in classical mechanics, electromagnetism, optics, and quantum mechanics. Use of Fortran and C programming languages and the UNIX operating system. Incorporation of standard subroutines for linear algebra and differential equations into student written programs.

### **PHYS 585. Computer Simulation in Physical Sciences (3)**

Prerequisites: Physics 350, 360; Physics 340B or Mathematics 342B.

Complex physical systems such as solids, liquids, and macromolecules, by means of computer simulation. Prediction of experimentally measurable physical quantities. Mathematical models. Molecular dynamics and Monte Carlo methods. Interpretation of numerical results. Statistical errors.

### **PHYS 596. Special Topics in Physics (1-4)**

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**

### **PHYS 600. Seminar (1-3)**

Prerequisite: Consent of instructor.

An intensive study in advanced physics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **PHYS 604A-604B. Electromagnetic Theory (3-3)**

Prerequisite: 604A: Physics 400B. Physics 604A is prerequisite to 604B.

604A: Electrostatics, magnetic induction, and magnetostatics, Maxwell's equations, electromagnetic waves and radiation, fields in macroscopic media, special relativity.

604B: Wave guides, optical phenomena and diffraction, multipole expansions, radiation by moving charges, plasma physics, electromagnetism and quantum mechanics.

### **PHYS 606. Statistical Mechanics (3)**

Prerequisites: Physics 360 and 410. Recommended: Physics 608.

Statistical basis of thermodynamics. Microcanonical, canonical, and grand canonical ensembles. Ideal Bose and Fermi systems. Interacting systems. Phase transitions.

### **PHYS 608. Classical Mechanics (3)**

Prerequisites: Physics 340B or Mathematics 342B; Physics 350.

Vector and tensor methods, motion of rigid bodies, vibration, coupled circuits, Lagrange's and Hamilton's equations, principle of least action.

### **PHYS 610A-610B. Quantum Mechanics (3-3)**

Prerequisites: 610A: Physics 410. Physics 610B: Physics 610A.

Physical and mathematical basis of quantum mechanics. Wave mechanics and the Schrodinger Equation, matrices and Hilbert space, angular momentum and spin, atomic structure, bound-state perturbation theory, many particle systems, transition rates and time-dependent perturbation theory, scattering, and relativistic quantum mechanics.

### **PHYS 632. Condensed Matter Theory (3)**

Prerequisite: Physics 532.

Electron gas, energy bands, semiconductors, device physics, optical properties of solids, magnetism, superconductivity.

### **PHYS 660. Radiological Health Physics (3)**

Prerequisite: Physics 560.

Radiation transport and shielding. Internal radiation dosimetry. and radiological risk assessment.

### **PHYS 670A-670B. Medical Physics (3-3)**

Prerequisites: Physics 560 and 561.

Radiological physics, dosimetry, imaging, and radiation protection in medical environments including diagnostic radiology, nuclear medicine, and radiation oncology.

### **PHYS 797. Research (1-3) Cr/NC/RP**

Prerequisite: Consent of graduate adviser.

Research in one of the fields of physics. Maximum credit six units applicable to a master's degree.

### **PHYS 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

### **PHYS 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a thesis in physics for the master's degree.

### **PHYS 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

### **PHYS 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Political Science

In the College of Arts and Letters

**OFFICE: Nasatir Hall 127**  
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**FAX: (619) 594-7302**

## Faculty

Ronald F. King, Ph.D., Professor of Political Science,  
Chair of Department  
Dipak K. Gupta, Ph.D., Professor of Political Science  
Edward V. Heck, Ph.D., Professor of Political Science  
C. Richard Hofstetter, Ph.D., Professor of Political Science  
Brian E. Loveman, Ph.D., Professor of Political Science  
Paul J. Strand, Ph.D., Professor of Political Science  
Louis M. Terrell, Ph.D., Professor of Political Science  
Mikhail A. Alexseev, Ph.D., Associate Professor of Political Science  
David V. Carruthers, Ph.D., Associate Professor of Political Science  
Lyndelle D. Fairlie, Ph.D., Associate Professor of Political Science  
K. Robert Keiser, Ph.D., Associate Professor of Political Science  
Farid Abdel-Nour, Ph.D., Assistant Professor of Political Science  
Brian E. Adams, Ph.D., Assistant Professor of Political Science  
Jonathan Graubart, Ph.D., Assistant Professor of Political Science  
Lei Guang, Ph.D., Assistant Professor of Political Science  
Carole Kennedy, Ph.D., Assistant Professor of Political Science  
(Graduate Adviser)  
Kristen Hill Maher, Ph.D., Assistant Professor of Political Science  
Madhavi M. McCall, Ph.D., Assistant Professor of Political Science  
Ronnee D. Schreiber, Ph.D., Assistant Professor of Political Science

## General Information

The political science graduate program emphasizes global diversity and the interdependence between American society and politics and other nations through its curriculum in the areas of international relations, comparative politics, American politics, and political theory and methods. The department offers courses that contribute to career development in various professions including teaching, research, and consulting. Students from nations throughout the world, students in other disciplines and majors, and students from diverse social and cultural backgrounds enroll in political science graduate courses.

This graduate program provides core courses and programs of study for three distinctive groups of students: (1) Academic career students intending to enter Ph.D. programs and to pursue careers as university or college faculty or as professional researchers. (2) Community career students pursuing a master's degree to obtain or enhance current employment including teaching, work in public agencies, business, military, law enforcement, and holding elected or appointed office. (3) Self-development students, often mature adults, pursuing a master's degree because they enjoy studying political science and politics. These students contribute breadth and sophistication of understanding and a wealth of diverse experience to graduate seminars.

Because of the diversity of student interests, the department offers three specializations in the M. A. program. The general political science specialization provides the fundamental theoretical and analytical skills for students seeking to expand their knowledge of politics as well as those intending to pursue doctoral degrees in political science or placement in an academic setting. The specialization in public policy prepares students for further advanced study in that field and provides the skills necessary for placement in non-academic careers in both the public and private sectors. It covers such areas of American public policy as immigration policy, urban policy, environmental policy, civil rights, and foreign policy. The public policy internship program places students in public and private sector positions that enhance applied and theoretical knowledge. The specialization in international relations/comparative politics supplies expertise to graduate students planning

to obtain a Ph.D. degree in this field or intending to seek employment with an overseas focus.

One of the strengths of the advanced degree program in political science is the depth and breadth of resources available to the students. The department actively cooperates with the interdisciplinary degree programs in Latin American Studies and Asian Studies and shares faculty and expertise with the program in International Security and Conflict Resolution (ISCOR). The Social Science Research Laboratory (SSRL) provides technical support for students wishing to pursue quantitative or survey research. The department also holds an associate membership in the Inter-University Consortium for Political and Social Research (ICPSR) that provides students with ready access to national and international databases. The faculty includes teacher/scholars who are experts in their respective fields of study and who remain professionally active in and out of the classroom. The department is committed to ensuring that financial resources are made available to graduate students in the form of scholarships, research and graduate assistantships, and graduate teaching assistantships.

## Admission to Graduate Study

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. In addition, students seeking the Master of Arts degree in political science must attain a satisfactory score on the GRE General Test (minimum of 500 on both the verbal and quantitative portions of the test). The department also requires that applicants submit two letters of recommendation from individuals familiar with the academic work or potential of the applicant along with a statement of purpose written by the applicant. Students must have completed 30 semester units of coursework in the social sciences, including at least 12 upper division units in political science, as approved by the department. The grade point average required for admission is 3.0 for the last 60 semester units of undergraduate work, a 3.0 grade point average in upper division courses in political science, and a 3.0 grade point average for all work taken in political science. An applicant who is deficient in any of these requirements may be considered for conditional admission. The application deadline for the fall semester is April 1 for students seeking scholarships or other financial support, and May 1 for all others. Currently, the department accepts applications for admission in the spring semester. The application deadline is November 1.

The following materials should be submitted as a complete package directly to the graduate adviser in the Department of Political Science:

- (1) Official transcripts (in sealed envelopes) from all undergraduate and graduate institutions;
- (2) GRE scores (official notification);
- (3) Two letters of reference;
- (4) Personal statement.

Mail or deliver your complete admissions package to:

Department of Political Science  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4427

### **Advancement to Candidacy**

All students must satisfy the general requirements for advancement to candidacy as stated in Part Two of this bulletin. In addition, students must complete the Empirical Theory and Methods sequence by fulfilling one of the following options:

1. POL S 515 and 516.
2. POL S 515. Pass an examination in statistics at the graduate level.
3. POL S 515. Pass a course in statistics equivalent to POL S 516.
4. POL S 515. Pass an examination in a language other than one's native language and other than English at a level approved by the department.

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

**(Major Code: 22071)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student will complete a program of study of 30 units of upper division and graduate courses as approved by the departmental graduate adviser. The program must include a minimum of 24 units in political science selected from courses listed below as acceptable on master's degree programs. Political Science 515 and 516 and at least 21 units in 600- and 700-numbered courses, including Political Science 601, are required. Students who have previously completed Political Science 515 or 516, or the equivalent as determined by the graduate adviser, will enroll in such additional courses in political science as approved by the graduate adviser.

Students may choose either Plan A or Plan B as the culminating experience for the degree. Plan A requires the writing of a thesis and enrollment in Political Science 799A, Thesis. Plan B requires the completion of a comprehensive written and oral examination. In consultation with the graduate adviser, a student electing the Plan B option will form an examining committee consisting of a chairperson and two additional members from the political science faculty. The examination committee will prepare, administer, and grade the written examination testing the student's general knowledge in the program of study. The oral portion of the examination will follow the committee's review of the written examination.

Specific requirements for students selecting the general political science specialization are:

1. POL S 515. Research Design and Analysis in Political Science (3)  
POL S 516. Statistics for Political Scientists (3), or its equivalent.
2. POL S 601. Seminar in the Scope and Methods of Political Science (3)
3. Five graduate seminars chosen from among the following:  
POL S 603. Seminar in Theory and Method of Public Policy Analysis (3)  
POL S 605. Seminar in Political Theory (3)  
POL S 620. Seminar in American National Government (3)  
POL S 625. Seminar in Political Behavior (3)  
POL S 630. Seminar in Politics (3)  
POL S 635. Seminar in Politics of Public Policy (3)  
POL S 655. Seminar in General Comparative Political Systems (3)

- POL S 658. Seminar in Post-Communist Political Systems (3)
- POL S 661. Seminar in the Political Systems of the Developing Nations (3)
- POL S 667. Seminar in Latin American Political Systems (3)
- POL S 675. Seminar in International Relations (3)
- POL S 676. Seminar in International Political Economy (3)
- POL S 696. Seminar in Selected Topics in Political Science (3), with permission of the graduate adviser.

4. Plan A: Political Science 799A, Thesis, and three additional units of coursework at the 500 level or above that may include transfer courses or courses outside the department, with permission of the graduate adviser.

OR

5. Plan B: Comprehensive written and oral examination. One additional seminar chosen from those listed in item 3 above and three additional units coursework at the 500-level or above that may include transfer units or courses outside of the department, with permission of the graduate adviser.

Specific requirements for students selecting the specialization in public policy are:

1. POL S 515. Research Design and Analysis in Political Science (3)  
AND  
POL S 516. Statistics for Political Scientists (3), or its equivalent.
2. POL S 601. Seminar in the Scope and Method of Political Science (3)
3. POL S 603. Seminar in Theory and Method of Public Policy Analysis (3)
4. POL S 796. Internship in Public Policy (3)
5. Three graduate seminars chosen from among the following:  
POL S 620. Seminar in American National Government (3)  
POL S 625. Seminar in Political Behavior (3)  
POL S 630. Seminar in Politics (3)  
POL S 635. Seminar in Politics of Public Policy (3)  
POL S 655. Seminar in General Comparative Political Systems (3)  
POL S 676. Seminar in International Political Economy (3)  
POL S 696. Seminar in Selected Topics in Political Science (3), with permission of the graduate adviser.

6. Plan A: Political Science 799A, Thesis, and three additional units of coursework at the 500 level or above that may include transfer courses or courses outside the department, with permission of the graduate adviser.

OR

7. Plan B: Comprehensive written and oral examination. One additional seminar chosen from those listed in item 5 above and three additional units coursework at the 500-level or above that may include transfer units or courses outside of the department, with permission of the graduate adviser.

Specific requirements for students selecting the international relations/comparative politics specialization are:

1. POL S 515. Research Design and Analysis in Political Science (3)  
AND  
POL S 516. Statistics for Political Scientists (3), or its equivalent.
  2. POL S 601. Seminar in the Scope and Method of Political Science (3)
  3. POL S 655. Seminar in General Comparative Political Systems (3)
  4. POL S 675. Seminar in International Relations (3)
  5. Three graduate seminars chosen from among the following:  
POL S 658. Seminar in Post-Communist Political Systems (3)  
POL S 661. Seminar in the Political Systems of the Developing Nations (3)  
POL S 667. Seminar in Latin American Political Systems (3)  
POL S 676. Seminar in International Political Economy (3)  
POL S 696. Seminar in Selected Topics in Political Science (3), with permission of the graduate adviser.
  6. Plan A: Political Science 799A, Thesis, and three additional units of coursework at the 500 level or above that may include transfer courses or courses outside the department, with permission of the graduate adviser.
- OR
7. Plan B: Comprehensive written and oral examination. One additional seminar chosen from those listed in item 5 above and three additional units coursework at the 500-level or above that may include transfer units or courses outside of the department, with permission of the graduate adviser.

## Courses Acceptable on Master's Degree Program in Political Science (POL S)

### UPPER DIVISION COURSES

#### **POL S 515. Research Design and Analysis in Political Science (3)**

Prerequisite: Political Science 201.

Conceptual analysis, measurement, and scaling. Elementary statistical analysis of behavioral data using computers and data processing using one of the major statistical packages. (Formerly numbered Political Science 515A.)

#### **POL S 516. Statistics for Political Scientists (3)**

Prerequisite: Political Science 201.

Basic concepts, theories, and methods that are utilized by political and other social scientists using statistics and microcomputers. Serves as an intermediate level introduction to statistical methods in political science. (Formerly numbered Political Science 515B.)

#### **POL S 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.

#### **POL S 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.

#### **POL S 535. Gender and Politics (3)**

Prerequisites: Political Science 101 and 102.

How gender matters in understanding key political science concepts including democracy, public/private participation and representation. Women involved in political institutions as elected officials, activists, and policy makers from U.S. and comparative perspectives.

#### **POL S 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.

#### **POL S 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.

#### **POL S 563. Government and Politics of Asian Countries (3)**

Prerequisite: Political Science 103 or 362 or Asian Studies 100 or History 566 or 567.

Domestic politics and foreign policies of select Asian countries such as China, India, South Korea, and Taiwan; to include political institutions and change, development politics and external relations in these countries. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

#### **POL S 564. Environmental Politics in Global Perspective (3)**

Prerequisite: Upper division or graduate standing.

Comparative examination of environmental politics and policy in major world regions. Considers environmental politics with related policy challenges of economic growth, equity, and social justice. Course content varies with regional focus.

#### **POL S 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.

#### **POL S 567. Political Systems of Latin America (3)**

Prerequisite: Political Science 566.

Domestic and international politics of selected Latin American states.

#### **POL S 568. Mexican Politics (3)**

Prerequisite: Political Science 101 or 103.

Principal factors in Mexican governmental decision making. Ideology, political groups, tactics of leaders and governmental structure.

#### **POL S 575. International Relations of the Pacific Rim (3)**

Prerequisite: Political Science 362 or 375 or 481.

Dynamics of conflict and cooperation among nations of the Pacific Rim. Stress on political and economics factors that shape interstate relations.

#### **POL S 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.

### **POL S 596. Topics in Political Science (1-3)**

Prerequisite: Upper division or graduate standing.

Selected topics in political 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 of six units of 596. Maximum credit of three units of 596 applicable to a master's degree. Maximum credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### **GRADUATE COURSES**

### **POL S 601. Seminar in the Scope and Methods of Political Science (3)**

The discipline of political science and systematic training in its methodology. Required of all applicants for advanced degrees in political science.

### **POL S 603. Seminar in Theory and Method of Public Policy Analysis (3)**

Prerequisites: Political Science 601 and admission to the special-ization in public policy.

Theoretical approaches used to explain and evaluate public policy performance. Focus on quantitative and qualitative methods of appraising the validity of theories.

### **POL S 605. Seminar in Political Theory (3)**

Maximum credit six units applicable to a master's degree.

### **POL S 620. Seminar in American National Government (3)**

Maximum credit six units applicable to a master's degree.

### **POL S 625. Seminar in Political Behavior (3)**

Prerequisite: Political Science 601.

Political science literature focusing on major areas of political behavior including study of political attitudes, voting, and political communication.

### **POL S 630. Seminar in Politics (3)**

Prerequisite: Six upper division units in political science, three units of which must come from political science courses 320 through 335; 422 through 436; 531.

Process by which individuals and groups make demands upon political decision makers; emphasis on the styles, structures, channels and consequences of interest articulation. Maximum credit six units applicable to a master's degree.

### **POL S 635. Seminar in Politics of Public Policy (3)**

Prerequisite: Graduate standing.

Examination of public policies, e.g., energy, environment, protection, taxation, income maintenance, population, health care, education, housing. Use of research findings to analyze policy process, to estimate probable consequences of alternative decisions, and to appraise governmental programs.

### **POL S 651. Seminar in Migration and Border Politics (3)**

Prerequisite: Graduate standing.

Migration and border politics within a global perspective. Transformations of sovereignty, territory, identity, and rights in an era of mass migration. May focus on U.S.-Mexican border region or other migration contexts internationally. May be repeated with different content.

### **POL S 655. Seminar in General Comparative Political Systems (3)**

Prerequisites: Political Science 555, and three additional upper division units in political science.

The field of comparative politics, including historical developments, major theoretical approaches, substantive concerns, uses and limitations of the comparative method, methodological innovations in study of foreign political systems.

### **POL S 658. Seminar in Post-Communist Political Systems (3)**

Prerequisite: Graduate standing.

Nature of Communist political systems and processes of transition to post-communist forms of government. Possibilities for development of democratic institutions examined theoretically and empirically.

### **POL S 661. Seminar in the Political Systems of the Developing Nations (3)**

Prerequisite: Six upper division units in political science.

Theoretical analysis of political development, modernization and industrialization in the emerging nations. Search for valid generalizations about the non-Western political process. Political trends and developments in the developing nations.

### **POL S 667. Seminar in Latin American Political Systems (3)**

Prerequisite: Political Science 555 or 566.

Political developments in selected Latin American nations. May be repeated with new content. Maximum credit six units applicable to a master's degree.

### **POL S 675. Seminar in International Relations (3)**

Maximum credit six units applicable to a master's degree.

### **POL S 676. Seminar in International Political Economy (3)**

Prerequisite: Six upper division political science units in international relations.

Major theoretical approaches applied to various interstate issues of the world economy.

### **POL S 696. Seminar in Selected Topics in Political Science (3)**

Prerequisite: Graduate standing.

Selected topics in political science. May be repeated with new content. See Class Schedule for specific content. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### **POL S 795. Problem Analysis (3)**

Analytical treatment of selected problems in political science. Review of methods for investigation and reporting of data. Consideration of problems in preparation of project or thesis.

### **POL S 796. Internship in Public Policy (3)**

Prerequisites: Political Science 601, 603, and eighteen units on official program for M.A. degree in political science with a specialization in public policy.

A 160-hour internship approved by instructor in public or private agency. Grade based on instructor's evaluation of supervisor's report, student consultation with instructor reviewing experience and required readings, and extensive paper relating internship experience to theories of public policy.

### **POL S 797. Research in Political Science (3) Cr/NC/RP**

Prerequisite: Consent of the department chair.

Research in political theory, political parties, comparative government, international relations, public law or American government.

### **POL S 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

### **POL S 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

### **POL S 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

### **POL S 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Psychology

In the College of Sciences

**OFFICE: Life Sciences 110**  
**TELEPHONE: (619) 594-5358**  
**FAX: (619) 594-1332**  
<http://www.psychology.sdsu.edu>

## Faculty

Claire Murphy, Ph.D., Professor of Psychology,  
Chair of Department

Catherine J. Atkins, Ph.D., Professor of Psychology, Associate Dean  
for Undergraduate Studies of the College of Sciences

Thereasa A. Cronan, Ph.D., Professor of Psychology

Roger M. Dunn, Ph.D., Professor of Psychology

Richard G. Graf, Ph.D., Professor of Psychology

Frederick W. Hornbeck, Ph.D., Professor of Psychology

Elizabeth A. Klonoff, Ph.D., Professor of Psychology,  
Co-Director of Clinical Training and of Doctoral Program

Alan J. Litrownik, Ph.D., Professor of Psychology

Nancy A. Marlin, Ph.D., Professor of Psychology, Provost

Sandra P. Marshall, Ph.D., Professor of Psychology

John E. Martin, Ph.D., Professor of Psychology

Georg E. Matt, Ph.D., Professor of Psychology

Robert F. McGivern, Ph.D., Professor of Psychology

Joseph M. Price, Ph.D., Professor of Psychology

Radmila Prislin, Ph.D., Professor of Psychology

Stephen K. Reed, Ph.D., Professor of Psychology

Judy S. Reilly, Ph.D., Professor of Psychology

Edward P. Riley, Ph.D., Professor of Psychology

Dennis P. Saccuzzo, Ph.D., Professor of Psychology

James F. Sallis, Jr., Ph.D., Professor of Psychology

Thomas R. Scott, Ph.D., Professor of Psychology,  
Dean of the College of Sciences

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Margaret Friend, Ph.D., Associate Professor of Psychology

Keith Hatstrup, Ph.D., Associate Professor of Psychology

Vanessa L. Malcarne, Ph.D., Associate Professor of Psychology

Judy M. Price, Ph.D., Associate Professor of Psychology  
(Graduate Adviser)

Roberto J. Velasquez, Ph.D., Associate Professor of Psychology

Leola A. Alfonso-Reese, Ph.D., Assistant Professor of Psychology

P. Niels Christensen, Ph.D., Assistant Professor of Psychology

Jeffrey M. Conte, Ph.D., Assistant Professor of Psychology

Thierry Devos, Ph.D., Assistant Professor of Psychology

Karen M. Ehrhart, Ph.D., Assistant Professor of Psychology

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Sarah N. Mattson, Ph.D., Assistant Professor of Psychology

Ralph-Axel Mueller, Ph.D., Assistant Professor of Psychology

Scott C. Roesch, Ph.D., Assistant Professor of Psychology

Jennifer D. Thomas, Ph.D., Assistant Professor of Psychology

Jean M. Twenge, Ph.D., Assistant Professor of Psychology

May Yeh, Ph.D., Assistant Professor of Psychology

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## Associateships and Assistantships

Graduate teaching associateships and graduate assistantships in psychology are available to a limited number of qualified students. Application forms and further information may be obtained from the master's program adviser, Department of Psychology.

## General Information

A Master of Science degree program in applied psychology with a focus on industrial/organizational psychology or program evaluation is offered. A Master of Arts degree program with a specialization in pre-clinical, developmental, behavioral and cognitive neuroscience, social/personality or learning and cognition is available for persons who expect subsequently to pursue a Ph.D. degree. For students currently enrolled in the Ph.D. program, an M.S. in clinical psychology is offered. In addition, the Department of Psychology, jointly with the Department of Psychiatry, University of California, San Diego, School of Medicine, offers an APA-accredited program of graduate study leading to the Doctor of Philosophy degree in clinical psychology with

specialization in behavioral medicine, neuropsychology, or experimental psychopathology. A scientist-practitioner training model serves as a guide for the experiences provided for doctoral students. It is expected that graduates of this program will be prepared to serve as scientists, innovators, and leaders in the field of clinical psychology.

The doctoral program requires that students spend a minimum of five calendar years in study and research. In the first four years, doctoral students must complete their prescribed coursework satisfactorily as well as engage in research and a series of clinical practica. In the last year of the program all students must complete a 12-month APA-accredited clinical internship.

The department has a strong scientific research orientation, and emphasizes the master's degree as preparation for doctoral work. Students in all programs must take an advanced statistics/experimental design course sequence and produce an empirical research thesis.

The department awards approximately 30 master's degrees annually. A substantial proportion of the graduates who apply go on to enroll in doctoral work at well-known universities.

The clinical psychology faculty staff a Psychology Clinic for graduate clinical training and service to the metropolitan San Diego community.

## Section I. Master's Degree Programs

### Admission to Graduate Study

Admission to the Psychology Department's master's program involves a two-step process. Applicants must file one application with the University, and a separate application package with the Psychology Department.

1. For admission to the University, all students must satisfy the general requirements for classified graduate standing, as described in Part Two of this Bulletin. Applications to the University can be found at <http://www.csumentor.edu>; they can be filled out on the computer and submitted electronically.

**NOTE: Admission to the University does not guarantee admission to the Psychology Department.**

2. To be considered for admission to the Psychology Department's programs, applicants must satisfy particular department requirements. These requirements and instructions for completing the department application package are shown below. The department application form is available at <http://www.psychology.sdsu.edu>. Students are admitted to the master's programs in the fall semester only.

To qualify for admission to the master's programs in psychology, the student must have:

1. A. For the M.A. program: An undergraduate major in psychology (or coursework equivalent to the SDSU bachelor's degree) consisting of at least 24 upper division units with a grade point average of at least 3.0. The major must include classes in general psychology, learning, physiological psychology, statistical methods, psychological testing and measurement, and at least one laboratory course or the equivalent in psychology. In addition, the student must have completed three of the following classes: developmental psychology, introduction to research methods, intermediate statistics, social psychology, abnormal psychology, psychology of personality, cognitive psychology, or sensation and perception. Six units of upper division psychology electives, which may be from the above list, are also required.

B. For the M.S. applied program: An undergraduate major in psychology (or coursework equivalent to the SDSU bachelor's degree) consisting of at least 24 upper division units with a grade point average of at least 3.0. The major must include classes in general psychology, learning, statistical methods, psychological testing and measurement, intermediate statistics or research methods, and at least one class providing research experience in psychology. In addition, the student must have completed three of the following classes: developmental psychology, social psychology, abnormal psychology, psychology of personality, cognitive psychology, industrial/organizational psychology, experimental psychology with laboratory, or sensation and perception. Six units of upper division psychology electives, which may be from the above list, are also required.

2. A grade point average of not less than 3.0 in the last 60 semester units of the undergraduate program.
3. A minimum score above the 50th percentile rank on both the verbal and quantitative sections of the GRE General Test.
4. A score above the 50th percentile rank on the GRE Subject (Advanced) Test in Psychology. The student should take this test as well as the GRE General Test in sufficient time so that the results will be available prior to the application deadline. It should be requested by the student that the score reports for these tests be forwarded directly to the SDSU Office of Graduate Admissions (SDSU code: 4682).

Meeting all of the indicated criteria does not guarantee admission to the program, since admission is also dependent on the facilities and resources available in the department.

The following materials should be submitted as a complete package directly to the Department of Psychology:

- (1) The completed application for admission to the Department of Psychology master's program, and the completed application for an assistantship, if this type of financial support is desired. The department application may be obtained by contacting the Department of Psychology, or at <http://www.psychology.sdsu.edu>. Include a brief statement with your reasons for pursuing graduate study (VI. Statement of Purpose).
- (2) Two sets of official transcripts (in sealed envelopes) from each issuing institution. This includes all degree transcripts and a transcript from the last institution attended. The transcripts must reflect the last 60 semester (90 quarter) units attempted. Students with international coursework must submit all official transcripts and proof of degree. If certificates and transcripts are not in English, they should be accompanied by certified English translations;
- (3) Three letters of recommendation (in sealed and signed envelopes returned to the applicant) from persons familiar with the applicant's academic performance.

Mail or deliver your complete application package to:

Department of Psychology  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4611

**The completed package must be received by the Department of Psychology by February 1.**

NOTE: Students must also take the GRE General Test and the GRE Subject (Advanced) Test in Psychology. Examination scores should be sent to SDSU, not to the Department of Psychology (SDSU code: 4682).

**The GRE should be taken by November to meet the Department of Psychology application deadline of February 1.**

If the student's postsecondary instruction is in a language other than English, he/she must take the TOEFL; these scores should be sent to the University.

Students applying to both the SDSU/UCSD Joint Doctoral Program and the SDSU Master's Program are required to file only one University application and pay only one fee, which would cover both programs. However, separate departmental applications, one for the masters program and one for the doctoral program, must be filed if the student wishes to be considered for both programs.

### Advancement to Candidacy

The student must satisfy the general requirements for advancement to candidacy as stated in Part Two of this bulletin. Having obtained three grades of C or lower in graduate courses automatically precludes advancement to candidacy.

In addition, students must have an approved thesis proposal prior to advancement to candidacy.

### General Requirements for all Master's Degree Programs

In addition to meeting the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units (36-38 units for the Master of Science degree). Only classified graduate students are permitted to enroll in any 600-numbered (or higher) courses in psychology. The departmental graduate adviser must approve all programs of study except the Master of Science in clinical psychology. For the Master of Science in clinical psychology, departmental approval is done by the program director of the joint doctoral program.

Psychology 670A-670B or 770A-770B are required in all master's degree programs in the Department of Psychology. In addition, for all degrees other than the Master of Science in Clinical Psychology, Psychology 600 (Research Orientation), Psychology 799A (Thesis), and an oral examination on the thesis are also required.

## Specific Requirements for the Master of Arts Degree

(Major Code: 20011)

The Master of Arts degree requires the completion of a minimum of 30 units in psychology to include Psychology 501, 670A-670B or 770A-770B, two units of 600, one unit of 797, and 799A. Students must also select at least one from the following pairs of core courses: Psychology 745 or 751, 587 or 632, 561 or 760, as well as two electives. In special cases, and by petition to the department's graduate committee, students may take up to six units of the required 30 units in 500-level and above courses in other departments.

All new Master of Arts degree students are required to take one unit of Psychology 600 during their first semester and another unit during their second semester.

## Specific Requirements for the Master of Science Degree

(Major Code: 20011)

The Master of Science degree may be obtained with the following concentrations:

### 1. The Applied Psychology program has two specializations: Program Evaluation and Industrial and Organizational Psychology.

Specific requirements for students selecting the Program Evaluation specialization are: A minimum of 38 units, 32 of which must be completed in psychology, to include Psychology 670A-670B or 770A-770B, 600 (Research Orientation, 2 units), 621 or 622, 630, 675, 730, 791 (Internship in Applied Psychology, 6 units), 799A (Thesis). Of the nine units of graduate electives required, at least three must be selected from psychology; six units of graduate electives may be selected from other departments with prior approval of the master's program adviser.

Specific requirements for students selecting the Industrial and Organizational specialization are: A minimum of 38 units, 35 of which must be completed in psychology, to include Psychology 670A-670B or 770A-770B, 600 (Research Orientation, 2 units), 621, 622, 630, 675, 721, 722, 792 (Internship in Industrial and Organizational Psychology, 6 units), 799A (Thesis). Three units of graduate electives may be selected from psychology or from other departments with prior approval of the master's program adviser.

### 2. Clinical Psychology (included within the Ph.D. program; not available separately).

A minimum of 36 units in psychology, including Psychology 770A-770B, 801, 820, 840, 849, 850, 855, 856, 860, 896 (Clinical Practicum, minimum 3 units), and one course to be taken at the University of California, San Diego, SOMC 202E. Completion of the second year project and approval by a committee consisting of a minimum of three faculty members representing both SDSU and UCSD. For this degree only, all approvals and advancement to candidacy will be completed by the program director of the joint doctoral program.

## Section II. Doctoral Program

<http://www.psychology.sdsu.edu/doctoral>

## Admission to Doctoral Study

(Major Code: 20031)

Detailed instructions for applying to the program, along with all necessary forms, are located on the SDSU/UCSD Joint Doctoral Program in Clinical Psychology webpage, which can be found at <http://www.psychology.sdsu.edu/doctoral/>. Please review and follow these instructions carefully. Specific questions not answered by these materials should be e-mailed to [PsycJDP@sciences.sdsu.edu](mailto:PsycJDP@sciences.sdsu.edu).

To be considered for admission to the joint SDSU-UCSD doctoral program in clinical psychology, students must meet the general requirements for admission to both universities with classified graduate standing as outlined in the respective current catalogs. These include (a) an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or equivalent academic preparation, as determined by the graduate deans of the two institutions; (b) a minimum overall grade point average of 3.0; (c) a grade point average of at least 3.25 in the last 60 semester (90 quarter) units attempted; (d) good standing at the last institution attended; and (e) a minimum score of 550 verbal and 550 quantitative on the GRE Aptitude Test and a score above the 85th percentile on the GRE Advanced Test in Psychology. However, given the large number of applicants in the field of clinical psychology, the selection process is designed to identify the best from among many highly qualified applicants. Thus no minimum set of qualifications in any way guarantees admission. Personal interviews will be conducted with the most promising applicants. Admission of any candidate who deviates from the minimum standards can only be granted with special permission of both graduate deans. No faculty member has authority to make an offer of a position in the program to any applicant, implied or otherwise, without final recommendation of the program directors and approval of the graduate deans.

Applicants must submit a copy of all transcripts of previous college work, three letters of recommendation, and score reports for the Graduate Record Examination General Test and Graduate Record Examination Advanced Test in Psychology. Although an undergraduate psychology major is not mandatory for admission, applicants should have completed a minimum of 18 semester units (27 quarter units) in psychology including courses in physiological psychology, statistical methods, psychological testing, abnormal psychology, personality, social psychology, and an experimental laboratory in psychology. Advanced courses in perception and learning are desirable as are courses in biology, mathematics, linguistics, and other related areas (e.g., medical physics, computer sciences). The joint doctoral program is a year around program.

An option for Ph.D. students in clinical psychology is to concurrently pursue the Master of Public Health (MPH) degree in the Graduate School of Public Health. Students jointly enrolled will first be accepted into the psychology program and then be recommended by the psychology program for admission to the MPH program. Students may be recommended at any time prior to receiving their doctoral degree. Following acceptance into the MPH degree, students must complete all required core classes as well as requirements for a particular specialization (health promotion, epidemiology, and health services administration and/or occupational/environmental health). A specially designed program of study that incorporates requirements from both degree programs has been developed. Subsequent to coursework, MPH candidates are required to complete a comprehensive examination in their area of study. (For more information, see the section of this bulletin under "Public Health.")

*Students will be admitted to graduate programs in psychology only in the fall semester. All application material must be received by the doctoral program office and the SDSU Office of Graduate Admissions not later than December 15 for the Ph.D. program.*

### Specific Degree Requirements for the Doctor of Philosophy Degree in Clinical Psychology

The student is guided by requirements for the doctoral degree program given in Part Two of this Bulletin. The core curriculum will normally be completed during the first two years. Completion of this core insures that students have a general background in empirical psychology (e.g., physiological, social, cognitive-affective, and individual bases of behavior); knowledge of conceptualizations of personality and psychopathology; an awareness and appreciation of professional ethics and conduct; awareness and appreciation of multicultural issues in an increasingly multicultural society; knowledge of the theory and techniques of psychological assessment; knowledge of therapeutic interventions, acquisition of therapeutic skills, and a minimum of 1,000 hours of supervised clinical experience; and competence in research methods. Specific courses providing this background at SDSU include Psychology 757, 770A-770B, 801, 840, 849, 850, 855, 856, 860, 896; Clinical Psychology 295 and 202E (Psychopathology) at UCSD.

During the second year, students will select a research topic for a second year project, which is similar to a master's thesis. Students are responsible for conducting all phases of this project under the supervision of their joint guidance committee. Students may also elect to obtain a master's degree by completing requirements for the Master of Science degree.

After completing the basic two-year core, work in subsequent years will diverge for students in each of the three specialty areas: behavioral medicine, experimental psychopathology, and neuropsychology. All students must take the one-unit seminar in neuropsychology.

Students specializing in behavioral medicine are required to take Psychology 842, Behavioral Medicine Seminar: Assessment, in the fall and Psychology 843, Behavioral Medicine Seminar: Intervention, in the spring of the third year. Students taking experimental psychopathology are required to take Psychology 852, Seminar in Experimental Psychopathology Research, in the fall of the third or fourth year. Students in neuropsychology are required to take Clinical Psychology 205, Neuroanatomy and Clinical Psychology 294, Seminar in Neuropsychology, offered at UCSD.

In the fourth year, students are expected to submit and defend a dissertation proposal. Many students will also collect the data for and begin writing the dissertation during this year.

The fifth year is reserved for the completion of a doctoral dissertation and a full-time clinical internship that is identified by the student and the joint guidance committee.

Students are expected to maintain the highest standards of academic performance. Students must maintain a minimum 3.0 grade point average. According to doctoral program policy, falling below a 3.0 GPA automatically places a student on academic probation. A student may not remain on academic probation for more than one year. In addition, three grades below a B (i.e., a B- or lower or No Credit) are grounds for dismissal from the program without further qualification regardless of a student's overall GPA.

In clinical psychology, adherence to the Ethical Principles of Psychologists (APA, Amended, 1992) is mandatory. Students who knowingly or unknowingly violate any part of the ethical code may be dismissed from the program without further qualification regardless of coursework, research, or other academic achievement. A copy of the ethical code is distributed to students at their initial orientation.

Prior to advancement to candidacy, students will be required to sign a statement of understanding that 1) the doctoral faculty will communicate with the clinical internship agency all information relevant to the student's academic and professional qualifications for placement and continuation in the internship and 2) the student understands that the clinical internship must be satisfactorily completed before graduation.

### Faculty

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

#### San Diego State University:

Program Director: Klonoff

Program Members: Atkins, Calfas, Cronan, Elder, Gallo, Hovell, Klonoff, Landrine, Litrownik, Malcarne, Marshall, Martin, Matt, Mattson, Mayer, Mueller, Murphy, Joseph Price, Reilly, Riley, Roesch, Saccuzzo, Sallis, Schulte, Thomas, Wulfeck, Yeh

#### University of California, San Diego:

Program Director: Heaton

Program Members: Akshoomoff, Ancoli-Israel, Appelbaum, Atkinson, Bellugi, Birchler, Bondi, Braff, Britton, G. Brown, S.A. Brown, S.J. Brown, Caligiuri, Carver, Courchesne, Delis, Dimsdale, Drummond, Feifel, Filoteo, Garland, Geyer, Gollan, Granholm, Grant, Haist, Jernigan, Jeste, L. Judd, P. Judd, Kaplan, Kelsoe, Kripke, Kulik, Kutas, Lang, Levine, Marcotte, Matloff, Max, McCabe, McQuaid, Mills, Myers, Nichols, Palinkas, Palmer, Parry, Patterson, Paulus, Penn, Perry, Rutledge, Salmon, Schreiber, Schuckit, Schuchter, Segal, Sieber, Sparta, Squire, Stein, Stiles, Swerdlow, Tapert, Townsend, Trauner, Wall, Wetherell, Zhu, Zisook

### Courses Acceptable on Master's and Doctoral Degree Programs in Psychology (PSY)

#### UPPER DIVISION COURSES

#### PSY 501. History of Psychology (3)

Limited to graduate students or psychology majors with senior standing.

The historical background of modern psychology.

#### PSY 502. Philosophical Issues in Psychology (3)

Prerequisite: Six units of psychology.

Mind-brain relationship and other topics at the interface of psychology and philosophy.

#### PSY 547. Applied Social Psychology (3)

Prerequisite: Psychology 340.

Problems, methods, and ethical issues related to applied social psychology. Applications to various settings to include educational system, business and industry, health settings, legal system, mass communication, and the environment.

#### PSY 561. Advanced Neuropsychology (3)

Prerequisite: Psychology 360 or 361 or grade of B or better in Psychology 260.

Biological bases of neuropsychological function and dysfunction, relationships between brain structure and function, neuropsychological assessment tools.

#### PSY 564. Seminar in Psychopharmacology and Behavioral Disorders (3)

Prerequisite: Grade of B or better in Psychology 260.

Drugs as cause and cure of behavioral problems. A review of drugs commonly used to change behavior in primary schools, psychiatric centers, in-home programs and mental hospitals. (Formerly numbered Psychology 764.)

#### PSY 587. Advanced Principles of Learning and Cognition (3)

Prerequisites: Psychology 211, 270, and 380.

Empirical data, basic principles and theoretical positions of major theorists in learning and cognitive psychology.

**PSY 596. Selected Topics in Psychology (1-3)**

Prerequisites: Psychology 101 and consent of instructor.  
Intensive study in specific areas of psychology. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**GRADUATE COURSES**

Graduate courses in psychology are not open to postbaccalaureate unclassified students.

Priority for enrollment in graduate courses in psychology is given to psychology students who have the courses as requirements in their respective programs.

**PSY 600. Research Orientation (1) Cr/NC**

Prerequisite: Admission to the master's degree program.  
Research in psychology. All master's degree students are required to enroll in this course. Maximum credit two units.

**PSY 621. Seminar in Personnel Psychology (3)**

Prerequisites: Psychology 320 and consent of graduate adviser.  
Problems and procedures in selection, classification, and performance appraisal, focusing on testing in industry, the interview, and other selection and assessment devices. Criterion development and measurement methods.

**PSY 622. Seminar in Organizational Psychology (3)**

Prerequisites: Psychology 321 and consent of graduate adviser.  
Applications of psychological principles and methods of investigation to problems of industrial relations and motivation of employees; factors influencing morale and employee productivity; criteria of job proficiency; psychological aspects of worker-management relationships and leadership.

**PSY 630. Seminar in Program Evaluation (3)**

Prerequisite: Graduate standing in psychology.  
Theory and practice of program evaluation. Surveys concepts, issues, and methods relevant to evaluating programs, services, and interventions in the public and private sectors.

**PSY 632. Theories and Methods in Developmental Psychology (3)**

Prerequisites: Psychology 230 and 331 or 332.  
Philosophical and biological origins of developmental psychology. Examination of processes that shape perception, language acquisition, socialization, and cognition.

**PSY 651. Seminar in Behavior Disorders of Childhood and Adolescence (3)**

Prerequisites: Psychology 350 and consent of graduate adviser.  
Contemporary approaches to emotional and behavioral problems of childhood and youth. Considers developmental, cognitive and social variables as well as theory and treatment.

**PSY 652. Seminar in Behavior Disorders of Adults (3)**

Prerequisites: Psychology 350 and consent of graduate adviser.  
Contemporary approaches to emotional and behavioral problems of adulthood. Considers developmental, cognitive and social variables as well as theory and treatment.

**PSY 670A-670B. Advanced Statistics in Psychology (3-3)**

Two lectures and two hours of activity.  
Prerequisites: Psychology 370, 410, a passing score on the departmental statistics placement test, and consent of graduate adviser.

Fundamentals of multiple regression and correlation. Principles of experimental design. Analysis of variance including factorial and repeated-measures designs and a priori and post hoc comparisons including trend analysis. Computer-based statistical packages in the analysis of data from psychological research.

**PSY 675. Seminar in Psychological Measurement (3)**

Prerequisites: Psychology 370 and consent of graduate adviser.  
General principles, theory and methods underlying measurement in studies of group and individual differences in controlled experiments.

**PSY 696. Selected Topics in Psychology (3)**

Prerequisite: Consent of instructor.  
Intensive study in specific areas of psychology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**PSY 700. Seminar (3)**

Prerequisite: Consent of graduate adviser.  
An intensive study in advanced psychology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**PSY 721. Advanced Seminar in Personnel Psychology (3)**

Prerequisites: Psychology 621 and consent of master's programs adviser.  
Selected areas within personnel psychology including selection, classification, performance appraisal, test development, criterion development, measurement and scaling techniques. Course may be repeated with new content with permission of instructor and master's programs adviser. Maximum credit six units applicable to a master's degree.

**PSY 722. Advanced Seminar in Organizational Psychology (3)**

Prerequisites: Psychology 622 and consent of master's programs adviser.  
Selected areas within organizational psychology including leadership, motivation, organizational development, and organizational effectiveness. Course may be repeated with new content with permission of instructor and master's program adviser. Maximum credit six units applicable to a master's degree.

**PSY 730. Advanced Seminar in Program Evaluation (3)**

Prerequisite: Psychology 630.  
Examines intellectual foundations, current debates, and innovative methods in program evaluation and their impact on planning, conducting, and using evaluations.

**PSY 732. Seminar in Developmental Psychology (3)**

Prerequisite: Psychology 632.  
In-depth examination of a selected aspect of development, such as cognition, social, perceptual or language development or the neural substrates of development.

**PSY 745. Seminar in Social Psychology (3)**

Prerequisite: Consent of graduate adviser. Recommended: Psychology 340 or 412.  
Issues of contemporary importance in the field. See Class Schedule for specific content.

Course may be repeated provided it is offered by a different instructor and the subject matter is substantially different. To enroll in the seminar for the second time, the student must submit a petition to be approved by the professor of the course and the graduate adviser. Maximum credit six units applicable to a master's degree.

**PSY 746. Seminar in Attitudes and Persuasion (3)**

Prerequisite: Undergraduate social psychology.  
Formation and organization of attitudes. Social influence processes through which attitudes are changed. Relationship between attitudes and overt actions in various behavioral domains.

**PSY 751. Clinical Psychology: Theory and Practice (3)**

Prerequisites: Graduate standing in psychology and Psychology 350.  
Clinical assessment, theory and practice of behavior change, and professional ethics. (Formerly numbered Psychology 551.)

### **PSY 757. Seminar in Selected Topics in Clinical Psychology (1-3)**

Prerequisite: Consent of graduate adviser.

Advanced study of such clinical topics as cognitive behavior therapy, forensic psychology, multiculturalism, ethics, and stress. Topics will vary on a semester basis.

Course may be repeated provided it is offered by a different instructor and the subject matter is substantially different. To enroll in the seminar for the second time, the student must submit a petition to be approved by the professor of the course and the graduate adviser. Maximum credit six units applicable to a master's degree.

### **PSY 760. Seminar in Physiological Correlates of Behavior (3)**

Prerequisites: Psychology 260 or six units of biology; and consent of graduate adviser.

An exploration of current research and theory in physiological psychology with emphasis on behavioral correlates and psychophysiology.

Course may be repeated provided it is offered by a different instructor and the subject matter is substantially different. To enroll in the seminar for the second time, the student must submit a petition to be approved by the professor of the course and the graduate adviser. Maximum credit six units applicable to a master's degree.

### **PSY 761. Seminar in Ethology and Comparative Psychology (3)**

Prerequisites: Psychology 417 or Biology 354, or Biology 527, and consent of graduate adviser.

Current problems in ethology and comparative animal behavior. Course may be repeated provided it is offered by a different instructor and the subject matter is substantially different. Maximum credit six units applicable to a master's degree.

### **PSY 770A-770B. Experimental Design and Data Analysis in Behavioral Research (3-3)**

Two lectures and two hours of activity.

Prerequisites: Psychology 370, 410, a passing score on the departmental statistics placement test, and consent of graduate adviser.

Principles and methods of behavioral research stressing interdependence of experimental design and statistical evaluation of results. General linear model in its regression and ANOVA formulations. Advanced multiple regression and multiple correlation techniques using computer-based statistical packages.

### **PSY 775. Multivariate Statistics in Psychology (3)**

Two lectures and two hours of activity.

Prerequisites: Psychology 670A-670B or 770A-770B and consent of instructor.

Introduction to multivariate techniques. Latent structure models with attention to relationship between latent constructs and observable data. Includes causal models, factor analysis (both exploratory and confirmatory), canonical correlation, path analysis, discriminant function analysis, and loglinear analysis.

### **PSY 778. Special Topics in Research Design and Data Analysis in Psychology (3)**

Prerequisites: Psychology 670A-670B or 770A-770B and consent of instructor.

Advanced, specialized statistical topics for psychological researchers. Examples include clustering (cluster analysis, multi-dimensional scaling), causal modeling (using LISREL or EQS), analysis of categorical data (emphasizing loglinear and logit models), non-parametric statistics, or analysis of quasi-experimental designs.

### **PSY 790. Practicum in the Teaching of Psychology (1) Cr/NC**

Prerequisite: Award of a graduate teaching associateship in psychology.

Supervision in the teaching of psychology, covering lecture writing, style of lecture presentation, in-class demonstration and exercise, test and syllabi construction, and grading system. Not applicable to an advanced degree.

### **PSY 791. Internship in Program Evaluation (1-6) Cr/NC/RP**

Up to 20 hours of supervised work per week in a program approved internship setting.

Prerequisites: Psychology 630, and consent of instructor.

Supervised training in program evaluation in a program approved internship setting. Maximum credit six units.

### **PSY 792. Internship in Industrial and Organizational Psychology (1-6) Cr/NC/RP**

Up to 20 hours of supervised work per week in a program approved internship setting.

Prerequisite: Consent of instructor. Credit or concurrent registration in Psychology 621 and 622.

Supervised training in industrial and organizational psychology in a program approved internship setting. Maximum credit six units.

### **PSY 796. Selected Topics in Psychology (3)**

Prerequisite: Advanced master's and doctoral students in psychology.

Intensive study in specific areas of psychology. Includes in-depth investigation of controversial issues in the field as well as introduction to current and emerging technologies. Examples include cognitive neuroimaging, cognition and social perception, etc.

### **PSY 797. Research (1-3) Cr/NC/RP**

Prerequisite: Consent of graduate adviser.

Research in one of the fields of psychology. Maximum credit six units of 797 and 798 combined applicable to a master's degree.

### **PSY 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of graduate adviser.

Individual projects involving library or laboratory research in any area of psychological investigation or interest. Maximum credit of six units of 797 and 798 applicable to a master's degree.

### **PSY 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree. Credit is contingent upon acceptance of the completed thesis by the Department of Psychology.

### **PSY 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

### **PSY 801. Seminar in History and Ethics in Psychology (3)**

Prerequisite: Admission to doctoral program in clinical psychology.

Historical background of modern psychology; in-depth examination of the American Psychological Association code of ethics and its application to the conduct of clinical psychologists.

### **PSY 820. Seminar in Cultural Psychology (3)**

Prerequisite: Admission to doctoral program in clinical psychology.

Cultural origins of human behavior; cultural limits of psychological knowledge.

### **PSY 833. Seminar in Developmental Psychopathology (3)**

Prerequisite: Admission to doctoral program in clinical psychology.

Research and theory in biological and social origins of psychopathology. Methods of assessing developmental change and stability, issues related to vulnerability and resiliency, developmental appropriateness of approaches to interventions, and role of culture as a developmental context.

### **PSY 840. Seminar in Personality and Social Psychology (3)**

Prerequisite: Admission to doctoral program in clinical psychology.

Research and theory in personality and social psychology. Theories of personality and individual differences, group processes, sex roles, social perception, and cross-cultural issues.

**PSY 842. Behavioral Medicine Seminar: Assessment (3)**

Prerequisites: Admission to the doctoral program, or approval by instructor and program director, and Psychology 841.

Assessment methods and issues in behavioral medicine. Development and implementation of assessment plans. Theoretical and practical aspects of psychological, behavioral, and physiological assessment methods for various health issues.

**PSY 843. Behavioral Medicine Seminar: Intervention (3)**

Prerequisites: Admission to the doctoral program and Psychology 842.

Design and implement interventions by stressing empirically supported approaches to improve health and change health behaviors. Strengths and weaknesses of clinical community interventions.

**PSY 849. Seminar and Laboratory in Counseling and Psychotherapy (4)**

Two lectures and six hours of laboratory.

Prerequisite: Consent of graduate adviser.

Supervised practice in application of psychotherapeutic and counseling techniques from selected cognitive, dynamic, interpersonal, and behavioral approaches. Open only to students accepted in the doctoral program.

**PSY 850. Seminar in Theory and Practice in Clinical Interventions (3)**

Prerequisite: Admission to doctoral program in clinical psychology.

Theory and application of clinical interventions, advanced study of interviewing techniques, behavioral interventions, cognitive/behavioral interventions, and family/child interventions.

**PSY 852. Seminar in Experimental Psychopathology Research (3)**

Prerequisites: Admission to the doctoral program in clinical psychology.

Analysis of experimental and theoretical literature as it pertains to research methodology for the study of disordered behavior.

**PSY 855. Seminar in Psychological Assessment I (4)**

Two lectures and six hours of laboratory.

Prerequisites: Psychology 350, 370, and consent of graduate adviser.

Theory and practice in assessment of intelligence and special abilities. Open only to students accepted in the doctoral program.

**PSY 856. Seminar in Psychological Assessment II (4)**

Two lectures and six hours of laboratory.

Prerequisites: Psychology 855 and consent of graduate adviser.

Theory and practice in assessment of special abilities, personality and behavior disorders. Open only to students accepted in the doctoral program.

**PSY 860. Seminar in Physiological Foundations of Behavior (3)**

Prerequisite: Admission to doctoral program in clinical psychology.

Research and theory in physiological psychology. Advanced study of biological rhythms, sleep and waking, stress responses, the neurophysiology of learning and memory, and research methods in physiological psychology.

**PSY 894. Clinical Internship (3-15)**

Prerequisites: Completion of coursework, second year project, and advancement to candidacy.

Clinical training in an APA-approved internship setting.

**PSY 895. Practicum in the Teaching of Psychology (1-6) Cr/NC**

Prerequisite: Admission to doctoral program in clinical psychology.

Supervision in the teaching of psychology, covering lecture writing, style of lecture presentation, in-class demonstration and exercises, test and syllabi construction, and grading systems.

**PSY 896. Clinical Practicum (1-15)**

Prerequisite: Admission to the doctoral program.

Supervision of advanced intervention strategies applied to clinical populations.

**PSY 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Independent investigation in the general field of the dissertation.

**PSY 898. Doctoral Special Study (1-8) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Individual study in the field of specialization. Maximum credit eight units applicable to the doctoral degree.

**PSY 899. Doctoral Dissertation (1-15) Cr/NC/RP**

Prerequisites: An officially constituted dissertation committee and advancement to candidacy.

Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

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# Public Administration

In the School of Public Administration and Urban Studies  
In the College of Professional Studies and Fine Arts

**OFFICE: Professional Studies and Fine Arts 100**  
**TELEPHONE: (619) 594-6224**  
**FAX: (619) 594-1165**

## Faculty

Louis M. Rea, Ph.D., Professor of Public Administration and Urban Studies, Director of School  
Roger W. Caves, Ph.D., Professor of Public Administration and Urban Studies (M.C.P. Graduate Adviser)  
James A. Gazell, Ph.D., Professor of Public Administration and Urban Studies  
Lawrence A. Herzog, Ph.D., Professor of Public Administration and Urban Studies  
Darrell L. Pugh, Ph.D., Professor of Public Administration and Urban Studies  
L. Paul Sutton, Ph.D., Professor of Public Administration and Urban Studies  
Patricia A. Wilson, D.P.A., Professor of Public Administration and Urban Studies  
Natalie Pearl, Ph.D., Associate Professor of Public Administration and Urban Studies (M.C.J.C. Graduate Adviser)

Robert L. Stock, Ph.D., Associate Professor of Public Administration and Urban Studies  
Susan E. Baer, Ph.D., Assistant Professor of Public Administration and Urban Studies  
Kyle Farmby, Ph.D., Assistant Professor of Public Administration and Urban Studies  
M. Celeste Murphy Greene, Ph.D., Assistant Professor of Public Administration and Urban Studies  
Jeffrey S. McIlwain, Ph.D., Assistant Professor of Public Administration and Urban Studies  
Dana M. Nurge, Ph.D., Assistant Professor of Public Administration and Urban Studies  
Sherry Ryan, Ph.D., Assistant Professor of Public Administration and Urban Studies  
Evelyn Zellerer, Ph.D., Assistant Professor of Public Administration and Urban Studies

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## General Information

Public Administration and Urban Studies offers graduate study leading to the Master of Public Administration degree. Research facilities provided include the Institute of Public and Urban Affairs and the Public Administration Center.

The San Diego metropolitan community affords significant internship opportunities for the graduate student in federal, state, and local government agencies.

*The Public Administration and Urban Studies' M.P.A. degree is accredited by the National Association of Schools of Public Affairs and Administration (NASPAA) and listed on its annual roster of accredited programs found to be in conformity with standards established for professional master's degrees in public affairs and administration.*

## Master of Public Administration Degree

This degree permits the selection, under advisement, of a program of course and seminar work which may be oriented toward a generalist approach or with a research focus on organizational behavior and development, public policy, fiscal policy and administration, recreation administration, or urban administration. Also offered are concentrations in criminal justice administration and city planning, each consisting of 15 units within the required program for the Master of Public Administration. Since management responsibilities are shared by administrators in a number of professional areas in the public service,

the student is encouraged to supplement the study of government and administration with graduate courses in economics, sociology, psychology, business administration, and other related areas.

## Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. The student must also satisfy the following requirements: (1) a 3.0 grade point average in the undergraduate major and a 2.85 overall average; and (2) an acceptable score on the GRE General Test.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the School of Public Administration and Urban Studies:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) Two letters of reference from individuals who have known the student's academic work and/or employment performance;

Mail or deliver your complete admissions package to:

School of Public Administration and Urban Studies  
(Attention: MPA Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4505

## Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, as described in Part Two of this bulletin and be recommended by the faculty. In order to be recommended for advancement, a student must have achieved a grade point average of 3.5 in Public Administration 600 and three additional courses from among Public Administration 604, 605 or 606, 630, 642, 650, 660, with no grade below B-.

## Specific Requirements for the Master of Public Administration Degree

(Major Code: 21021)

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Two of this bulletin. Students must also complete as a part of their programs: (1) at least 27 units of 600- and 700-numbered courses including Public Administration 600, 604, 605 or 606, 630, 642, 650 and 660; (2) a minimum of nine additional units of 500 level or graduate courses in public administration or related fields selected under advisement. An internship of 12 units (one semester) beyond the 36 units of coursework is required of students who have not had equivalent experience. The internship normally will be served in a governmental agency where the intern will perform duties of an administrative nature. Placements typically will be made in the office of a city manager, a budget office, a personnel office or in the office of the head of a major operating department. Public Administration 799A, Thesis, must be included in the program unless Plan B with a comprehensive written examination in lieu of the thesis is selected by the student with the approval of a graduate adviser; and (3) Students who specialize in Public Personnel and Labor Relations must take Public Administration 530, 531, 632, 633, and 643.

### Concentration in Criminal Justice Administration (Major Code: 21051)

Students must complete 15 units from the following courses as part of the M.P.A. degree:

CJA 601	Seminar in the Administration of Criminal Justice (3)
CJA 602	Seminar in the Criminal Justice System as a Social Institution (3)
CJA 604	Seminar in Criminal Justice and Urban Administration (3)
CJA 791	Seminar in Readings in Criminal Justice Administration (3)
CJA 797	Research in Criminal Justice Administration (3) Cr/NC/RP

### Concentration in City Planning (Major Code: 02061)

Students must complete the following courses as part of the M.P.A. degree:

P A 525	The U.S. City Planning Process (3)
C P 630	Seminar in Urban Planning Implementation (3)
C P 640	Seminar in Urban Planning Theory (3)
C P 670	History of Urban Planning (3)
C P 690	Seminar in Land Use Planning Principles and Techniques (3)

## Transborder Public Administration and Governance Certificate

The purpose of the Certificate in Transborder Public Administration and Governance is to educate students in how U.S. and Mexico systems of public administration and governance function in the border region and what boundary spanning mechanism exists for transborder cooperation on shared issues.

### Admission Requirement

1. A bachelor's degree is required. The field of study can be any area of the social sciences, humanities, or professional programs of study such as public administration, communication and business administration. Other major areas will be considered at the discretion of the faculty.
2. Admission of students into the certificate program will be on a postbaccalaureate classified status.
3. Prospective students must demonstrate a basic level of currency and knowledge with regard to border issues. Such currency may be demonstrated through the applicant's work experience and/or oral interview.
4. Prospective students must demonstrate fluency in both Spanish and English. Examinations will be given for this purpose.
5. Applicants must have attained a grade point average of at least 2.5 (where A equals 4) in the last 60 semester (90 quarter) units attempted.

### Course Requirements (18 units)

PA 680	Seminar in Transborder Public Administration and Governance (3)
PA 681	Seminar in Comparative Federalism: Mexico and the U.S. (3)
PA 682	Seminar in Comparative Fiscal Structures: Mexico and the U.S. (3)
PA 683	Seminar in Environmental Administration and Management in the Transborder Region (3)
PA 684	Seminar in Transnational Criminal Justice: Mexico and the U.S. (3)
PA 685	Practicum in Border Research (3)

No other courses may be substituted for courses in the certificate program.

Students must maintain a minimum grade point average of 3.0 in all certificate courses and with no less than a "C" in any course. Only three units of coursework with a grade of "C" will count toward the certificate.

Additional information may be obtained from Dr. Louis M. Rea.

**Courses Acceptable on Master's Degree Program in Public Administration (CJA) (P A)**

**Criminal Justice Administration (CJA)  
UPPER DIVISION COURSES**

**CJA 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.

**CJA 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.

**CJA 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.

**CJA 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.

**CJA 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.

**CJA 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.

**CJA 570. Organized Crime: Domestic and International Perspectives (3)**

Prerequisite: Criminal Justice Administration 301.

Interdisciplinary analysis of organized crime's impact on criminal justice administration and public policy on both domestic and international levels.

**Public Administration (P A)  
UPPER DIVISION COURSES**

**P A 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.

**P A 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.

**P A 520. Decision Making in the Urban Community (3)**

Prerequisite: Public Administration 310.

Processes of decision making in the management of urban communities.

**P A 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.

**P A 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.

**P A 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.

**P A 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.

**P A 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.

**P A 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.

**P A 580. Comparative Public Administration (3)**

Prerequisite: Public Administration 301.

Administrative organization and process of selected foreign and American governments. Analysis of the cultural basis of administrative systems.

**Public Administration (P A)  
GRADUATE COURSES**

**P A 600. Scope of Public Administration (3)**

The development of public administration as an academic discipline; a systematic evaluation of the rise and operations of large-scale public bureaucracies.

**P A 604. Methods of Analysis in Public and Urban Affairs (3)**

Prerequisite: Credit or concurrent registration in Public Administration 600.

Research design for problems and cases in public affairs; summarizing and organizing data; methods of projection; sampling theory and application; using census and other secondary data sources.

**P A 605. Seminar in Research Methods in Public Administration (3)**

Prerequisites: Public Administration 600 and 604.

Examination of basic research approaches, i.e., legal, historical, and small-group, etc.

**P A 606. Seminar in Quantitative Approaches to Public Administration (3)**

Prerequisites: Public Administration 600 and 604.

Advanced techniques for analyzing problems in public and urban affairs; emphasis on computer applications.

**P A 620. Seminar in Management of Urban Governments (3)**

Selected problems in the management of urban governments. Maximum credit six units applicable to a master's degree.

**P A 630. Seminar in Public Personnel Administration (3)**

Prerequisite: Public Administration 600.

Analysis of selected problems in personnel administration; special emphasis on organizational development and consultation skills as emerging personnel functions. Maximum credit six units applicable to a master's degree.

**P A 632. Seminar of Organization Development in the Public Sector (3)**

Prerequisite: Public Administration 600.

Organization development theory and practice. Emphasis on organizational diagnosis, intervention theory, team building and process consultation skills as they apply to public sector organizations.

**P A 633. Collective Bargaining in the Public Sector (3)**

Prerequisite: Public Administration 530 or 531.

Simulation of public sector collective bargaining. Students will participate in all facets of the bargaining process including data collection, proposal preparation, formal and informal negotiation, fact-finding and mediation. Videotape feedback will be used extensively.

**P A 640. Seminar in Public Administration (3)**

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

**P A 642. Seminar in Administrative Theory (3)**

Prerequisite: Public Administration 600.

Organization and management; the executive role, decision making; bureaucracy; authority and power; communication and control and organizational system; tactics and strategies in effective management.

**P A 643. Seminar in Administrative Behavior (3)**

Prerequisite: Public Administration 340.

Intrapersonal, interpersonal and group development knowledge which enhances the administrator's effectiveness. Simulations and structured experiential designs examine behaviors encountered in public bureaucracies.

**P A 650. Seminar in Public Financial Management (3)**

Prerequisite: Public Administration 450.

Economics and politics of the public sector. Theories of public expenditure analysis and revenue generation. Issues of ethics and efficiency in government financial policy.

**P A 660. Administration and Public Policy Development (3)**

Prerequisite: Public Administration 600.

Social, political and administrative problems involved in governmental program development and change.

**P A 680. Seminar in Transborder Public Administration and Governance (3)**

Prerequisite: Admission to Certificate in Transborder Public Administration and Governance.

Binational borders and theories and history of international boundaries; roles of public administrators in border regions; history, governance, economy, culture and political structure of U.S. and Mexico.

**P A 681. Seminar in Comparative Federalism: Mexico and the U.S. (3)**

Prerequisite: Public Administration 680.

Comparative analysis of governmental structures of Mexico and U.S.; focus on federalism in context of constitutional framework; historical and contemporary expressions of federalism in both countries.

**P A 682. Seminar in Comparative Fiscal Structures: Mexico and the U.S. (3)**

Prerequisite: Public Administration 681.

Comparative analysis of fiscal organization and structure in Mexico and U.S.; impact of federalism on fiscal structure; analysis of revenue flows and expenditure patterns; relationships of public finance and budgeting to public policy making.

**P A 683. Seminar in Environmental Administration and Management in the Transborder Region (3)**

Prerequisite: Public Administration 682.

Environmental administration and management as structured in the border region; including U.S./Mexican federal environmental laws, California/Baja California state level environmental laws; environmental issues related to soil, water, air, hazardous waste.

**P A 684. Seminar in Transnational Criminal Justice: Mexico and the U.S. (3)**

Prerequisite: Public Administration 682.

Criminal justice system in Mexico and U.S.; history, structure, and function of both systems, and similarities and differences between them; focus on transnational crime and responses to crime in border region.

**P A 685. Practicum in Border Research (3)**

One lecture and four hours of activity.

Prerequisites: Public Administration 683 and 684.

Guided research in addressing a border issue; development of research and presentation skills on issues of binational significance; critical policy analysis; identification of informational sources on both sides of border; presentation to professional audience.

**P A 791. Readings in Public Administration (3) Cr/NC**

Prerequisites: Public Administration 600 and advancement to candidacy.

Selected readings in the literature of public administration.

**P A 792. Problem Analysis (3)**

Analytical treatment of selected problems in Public Administration. Review of methods for investigation and reporting of data. Consideration of problems in preparation of projects or thesis.

**P A 796. Internship in Public Administration (3-12) Cr/NC**

Prerequisite: Consent of instructor.

Students will be assigned to various government agencies and will work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences. Admission by consent of instructor. Maximum credit twelve units.

The 12 units of 796 will be exempt from the University's requirement that courses graded Cr/NC be limited to 30 percent of units for the master's degree.

**P A 797. Research in Public Administration (3) Cr/NC/RP**

Prerequisite: Consent of director of public administration and urban studies.

Research in one of the areas of public administration. Maximum credit six units applicable to a master's degree.

**P A 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of staff, to be arranged with the director and instructor.

Individual study. Maximum credit six units applicable to a master's degree.

**P A 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**P A 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

**P A 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

### Criminal Justice Administration (CJA) GRADUATE COURSES

#### **CJA 601. Seminar in the Administration of Criminal Justice (3)**

Prerequisite: Criminal Justice Administration 301.  
Administrative problems of criminal justice systems.

#### **CJA 602. Seminar in the Criminal Justice System as a Social Institution (3)**

Prerequisite: Criminal Justice Administration 301.  
Examination of criminal justice system as both cause and consequence of social change; nature of institutional change with application to criminal justice system components.

#### **CJA 603. Seminar in Communicative and Restorative Justice (3)**

Community and restorative justice movement from local, national, and international perspectives. Theories, policies, practices, and research associated with community and restorative justice.

#### **CJA 604. Seminar in Criminal Justice and Urban Administration (3)**

Prerequisite: Criminal Justice Administration 540.  
Critical analysis of influences on crime control and the criminal justice process of actions by urban administrators, legislators and the private sector in areas such as housing, education, public health and transportation, and urban development policies.

#### **CJA 605. Seminar in Juvenile Justice and Youth Violence (3)**

Prerequisite: Graduate standing.  
Juvenile justice system in U.S. and throughout the world. Responses to delinquency and youth violence. History and foundations of juvenile court, juvenile justice reforms, context, causes, and correlates of youth violence and gang involvement, including programs and policies designed to address these problems.

#### **CJA 696. Selected Topics in Criminal Justice Administration (3)**

Prerequisite: Criminal Justice Administration 601 or 602.  
Analysis of contemporary issues of major import to the administration of criminal justice. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

#### **CJA 791. Seminar in Readings in Criminal Justice Administration (3)**

Prerequisite: Six graduate units in criminal justice administration.  
Selected readings in the literature of criminal justice administration.

#### **CJA 796. Internship in Criminal Justice Administration (3-12) Cr/NC**

Prerequisite: Consent of instructor.  
Students will be assigned to various government agencies and will work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences. Maximum credit twelve units.

#### **CJA 797. Research in Criminal Justice Administration (3) Cr/NC/RP**

Prerequisite: Consent of coordinator of criminal justice administration.

Research in one of the areas of criminal justice administration. Maximum credit six units applicable to a master's degree.

#### **CJA 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of staff; to be arranged with coordinator and instructor.

Individual study. Maximum credit six units applicable to a master's degree

#### **CJA 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

#### **CJA 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

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# Public Health

In the College of Health and Human Services

## Faculty

### Office of the Director

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Ofelia V. Dirige, Dr.P.H., Adjunct Professor of Public Health  
Paul S. Kurtin, M.D., Research Professor of Public Health, Maternal Child Health Coordinator  
Philip Nader, M.D., Research Professor of Public Health  
David Lawrence, M.P.H., Research Assistant Professor of Public Health

### Epidemiology and Biostatistics

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Richard A. Shaffer, Ph.D., M.P.H., Associate Professor of Public Health  
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Ming Ji, Ph.D., Assistant Professor of Public Health

### Health Promotion

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Georg E. Matt, Ph.D., Professor of Psychology  
Joni A. Mayer, Ph.D., Professor of Public Health  
James F. Sallis, Jr., Ph.D., Professor of Psychology  
Terry L. Conway, Ph.D., Research Professor of Public Health

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Ana Martinez-Donate, Ph.D., Adjunct Assistant Professor of Public Health  
Mitchell Rauh, Ph.D., Adjunct Assistant Professor of Public Health  
Sergios Roussos, Ph.D., Adjunct Research Assistant Professor of Public Health

### Health Services Administration

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K. Michael Peddecord, Dr.P.H., Professor of Public Health  
Dennis D. Pointer, Ph.D., Emeritus Professor of Public Health, The John Hanlon Chair in Health Services Research and Policy  
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Michael W. Murphy, B.S., Adjunct Professor of Public Health  
Stanley J. Pappelbaum, M.D., Adjunct Professor of Public Health  
Terry L. Schmidt, Dr.H.A., Adjunct Clinical Professor of Public Health  
James W. Ledwith, M.B.A., Adjunct Associate Professor of Public Health  
Michael Seid, Ph.D., Adjunct Associate Professor of Public Health

### Occupational and Environmental Health

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### Environmental Health

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Ralph J. Delfino, M.D., Adjunct Professor of Public Health

### Occupational Health

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David A. Ingram, M.D., Adjunct Associate Professor of Public Health  
Michelle Eisenberg, M.P.H., Adjunct Assistant Professor of Public Health

### Toxicology

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Anthony S. Manoguerra, Jr., Pharm.D., Adjunct Professor of Public Health  
Gregory J. Stevens, Ph.D., Adjunct Professor of Public Health

### Health Science/Community Health Education – Undergraduate Division

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James V. Noto, Ph.D., Emeritus Associate Professor of Public Health  
Lori J. McNicholas, M.A., Research Associate Professor of Public Health  
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Nick Macchione, M.P.H. Adjunct Associate Professor of Public Health  
Henri Migala, M.P.H., Adjunct Assistant Professor of Public Health  
Diane Beach, M.P.H., Adjunct Assistant Professor of Public Health  
Daniel G. Hopwood, M.P.H., Adjunct Assistant Professor of Public Health

### Preventive Medicine Residency

Linda L. Hill, M.D., M.P.H., Adjunct Associate Professor of Public Health, Director  
Kevin M. Patrick, M.D., M.S., Adjunct Professor of Public Health, Associate Director  
Regina Fleming, M.D., M.P.H., Adjunct Associate Professor of Public Health  
Robert Gunn, M.D., M.P.H., Adjunct Associate Professor of Public Health  
Wilma Wooten, M.D., M.P.H., Adjunct Associate Professor of Public Health

### Joint Doctoral Program

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Kenneth J. Bart, M.D., Professor of Public Health  
John P. Elder, Ph.D., M.P.H., Professor of Public Health  
Paul Ganster, Ph.D., Director, Institute for Regional Studies of the Californias  
Arthur Getis, Ph.D., Professor of Geography  
Melbourne F. Hovell, Ph.D., M.P.H., Professor of Public Health  
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Alma L. Koch, Ph.D., M.P.H., Professor of Public Health  
Caroline A. Macera, Ph.D., Professor of Public Health  
Joni A. Mayer, Ph.D., Professor of Public Health  
Thomas L. McKenzie, Ph.D., Professor of Exercise and Nutritional Sciences  
K. Michael Peddecord, Dr.P.H., Professor of Public Health  
James F. Sallis, Jr., Ph.D., Professor of Psychology  
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## The John J. Hanlon Chair in Health Services Research and Policy

Alvarado Hospital Medical Center has joined with SDSU's faculty and staff to create The John J. Hanlon Chair in Health Services Research and Policy in the Graduate School of Public Health (GSPH). The chair is named in honor of the late Dr. John J. Hanlon, former assistant surgeon general for the U.S. Public Health Service. Dr. Hanlon coordinated the planning and development of SDSU's Graduate School of Public Health.

The first appointee to the Chair, Dr. Dennis Pointer, is a national authority on health care organization, governance, strategy, and management.

## General Information

**APPLICATION DEADLINES:** Applicants for the MPH, MS, and MD/MPH programs are strongly encouraged to submit *all* application materials as early as possible, no later than March 1 for fall semester consideration, or October 1 for spring consideration (the latter is applicable *only* to those divisions or programs that accept spring applications; contact Coordinator for Admissions and Student Affairs if interested in spring semester admission). The final filing dates are May 1 for fall semester admission, or November 1 for spring semester admission. Although every effort is made to process all applications submitted by the final filing date, we may not have space to accommodate applications received or completed after March 1/October 1, regardless of applicant's qualifications. Students applying for the Ph.D. must submit all application materials (applications, transcripts, letters of recommendation, and GRE scores) by December 15, for fall admission only.

Students interested in the MSW/MPH should contact the School of Social Work. The completed application is due April 30.

The Graduate School of Public Health offers advanced study leading to the degrees of Doctor of Philosophy, Master of Public Health, Master of Science, and a program that allows students to earn the Master of Public Health and the Master of Social Work, and a Doctor of Medicine and Master of Public Health, concurrently. The Ph.D. is offered in two concentration areas, one in epidemiology and one in health behavioral science with various specialization opportunities (see doctoral program); the M.P.H. with concentrations in the areas of biometry, environmental health, epidemiology, health promotion, and health services administration. The Division of Health Services Administration has two specializations. The specialization in public health management is designed for mid-career professionals and may be completed in one year. The concentrations in the M.S. degree are in the areas of industrial hygiene and toxicology.

In addition to these advanced degree programs, the school offers a preventive medicine residency program that prepares qualified physicians to sit for the American Board of Preventive Medicine certification examination. Residents may receive the M.P.H. degree along with completion of this residency program. Finally, the public health faculty directs academic study leading to a Bachelor of Science degree in health science for those undergraduate students interested in community health education. For more information concerning this undergraduate program, see the General Catalog.

The Graduate School of Public Health is nationally accredited by the Council on Education for Public Health (CEPH). The graduate program in health services administration is accredited by the Accrediting Commission on Education for Health Services Administration (ACEHSA), and the preventive medicine residency program is accredited by the Accrediting Commission for Graduate Medical Education (ACGME). The graduate program in industrial hygiene is accredited by the American Board of Engineering and Technology/Applied Sciences Accreditation Council (ABET/ASAC).

The curriculum in the Graduate School of Public Health has been designed to prepare students as practitioners of public health as well as for careers in teaching and research and as leaders in both public and private sector agencies and organizations. To accomplish this mission effectively, the faculty of the Graduate School of Public Health is augmented by expert practitioners in specialized fields related to public health who contribute to both the academic and practical experiences of students pursuing public health degrees. These professionals, who hold research or adjunct professorships in the school, come from a variety of settings such as the County Health and Human Services Agency, military services, hospitals, HMOs, managed care agencies, industry, and other academic institutions.

The Graduate School of Public Health has established close cooperation between the GSPH at San Diego State University and the Department of Family and Preventive Medicine in the School of Medicine at the University of California, San Diego. The UCSD medical school faculty has joined the public health faculty at SDSU in offering the Ph.D. in public health as well as the preventive medicine residency program. Under a special affiliation agreement between the two institutions, medical students at UCSD may take public health courses at SDSU while pursuing their medical studies and, if they choose, earn the M.D. and M.P.H. degrees concurrently. Likewise, SDSU students pursuing advanced study in the GSPH may enroll for specialized courses in the medical school.

This broad network of individual practitioners and the institutions they serve provides a variety of health facilities in which students at the GSPH may meet field studies and practicum requirements. Many of these opportunities are available not only in the San Diego region, but also in Mexico. The school's proximity to the Mexican border has led to the development of strong professional ties between the faculty and students of the GSPH and their counterparts in Baja California. Special arrangements with Universidad Autonoma de Baja California enables students to take courses for credit at the Tijuana campus. This connection has produced a continuing series of jointly sponsored binational research and service projects designed to improve public health conditions and health services on both sides of the border.

## Research

Faculty and student research in the broad interdisciplinary field of public health is conducted within the various specialized areas that are generally defined by the degree concentrations. The following descriptions illustrate the focus of research within each of these areas.

**Biometry and Biostatistics:** Development and application of statistical methods and models in the fields of public health, medicine, and biology. A concentration in biometry, and the scope of the academic and research opportunities in the University may be seen in the listing for the program in biostatistics and biometry presented earlier in this bulletin.

**Environmental and Occupational Health Science:** Isolation and identification of chemical and microbiological disease agents in air, water, soil, hazardous, and other solid wastes.

**Epidemiology and Biostatistics:** Identification of biological, environmental, social, and behavioral risk factors of human disease; determination of the distribution and etiology of disease in human populations, particularly infectious and chronic diseases.

**Health Promotion:** Behavioral science applied to health-related behavior for the identification of risk factors for physical and mental health "illnesses," and the experimental evaluation of interventions aimed at changing risk practices or promoting health enhancing behavior; emphasis is placed on vulnerable populations, such as low income, minority, women, and children.

**Health Services Administration:** Management of health care facilities, services, and organizations; planning and evaluation of public and private sector programs; administration and operations in specialty services, hospitals, ambulatory care, insurance companies, HMOs, and other health-related organizations.

**Industrial Hygiene:** Recognition, evaluation and control of chemical, physical, and biological hazards in the work place; current emphasis is on studies of airborne contaminants and respiratory protection.

**Toxicology:** Study of toxicity, biologic mechanisms of action, and the health risk of exposure to chemicals in the environment.

### Affiliated Research Centers

In an effort to serve better the community at large, the Graduate School of Public Health sponsors the Institute of Public Health. The Institute serves as the school's bridge with the community, facilitating field practice opportunities, community-based research and program evaluations, and a venue for continuing education.

In addition, a number of research centers have been established to integrate the specialized research of its faculty and students. These are the Center for Behavioral and Community Health Studies, the Center for Behavioral Epidemiology and Community Health, the California Center for Childhood Injury Prevention, and the Center for Injury Prevention and Research. For more information on these centers, see Part Four of this bulletin.

## Section I. Master's Degree Programs

### Master of Public Health Degree

#### Admission to Graduate Study

Applicants seeking admission to public health concentration areas leading to either the Master of Public Health or Master of Science degree should contact the Graduate School of Public Health requesting appropriate descriptive materials. Application material and detailed application instructions can be obtained from our Web site (<http://www-rohan.sdsu.edu/dept/gsph/>) or ordered from the SDSU Bookstore. Call (619) 594-7535 to order the GSPH application/information packet.

In addition to satisfying the requirements for admission to the University with classified graduate standing, students applying for admission should electronically submit the University application available at <http://www.csummentor.edu>, as described in Part Two of this bulletin. The student seeking admission to the Graduate School of Public Health must also submit the following to the department: (1) GSPH Application Parts I and II (includes narrative statement); (2) two sets of official transcripts, sent directly to the GSPH by the colleges/universities the student attended; (3) GRE score report (SDSU code 4682, department code 0616), or GMAT score report (for applicants to the Health Services Administration program only); (4) three letters of recommendation (preferably academic); (5) additional evidence of promise of success in academic and professional activities; and (6) document competence or prior academic preparation in the biological sciences, social sciences, and quantitative methods. Applicants for the biometry concentration are required to have successfully completed undergraduate courses in single and multivariate calculus. Applicants for the concentration in health services administration with a specialization in public health management are required to have a graduate or professional degree in a health or health-related discipline or a minimum of five years of progressively responsible managerial experience in health care or a related field.

Students who do not fully meet the requirements for admission with classified graduate standing may be considered for conditionally classified graduate standing upon recommendation of the admissions committee and the graduate adviser.

### Advancement to Candidacy

All students must: (1) meet the general requirements for advancement to candidacy as described in Part Two of this bulletin; (2) satisfactorily pass a faculty evaluation of the progress that they are making in their graduate course of study; (3) complete the core courses, Public Health 601, 602, 603, 604, 605 (students in health services administration will substitute Public Health 641 for Public Health 605, and students in health promotion will substitute Public Health 661 and 662 for Public Health 603); have a grade point average of at least 3.0 and no grade less than a B- in each core course completed; and (4) have completed at least 12 semester units of approved public health coursework.

In addition, the student must be recommended for advancement to candidacy by the faculty of the Graduate School of Public Health.

### Specific Requirements for the Master of Public Health Degree

(Major Code: 12141)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete an officially approved course of study of not less than 48 units (exceptions are 55 units for students in health services administration concentration with a specialization in health services management and 34 units for students in the health services administration concentration with a specialization in public health management) including: (1) Public Health 601, 602, 603, 604, and 605 (students in health services administration will substitute Public Health 641 for Public Health 605 and students in health promotion will substitute Public Health 661 and 662 for Public Health 603); (2) a minimum of 21 units of graduate courses in the area of concentration; (3) a maximum of twelve units of supervised field placement (if the student has not had equivalent field experience); and (4) electives selected with the approval of the graduate adviser. In addition, Public Health 799A, Thesis, must be included in the program except in the concentrations in biometry, health promotion, and health services administration, where the student may select the Plan B option, with a comprehensive examination in lieu of the thesis or project when approved by the graduate adviser.

In the environmental health concentrations, students registering for 799A may complete a major project or thesis; and six units of supervised field placement are required.

Up to six units of graduate credit may be accepted in transfer, with the approval of the graduate adviser.

In special circumstances, the graduate adviser may approve one course not on the list of prescribed electives. The substitution must be approved prior to enrollment in the course.

#### Concentration in Biometry

Courses required for the concentration:

PH 623	Epidemiological Methods (3)
PH 627	Advanced Statistical Methods in Public Health (3)
PH 628	Applications of Multivariate Statistics in Public Health (3)
STAT 551A	Probability and Mathematical Statistics (3)
STAT 551B	Probability and Mathematical Statistics (3)
STAT 560	Sample Surveys (3)

Prescribed Electives: Three units selected from the following Public Health courses:

PH 622	Epidemiology of Chronic Diseases (3)
PH 649	Public Health Surveillance (3)
PH 700A	Seminar in Public Health: Epidemiology (3)

Prescribed Electives: Nine units selected with the approval of the adviser from the following Mathematics courses:

STAT 510	Applied Regression Analysis (3)
STAT 520	Applied Multivariate Analysis (3)

STAT 570	Stochastic Processes (3)
STAT 670A-670B	Advanced Mathematical Statistics (3-3)
STAT 671	Statistical Computing (3)
STAT 672	Nonparametric Statistics (3)
STAT 677	Design of Experiments (3)
STAT 678	Survival Analysis (3)
STAT 679	Analysis of Discrete Data (3)
STAT 680A-680B	Advanced Biostatistical Methods (3-3)

### Concentration in Environmental Health

Courses required for the concentration:

PH 632	Air Quality (3)
PH 634	Environmental Protection (3)
PH 636	Hazardous Waste Management (3)
PH 638A	Principles of Toxicology (3)
PH 639	Water Quality Investigation (3)

Prescribed electives (a minimum of six additional units selected with the approval of the adviser from):

PH 630	Environmental Health Risk Assessment (3)
PH 635	Occupational Medicine (3)
PH 637	Biological Mechanisms of Environmental Toxicants (3)
PH 700C	Seminar in Public Health: Occupational and Environmental Health (3)
PH 721	Environmental Epidemiology (3)
PH 731	Environmental and Occupational Health Policy (3)
PH 732	Principles of Industrial Hygiene (4)
PH 737A	Chemical Agents, Recognition, Evaluation, and Assessment (3)
PH 737B	Physical and Biological Agents, Recognition, Evaluation and Assessment (2)
PH 738	Topics in Toxicology (3)
PH 798	Special Study (1-3) Cr/NC/RP

Electives (3 units): These electives may include any public health course or selected graduate level courses in other departments with the approval of the faculty adviser.

### Concentration in Epidemiology

Courses required for the concentration:

PH 621	Epidemiology of Infectious Diseases (3)
PH 622	Epidemiology of Chronic Diseases (3)
PH 623	Epidemiological Methods (3)
PH 627	Advanced Statistical Methods in Public Health (3)

Prescribed electives in Epidemiology (two courses selected from):

PH 625	Control of Infectious Diseases (3)
PH 628	Applications of Multivariate Statistics in Public Health (3)
PH 649	Public Health Surveillance (3)
PH 700A	Seminar in Public Health: Epidemiology (3)
PH 721	Environmental Epidemiology (3)
PH 722	Seminar in Clinical Trials (3)
PH 724	Advanced Methods in Epidemiology (3)
PH 726	HIV/AIDS Epidemiology and Public Health (3)
PH 729	Ethics for Epidemiology (3)
PH 823	Case-Control Studies (3)
PH 824	Cohort Studies (3)
PH 825	Grantwriting in Epidemiology and Public Health (1-3)

Electives (3 units selected with the approval of the concentration faculty): These electives may include any public health course or selections from the following:

Biology 585, 588  
Nutrition 600, 606, 607, 700  
Statistics 510, 550, 551A, 560, 672, 674, 677

### Concentration in Health Promotion

Courses required for the concentration:

PH 607	Research Methods and Proposal Writing (3)
PH 661	Theoretical Foundations of Health Promotion (3)
PH 662	Motivating Health Behavior (3)
PH 663	Health Promotion Communications Theory and Design (3)
PH 666	Health Promotion Program Planning and Assessment (3)

Prescribed electives (choose two or more different courses from):

PH 664	Health, Society and Human Behavior (3)
PH 667	Prevention and Control of Chronic Diseases (3)
PH 668	Seminar in Health Promotion Research (3)
PH 669	Health Risk Appraisal (3)
PH 700F	Seminar in Public Health: Health Promotion (3)
PH 761	Programming Health Promotion (3)
PH 762	Behavioral Medicine (3)
PH 797	Research (3) Cr/NC/RP
PH 861	Behavioral Measurement (3)
PH 862	Advanced Theoretical Foundations of Health Behavior Research and Applications (3)
PH 863	Advanced Communication Technology as Applied to Health Behavioral Interventions (3)
PH 866	Global Issues in Health Behavior Research and Application (3)

Electives (6 units to be chosen with the approval of the faculty from any public health course or Community Health Education 574).

### Concentration in Health Services Administration

#### Graduate Program in Health Services Administration (ACEHSA Accredited)

#### Specialization in Health Services Management

Courses prerequisite to this specialization are Public Health 640 and 700E or their equivalents as determined by the graduate adviser. If these courses or the equivalent have not been completed prior to admission, they should be included in the first semester course requirements.

PH 640	Public Issues in Financing Health Care (3)
PH 700E	Funds Management in Public Health (3)

Courses required for the specialization:

PH 641	Introduction to Health Services (3)
PH 644A	Health Services Organization (3)
PH 644B	Health Services Management (3)
PH 645	Health Economics (3)
PH 646	Legal and Ethical Aspects of Health Care (3)
PH 647A	Quantitative Methods and Health Data Analysis (3)
PH 647B	Health Quality and Information Management (3)
PH 742A	Health Services Financial Management (3)
PH 742B	Financing Health Systems and Services (3)
PH 748	Health Services Competitive Strategy and Marketing (3)

Prescribed electives (six units selected with approval of adviser). In special circumstances, the graduate adviser may approve one course not on the list of prescribed electives. The substitution must be approved prior to enrollment in the course.

PH 649	Public Health Surveillance (3)
PH 700E	Seminar in Public Health: Health Services Administration (3)
PH 743	Hospitals and Health Systems (3)
PH 744	Ambulatory and Group Practice Management (3)
PH 746	Quality of Care Assessment and Assurance (3)
PH 798	Special Study (1-3) Cr/NC/RP

The remaining elective units may be selected with the approval of the adviser.

**Specialization in Public Health Management**

Designed for mid-career professionals. May be completed in one year.

Courses required for the specialization:

- PH 641 Introduction to Health Services (3)
- PH 645 Health Economics (3)
- PH 647A Quantitative Methods and Health Data Analysis (3)
- PH 666 Health Promotion Program Planning and Assessment (3)
- PH 740 Financial Principles for Public Health Executives (3)
- PH 741 Public Health Services Organization and Management (3)
- PH 797 Research (3) Cr/NC/RP

Prescribed electives (three units selected with approval of adviser).

- PH 647B Health Quality and Information Management (3)
- PH 649 Public Health Surveillance (3)
- PH 700E Seminar in Public Health: Health Services Administration (3)
- PH 742B Financing Health Systems and Services (3)
- PH 798 Special Study (1-3) Cr/NC/RP

Certain courses in public health and other graduate programs may be substituted for prescribed electives with the approval of the adviser.

**Master of Science Degree in Public Health**

**Admission to Graduate Study**

The M.S. degree is offered in industrial hygiene and toxicology. In addition to satisfying the requirements for admission to the University with classified graduate standing, students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>, as described in Part Two of this bulletin. The student seeking admission to the Graduate School of Public Health master of science programs must also submit the following to the department: (1) GSPH Application Parts I and II (includes narrative statement); (2) two sets of official transcripts, sent directly to the GSPH by the colleges/universities the student attended; (3) GRE score report (SDSU code 4682, department code 0616); (4) three letters of recommendation (preferably academic); (5) document competence or prior academic preparation in laboratory sciences.

Normally, to be considered for admission to these programs, a student must have successfully completed an undergraduate degree (BA or BS) in biology, chemistry, engineering, or other basic or applied natural science. For the industrial hygiene program, admitted students must hold an earned baccalaureate that prepares them to apply the basic principles of college level mathematics, inorganic and organic chemistry, physics, and biology. Exceptions may be admitted with an individually documented plan of study to compensate for any deficiencies. The Graduate School of Public Health should be consulted for specific course preparation recommended for each of the concentrations. In some cases, if an applicant is deficient in certain basic or applied science areas, some remedial coursework can be completed as an unclassified graduate student. However, credits earned by remedial courses cannot be applied toward the required number of units for the master's degree. Students who do not meet all of the above requirements for admission with classified graduate standing may be admitted with conditionally classified graduate standing upon the recommendation of the admissions committee and the graduate adviser. Students so admitted will be advised as to remedial steps to take to satisfy the requirement to achieve classified graduate standing. Courses prerequisite to the master of science

degree concentrations are Public Health 601 and Public Health 602 or their equivalents as determined by the graduate adviser. If these courses or their equivalents have not been completed prior to admission, they should be included in the first semester course requirements.

**Advancement to Candidacy**

All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. Students completing master of science degree concentrations must (1) have satisfactorily completed at least 12 units of coursework of the 36-unit official program including at least two courses chosen from the list of courses required for the student's concentration, with a minimum grade point average of 3.0 (B) and no grade less than a B-; (2) have a thesis proposal which has received the approval of the Graduate School of Public Health faculty.

**General Requirements for the Master of Science Degree**

(Major Code: 12141)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete an officially approved course of study of not less than 36 units in the area of concentration or related disciplines as listed below. Up to six units may be accepted in transfer, with the approval of the graduate adviser. Requirements vary depending on the area of concentration and are as shown below:

	<b>Industrial Hygiene</b>	<b>Toxicology</b>
Required	20	15
Prescribed electives	7	15
Field Practice*	3	—
PH 797 (Research)	3	3
PH 799A (Thesis)	3	3
<b>Total units:</b>	<b>36</b>	<b>36</b>

\* A 3-unit field practice is mandatory for industrial hygiene students and may be taken as an elective by students in the toxicology concentration with approval of the academic adviser.

**Specific Requirements for Master of Science Degree Programs**

**Concentration in Industrial Hygiene**

Courses required for the concentration (20 units):

- PH 636 Hazardous Waste Management (3)
- PH 638A Principles of Toxicology (3)
- PH 732 Principles of Industrial Hygiene (4)
- PH 735 Industrial Ventilation (3)
- PH 736 Principles of Ergonomics (2)
- PH 737A Chemical Agents, Recognition, Evaluation, and Assessment (3)
- PH 737B Physical and Biological Agents, Recognition, Evaluation, and Assessment (2)

Prescribed electives (a minimum of seven units of coursework selected from the following list with the approval of the faculty adviser):

- PH 603 Behavioral and Social Science in Public Health (2)
- PH 604 Environmental Determinants of Human Health (2)
- PH 605 Health Services Administration (2)
- PH 632 Air Quality (3)

PH 634	Environmental Protection (3)
PH 635	Occupational Medicine (3)
PH 639	Water Quality Investigation (3)
PH 700C	Seminar in Public Health: Occupational and Environmental Health (3)
PH 731	Environmental and Occupational Health Policy (3)
PH 733	Principles of Industrial Safety (3)
PH 738	Topics in Toxicology (3)
PH 798	Special Study (1-3) Cr/NC/RP

In special circumstances, the graduate adviser may approve one course not on the list of prescribed electives. The substitution must be approved prior to enrollment in the course.

### Concentration in Toxicology

Courses required for the concentration (15 units):

PH 630	Environmental Health Risk Assessment (3)
PH 637	Biological Mechanisms of Environmental Toxicants (3)
PH 638A	Principles of Toxicology (3)
PH 638B	Methods in Toxicity Testing (3)
PH 738	Topics in Toxicology (3)

Prescribed electives (a minimum of 15 units of coursework selected from the following list with the approval of the faculty adviser):

PH 603	Behavioral and Social Science in Public Health (2)
PH 604	Environmental Determinants of Human Health (2)
PH 627	Advanced Statistical Methods in Public Health (3)
PH 632	Air Quality (3)
PH 635	Occupational Medicine (3)
PH 636	Hazardous Waste Management (3)
PH 639	Water Quality Investigation (3)
PH 650	Field Practice (3) Cr/NC
PH 700C	Seminar in Public Health: Occupational and Environmental Health (3)
PH 721	Environmental Epidemiology (3)
PH 731	Environmental and Occupational Health Policy (3)
PH 732	Principles of Industrial Hygiene (4)
PH 798	Special Study (1-3) Cr/NC/RP

In special circumstances, the graduate adviser may approve one course not on the list of prescribed electives. The substitution must be approved prior to enrollment in the course.

## Master of Social Work and Master of Public Health Degrees

### General Information

The Graduate School of Public Health and the School of Social Work offer a three year concurrent graduate program leading to a Master of Public Health and a Master of Social Work. The major objective of the concurrent program is to offer preparation in the fields of public health and social work for the purpose of providing the knowledge and skills necessary to promote health, prevent disease, and enhance the delivery of social and health services in the community.

### Admission to Graduate Study

To request application materials for the concurrent graduate program in Social Work and Public Health, applicants should write to the Director of the MSW/MPH Advisory Committee, Graduate School of Public Health, San Diego State University. All necessary application forms, instructions for filing them, and information about the program will be sent. In order to be considered for the concurrent MSW/MPH program, applicants must:

1. Meet the general requirements for admission to graduate study at the University (see Part Two of this bulletin).
2. Have a minimum 2.85 grade point average in the last 60 semester or 90 quarter units in undergraduate work completed. Undergraduate preparation in at least one of the following areas is preferred: social work, social or behavioral sciences, or health science.

3. A satisfactory score on the GRE General Test. Applicants already holding another master's degree or higher degree from an acceptable accredited graduate school are exempt from the GRE.
4. Submit a narrative statement as described in Instructions for Applicants.
5. Submit three letters of recommendation.  
A committee composed of faculty from Public Health and Social Work will make all admission recommendations to the Dean of the Graduate Division.

### Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. All core courses in public health and social work must be completed prior to advancement. In addition, the student must: (1) have earned at least 24 units of graduate study within the concurrent program with a minimum grade point average of 3.0 and no grade less than a B- in each core course; (2) have been recommended for advancement by the combined faculty advisory committee; received credit (Cr) in field practicum; (3) have a thesis proposal approved by the combined faculty advisory committee.

Upon advancement to candidacy, the student will enroll in Public Health 797 (Research), Social Work 797 (Research), and Public Health 799A (Thesis) or Social Work 799A (Thesis). A thesis incorporating theory, method, and analytic techniques from both disciplines is the culminating experience for the concurrent program leading to the M.S.W. and M.P.H. degrees.

### Specific Requirements for the MSW/MPH Degree

(Major Code: 12991)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete an officially approved course of study of not less than 83 units.

#### Social Work/Public Health – Health Services Administration

Courses prerequisite to the program are Public Health 640 and Business Administration 650 or their equivalents as determined by the graduate adviser. If these courses or the equivalents have not been completed prior to admission, they should be included in the first semester course requirements.

BA 650	Financial Reporting and Analysis I (2)
PH 640	Public Issues in Financing Health Care (3)
SWORK 601	Seminar in Social Welfare Policy and Services (3)
SWORK 619	Human Behavior in the Social Environment (3)
SWORK 630	Social Work Practice: A Generalist Perspective (3)
SWORK 631	Social Work Practice: Individuals, Families, and Groups (3)
SWORK 632	Social Work Practice: Organizations and Communities (3)
SWORK 650*	Field Practicum (7) Cr/NC
SWORK 690	Seminar in Social Work Research Methods (3)
SWORK 702	Seminar in Social Welfare Policy and Services: Health and Aging (3)
SWORK 740	Advanced Seminar in Social Work Administration (3)
SWORK 745	Advanced Seminar in Selected Topics in Social Work Administration (3)
SWORK 750B*	Advanced Field Practicum: Social Work Administration (8) Cr/NC/RP
SWORK 797	Research (3) Cr/NC/RP
PH 601	Epidemiology (3)
PH 602	Biostatistics (3)

## Public Health

PH 604	Environmental Determinants of Human Health (2)
PH 641	Introduction to Health Services (3)
PH 644A	Health Services Organizations (3)
PH 644B	Health Services Management (3)
PH 645	Health Economics (3)
PH 647A	Quantitative Methods and Health Data Analysis (3)
PH 742A	Health Services Financial Management (3)
PH 742B	Financing Health Systems and Services (3)
PH 797	Research (3) Cr/NC/RP
PH 799A or SWORK 799A	Thesis (3) Cr/NC/RP
Electives:	Three units selected from a graduate-level course in Social Work. This may include any 600-level or above course in social work with the approval of the faculty adviser.

\* Social Work 650 and 750 (field practica) must have the approval of the faculty advisory committee. Responsibility for faculty field supervision will be assigned in social work.

Transfer units will not be accepted toward the concurrent MSW/MPH degree program. Graduate study or degrees obtained previously will not be accepted toward meeting the unit requirements of the concurrent MSW/MPH degree program.

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

### Section II. Doctoral Program

<http://www-rohan.sdsu.edu/dept/gsph/>

(Major Code: 12141)

A Ph.D. is offered in two concentration areas, epidemiology and health behavioral sciences.

#### Ph.D. in Public Health with a Concentration in Epidemiology

A Ph.D. in public health with a concentration in epidemiology is offered by the joint faculties of the Division of Epidemiology and Biostatistics, Graduate School of Public Health at San Diego State University, and the Department of Family and Preventive Medicine, School of Medicine at the University of California, San Diego (UCSD). Emphasis is on producing graduates with a mastery of the central concepts and analytic processes of epidemiology for application to a multitude of disciplines. Specializations are offered through both campuses, including infectious and chronic diseases, exercise science, medical geography, and behavioral epidemiology. Graduates of this program are competitive for a variety of research, teaching, and community service positions in areas such as academic institutions, local and state health departments, federal and international agencies, and both privately and publicly sponsored research institutes.

#### Ph.D. in Public Health with a Concentration in Health Behavioral Science

A Ph.D. in public health with a concentration in health behavioral science is offered by the joint faculties of the Division of Health Promotion, Graduate School of Public Health at San Diego State University, and the Department of Family and Preventive Medicine, School of Medicine at the University of California, San Diego (UCSD). Emphasis is on producing graduates with a mastery of the central concepts and

analytic processes of health behavioral sciences. Graduates of the program are expected to establish advanced skills in applied behavioral analysis for population application; to establish expertise in advance qualitative and quantitative research methods; to establish advanced skills in the application of interventions and research methods to health behavior in disenfranchised populations; to establish skills necessary to understand and change health policy behavior. Graduates of the program are competitive for a variety of research, teaching, and community service positions in areas such as academic institutions, local and state health departments, federal and international agencies, and both privately and publicly sponsored research institutions.

### Admission to Doctoral Study

Applicants for admission to the doctoral program must present evidence of capacity for graduate study in public health. A multidisciplinary field such as public health draws from a wide variety of undergraduate majors, but the student is expected to have a strong grounding in the quantitative, behavioral, and biological sciences. A master's degree in epidemiology is preferred. Admission to the program requires acceptance by both institutions on recommendation of the participating units at SDSU and UCSD. It is understood that acceptance of a student into the joint program by each of the units will be conditioned by their respective standards for graduate admissions and also the available facilities.

Application for admission to the Ph.D. program must be received by the Graduate School of Public Health not later than December 15.

### Application

A complete application to the joint doctoral program in public health requires the following information:

1. The appropriate application form, Parts I and II.
2. Doctoral Admissions Form.
3. Three letters of recommendation.
4. Transcripts of academic work already completed.
5. Results of the Graduate Record Examination.

To be considered for admission to the joint SDSU-UCSD doctoral program in public health, students must meet the general requirements for admission to both universities with classified graduate standing as outlined in the respective current catalogs. These include (a) an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or equivalent academic preparation, as determined by the deans of the two graduate divisions; (b) a GPA of at least 3.0 in the last 60 semester (90 quarter) units attempted; (c) good standing at the last institution attended; and (d) an acceptable score (verbal and quantitative) on the GRE General Test. Preference will be given to students with an M.P.H. or M.S. degree in behavioral science or epidemiology.

### Residency Requirements

After formal admission to the joint doctoral program, the student must spend at least one academic year in full-time residence on each of the two campuses. The definition of residence must be in accord with the regulations of San Diego State University and University of California, San Diego.

### Advisory Committee

Upon admission to the program, the steering committee of the two institutions will establish an advisory committee for the student. This committee will consist of three faculty members chosen jointly from the two institutions. In consultation with the student, the committee will develop the student's course of study, prepare and guide a preliminary examination, and establish the student's joint qualifying committee. At least one member of the advisory committee must be from SDSU and one from UCSD.

## Course Requirements

Core courses in behavioral science, epidemiology, and biostatistics are offered at both SDSU and UCSD. Prior to taking the qualifying examination, every student is expected to have a firm understanding of modern principles of public health as well as knowledge and application of epidemiology, behavioral science, and biostatistical methods. Elective coursework may be selected from offerings at both campuses.

### Course Requirements for Students with an Existing M.P.H. or M.S. Degree in Epidemiology

**Epidemiology:** Public Health 623, 724, 800 (Doctoral Seminar in Epidemiology); six units in advanced study design selected from Public Health 722, 823, 824; and six-unit UCSD course series in applied epidemiology (FPM 259A, 259B, 259C).

**Biostatistics:** Public Health 628 and six units in advanced biostatistics.

**Electives:** 24 units in specialty area.

**Graduate Assistantship in Epidemiology:** 6 units

**Dissertation Research and Proposal:** 15 units

Students who do not possess an existing M.P.H. or M.S. degree in epidemiology are required to take the following additional courses: Public Health 601, 602, 621, 622, and 627. Once the student is matriculated at SDSU, the final curriculum will be determined by the doctoral advising committee.

### Preliminary Examinations

The preliminary examinations will test knowledge and the application of epidemiology and biostatistical methods.

### Course Requirements for Students with an Existing M.P.H. or M.S. Degree in Behavioral Sciences

**Health Behavioral Sciences:** Public Health 800, 861, 862; six units in advanced study design selected from Public Health 722, 863, 866; and six-unit UCSD course series in applied epidemiology (FPM 259A, 259B, 259C).

**Biostatistics:** Public Health 628 and six units in advanced biostatistics.

**Electives:** 24 units in specialty area.

**Graduate Assistantship:** 6 units

**Dissertation Research and Proposal:** 15 units

Students who do not possess an existing M.P.H. or M.S. degree in epidemiology are required to take the following additional courses: Public Health 601, 607, 621, 627, 661, 662, 663. Once the student is matriculated at SDSU, the final curriculum will be determined by the doctoral advising committee.

### Preliminary Examinations

The preliminary examinations will test knowledge and the application of behavioral science, epidemiology, and biostatistical methods.

## Doctoral Committee

A five-member committee, composed of faculty at SDSU and UCSD, will be recommended by the advisory committee for each student and approved by the graduate deans from both campuses. One member must be nonprogram faculty and there must be at least one tenured faculty member from each university. The student's dissertation adviser will chair the committee. At least two members must be from SDSU and two from UCSD.

The doctoral committee will conduct a written and oral comprehensive qualifying examination, which will evaluate the student's understanding and knowledge of his or her special area of behavioral science or epidemiologic interest. The purpose of this examination is for the student to demonstrate competence in the major research field.

The doctoral committee may specify a course of study to strengthen any weaknesses identified during the qualifying examination. Upon successful completion of the qualifying examination the student must make application to the Graduate Division at UCSD for advancement to candidacy. Upon payment of the candidacy fee to UCSD, and after approval by the graduate deans on both campuses, the student will be notified of advancement to candidacy by the UCSD Graduate Division.

## Faculty

Faculty members of the cooperating institutions participate in the joint doctoral program in Public Health Epidemiology and are available for direction of research and as members of joint doctoral committees.

## Dissertation

Following successful completion of the qualifying examination and advancement to candidacy, the major remaining requirement for the Ph.D. degree will be satisfactory completion of a dissertation consisting of original and significant research carried out under the guidance of the dissertation adviser, who may be from either SDSU or UCSD. The doctoral committee becomes the dissertation committee after the student's advancement to candidacy. Requirements currently in force at SDSU and UCSD must be met for completing and filing the dissertation.

## Award of the Degree

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

## Financial Support

The Graduate School of Public Health at SDSU and the Department of Community and Family Medicine at UCSD endeavors to provide financial support that will enable all students to devote full time to research training and study.

## Medical Students Interested in Obtaining the Master of Public Health (M.P.H.) Degree

San Diego State University, Graduate School of Public Health, and University of California, San Diego, School of Medicine, offer a collaborative education effort to enable UCSD medical students to also obtain the M.P.H. degree. The program is designed for those UCSD medical students who anticipate careers in one or more of the following fields: public health, preventive medicine, maternal and child health, epidemiology, occupational and/or environmental health, health promotion, health services administration, or aerospace medicine, and to those with special interest in such areas as nutrition, demography, international health, and behavioral medicine. In addition, it provides public health training for those planning careers in family practice, pediatrics, general internal medicine, and other aspects of primary care who wish to enhance their knowledge and skills in clinical preventive medicine and in the managerial aspects of health care. The M.P.H. degree or an equivalent academic experience is required for certification by the American Board of Preventive Medicine.

With approval, certain UCSD courses can be counted toward fulfilling the M.P.H. degree requirement at the SDSU Graduate School of Public Health.

Further information about these programs can be obtained from the Dean of Students, Maria Savoia, M.D., (858) 534-3703 or Michael Crique, M.D., (858) 534-3723.

**Section III.  
Other Programs**

**Preventive Medicine Residency Certificate**

The purpose of the Preventive Medicine Residency Certificate is to train physicians to assure that they have adequate knowledge, attitudes, and skills germane to general preventive medicine and occupational medicine. The physician will be eligible to sit for the board certification examination administered by the American Board of Preventive Medicine.

In addition to satisfying the requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, the student seeking admission to the preventive medicine residency must (1) fulfill the admission requirements given above, and (2) have completed a Doctor of Medicine degree from an accredited institution.

The student will be expected to complete a three year course of study which involves the completion of a clinical year provided by the University of California, San Diego, School of Medicine, the completion of an academic year leading to the Master of Public Health degree provided by the Graduate School of Public Health at San Diego State University, and appropriate practicum experiences under the supervision of faculty of one of the two cooperating institutions.

The student is expected to complete the number of units required for the Master of Public Health degree as well as those additional units which may be prescribed in order to complete the practicum year, i.e., Public Health 750.

The student is expected to have maintained a 3.0 average overall in the coursework at the Graduate School of Public Health and at the University of California, San Diego, School of Medicine.

**Preventive Medicine Residency Faculty:**

Linda L. Hill, M.D., M.P.H., Director, Adjunct Associate Professor of Public Health

Kevin M. Patrick, M.D., Adjunct Professor of Public Health, Associate Director

Michael H. Criqui, M.D., M.P.H., Professor of Epidemiology, UCSD, Adjunct Professor of Public Health, Associate Director

Regina Fleming, M.D., M.P.H., Adjunct Associate Professor of Public Health

Robert A. Gunn, M.D., Adjunct Associate Professor of Public Health

**Fellowships**

A variety of fellowships, scholarships, and traineeships are funded by the federal government and the Graduate School of Public Health.

**Fellowship in Medical Toxicology**

Residents in emergency medicine, preventive medicine, and other medical specialties are eligible for this fellowship. The Fellowship in Medical Toxicology within the Preventive Medicine Residency

Program extends the certification in medical toxicology of qualified physicians through didactic courses and a practicum. These may be used in partial fulfillment of the requirements for the M.P.H. degree. Physicians interested in more information may contact Richard F. Clark, M.D., Medical Director, California Poison Control System, UCSD School of Medicine, (619) 543-6835 or Ann de Peyster, Ph.D., SDSU Graduate School of Public Health, (619) 594-3690 for information on coursework offered at SDSU.

**Fellowships in Community Pediatrics, Family Medicine, or Internal Medicine**

UCSD, School of Medicine Fellows in Pediatrics, Medicine or Internal Medicine will develop experiences in community practice through didactic courses and practicum leading to both completion of a fellowship and a Master of Public Health degree.

The Division of Community Pediatrics at UCSD and the Graduate School of Public Health at SDSU have developed opportunities and experiences for medical students, residents, and practitioners in community practice to provide physicians a population-based understanding of disease and its determinants.

Further information about this program can be obtained from Philip R. Nader, M.D., (619) 681-0688 or Kenneth J. Bart, M.D., (619) 594-1255.

**Macy Foundation/Synergistic Education in Public Health and Health Care**

Philip R. Nader, M.D., Professor of Pediatrics, UCSD, Research Professor of Public Health

Kenneth J. Bart, M.D., M.P.H., M.S.H.P.M., Professor of Public Health

**National Research Service Award Fellowship in Community Health**

Philip R. Nader, M.D., Professor of Pediatrics, UCSD, Research Professor of Public Health

**Family Medicine Faculty Development Program**

Ellen L. Beck, M.D., Director of Community Education, Associate Clinical Professor of Epidemiology, UCSD

William J. Wooten, M.D., M.P.H., Associate Clinical Professor of Epidemiology, UCSD

Stuart H. Gilbreath, Ph.D., Professor of Public Administration and Urban Studies

**Fellowship in Applied Child Health Services**

The Center for Child Health Outcomes at Children's Hospital is offering a one year fellowship in applied child health service research. The fellowship may be associated with the preventive medicine residency for fellows wishing Preventive Medicine Board Certification. Experiences will be developed through didactic courses or a practicum leading to both the completion of a fellowship and a Master of Public Health. Further information may be obtained by contacting Paul S. Kurtin at (858) 576-4047, Kevin M. Patrick at (619) 594-5332, or Kenneth J. Bart at (619) 594-1255.

## Courses Acceptable on Master's and Doctoral Degree Programs (C H E) (P H)

### Community Health Education (C H E) UPPER DIVISION COURSES

#### C H E 560. Introduction to Public Health (3) I, II

Prerequisite: Community Health Education 290.

Epidemiological methods, behavioral and biological determinants, modes of transmission, risk factors, prevention of common infectious and chronic disease. Evaluation of health information to develop health education programs.

#### C H E 561. Health and Medical Care (3) II

Prerequisite: Senior or graduate standing with a major or minor in health education or a closely related area.

Health values, concepts, and attitudes; health products and facilities; hospital care and hospitalization plans; governmental health controls; economic and cultural influences on health and medical care; professional contributions, relationships, and careers; national and international health programs.

#### C H E 574. Habit-Forming Substances (3) I

Tobacco, alcohol, and other drugs; their use, misuse and abuse.

#### C H E 596. Workshop in Health Education (1-3)

Selected problems in health science are used as a basis for workshop experiences. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596; maximum credit of three units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### Community Health Education (C H E) GRADUATE COURSE

#### C H E 920. Health Education for Teachers (3)

Prerequisite: For professional, multiple, or single subject clear credential teaching applicants.

Covers all topics designated in the health framework for California including nutrition, physiological, and sociological effects of substance abuse, consumer health, injury prevention, and child abuse.

### Public Health (P H) GRADUATE COURSES

#### P H 601. Epidemiology (3)

Prerequisite: Consent of instructor.

Distribution and determinants of diseases; role of epidemiology in public health. Descriptive, analytic and experimental epidemiology.

#### P H 602. Biostatistics (3)

Prerequisite: Consent of instructor.

Statistical reasoning applied to public health; probability, hypothesis testing, regression and correlation, analysis of variance, measurement theory and modeling.

#### P H 603. Behavioral and Social Science in Public Health (2)

Prerequisites: Psychology 316, 340, and Sociology 436.

Role of psychological, social and environmental variables in health and illness. Multifactorial psychosocial model of disease susceptibility.

#### P H 604. Environmental Determinants of Human Health (2)

Prerequisites: Biology 100, Chemistry 100.

Environmental determinants and their influence on human health. Biological, physical, and chemical factors which affect the health of a community.

#### P H 605. Health Services Administration (2)

Overview of health services administration and delivery in U.S. Characteristics of utilization of health care, financing and system structure, types of providers, nonfinancial resources, and assessment and regulation.

#### P H 607. Research Methods and Proposal Writing (3)

Two lectures and three hours of laboratory.

Prerequisites: Public Health 601, 661, and consent of instructor. Recommended: Public Health 602.

Direct observation measurement, group and intensive experimental designs. Laboratory exercises and proposal writing applicable to public health.

#### P H 621. Epidemiology of Infectious Diseases (3)

Prerequisite: Public Health 601.

Utilizing selected infectious diseases and environmental settings, provides scientific background on which epidemiological investigations and control measures are based.

#### P H 622. Epidemiology of Chronic Diseases (3)

Prerequisite: Public Health 601.

Epidemiology of selected chronic diseases.

#### P H 623. Epidemiological Methods (3)

Prerequisites: Public Health 602, 621 or 622.

Topics include: analysis of descriptive data, design of studies, evaluation of data, development of biological models. Examples of both acute and chronic diseases.

#### P H 625. Control of Infectious Diseases (3)

Prerequisite: Public Health 621.

Theoretical and practical experience in techniques available for control of infectious diseases.

#### P H 627. Advanced Statistical Methods in Public Health (3)

Prerequisite: Public Health 602.

Applications of advanced statistical methods for analysis of public health and biomedical data. Topics include multiple linear regression, analysis of variance, logistic regression, and introduction to survival analysis.

#### P H 628. Applications of Multivariate Statistics in Public Health (3)

Prerequisite: Public Health 627.

Statistical methods for multivariate problems in public health including regression diagnostics, cluster analysis, discriminant analysis, principal components, multivariate discrete analysis and Poisson regression. Computer applications included.

#### P H 630. Environmental Health Risk Assessment (3)

Four major steps of risk assessment to include hazard identification, dose-response assessment, exposure assessment, and risk characterization. Will also include risk communication and risk management in environmental arena.

#### P H 632. Air Quality (3)

Prerequisites: Biology 100, Chemistry 251, Physics 180A.

Properties of airborne gases, vapors, and particulate matter. Effects of air pollution on community. Mobile and stationary sources of air pollution. Meteorology and dispersion of air pollutants. Ambient air quality standards.

#### P H 634. Environmental Protection (3)

Rationale and mechanisms for control of water supplies, liquid and solid waste disposal, lighting, heat, food and housing, pesticides and community noise.

#### P H 635. Occupational Medicine (3)

Etiology, diagnosis of disease, and stress in the modern industrial environment.

#### P H 636. Hazardous Waste Management (3)

Prerequisite: Chemistry 201.

Rationale, methods, and regulations governing the proper management of hazardous and toxic wastes.

### **P H 637. Biological Mechanisms of Environmental Toxicants (3)**

Two lectures and three hours of laboratory.

Prerequisites: Biology 261 and Chemistry 160.

Biologic effects and underlying mechanisms of action of harmful environmental agents on mammalian cells and tissues. Emphasis on toxic chemicals and applications of basic mechanisms research to public health situations.

### **P H 638A. Principles of Toxicology (3)**

Prerequisites: Biology 261 and Chemistry 160.

Dose-response and other principles for evaluating the effects of toxic chemicals on mammalian organ systems.

### **P H 638B. Methods in Toxicity Testing (3)**

One lecture and six hours of laboratory.

Prerequisite: Credit or concurrent registration in Public Health 638A.

Laboratory methods used in evaluating chemicals for potential human toxicity.

### **P H 639. Water Quality Investigation (3)**

Two lectures and three hours of laboratory.

Prerequisite: Public Health 604 or 634.

Human health problems associated with water usage and with various aquatic environments.

### **P H 640. Public Issues in Financing Health Care (3)**

Prerequisite: Open to Health Services Administration majors and students in related fields with consent of instructor.

Orientation to growing role of public intervention in health care sector, including equity versus efficiency aspects of taxation and health care financing, social insurance programs, and methods of evaluating public health activities.

### **P H 641. Introduction to Health Services (3)**

Health care systems in the U.S. Underlying needs, insurance and uninsurance, public programs, reimbursement, managed care, resources, providers, regulation outcome measurement and evaluation, and health policy issues.

### **P H 644A. Health Services Organizations (3)**

Prerequisite: Public Health 641.

Structure and functioning of organizations that provide and finance health services. Systems theory approach to environments, visions and goals, strategies, structure, and processes of healthcare organization.

### **P H 644B. Health Services Management (3)**

Prerequisite: Public Health 644A.

Functions of manager in healthcare organizations. Behavioral science perspective on interpersonal, informational, decision, ethical, and conflict resolution roles of manager.

### **P H 645. Health Economics (3)**

Prerequisite: Public Health 640.

Economics of health care, including supply and demand factors, efficiency, incentives facing physicians, hospitals, and health plans, economic evaluation of provider performance, health workforce issues, and cost-effectiveness analysis.

### **P H 646. Legal and Ethical Aspects of Health Care (3)**

Prerequisite: Public Health 641.

Legal topics in health care include tort law and reform, malpractice, risk management, patient consent, patient rights, contracts, anti-trust, managed care, and organizational restructuring. Ethical subjects include patient rights, procreation and abortion, and issues of death and dying.

### **P H 647A. Quantitative Methods and Health Data Analysis (3)**

Prerequisites: Public Health 602 and 641.

Quantitative methods and data analyses in health services administration. Topics include decision analysis, forecasting and regression, project management techniques, data analysis, and data and information management applications.

### **P H 647B. Health Quality and Information Management (3)**

Prerequisite: Public Health 647A.

Health quality measurement and improvement, focusing on managed care computer applications. Topics include outcomes and performance measurement; health and patient databases; types of databases and their management; hardware, software, and networks; systems analysis and design; and project control methods.

### **P H 649. Public Health Surveillance (3)**

Two lectures and three hours of laboratory.

Prerequisites: Public Health 601 and 602.

Public health data sources, including vital statistics, hospital discharge systems, the census, annual and special federal surveys through use of computer files. Methods of data quality control and analysis, communication of information, survey research, and public health surveillance.

### **P H 650. Field Practice (3-6) Cr/NC**

Field instruction in public health settings. Application of public health principles and skills to practical problems. Maximum credit six units of Public Health 650 applicable to a master's degree.

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|---|--|
| <b>A.</b> Epidemiology                        | <b>E.</b> Health Services Administration |
| <b>C.</b> Occupational Health Administration  |  |
| <b>D.</b> Environmental Health Administration | <b>F.</b> Health Promotion               |

### **P H 651A. Legislation and Policy Affecting Women and Children's Health (3)**

Prerequisite: Open to graduate students in the College of Health and Human Services.

Health policies and legislation affecting programs and services for women, children, adolescents, and families.

### **P H 655. Child and Adolescent Health (3)**

Health problems of children and adolescents in the U.S. with identification of needs and services which address these problems.

### **P H 658. Program and Data Management in Maternal and Child Health (3)**

Planning and evaluation, program implementation, budgeting, personnel issues, quality assurance, and data management for services in maternal and child health programs.

### **P H 661. Theoretical Foundations of Health Promotion (3)**

Prerequisite: Community Health Education 290.

Psychological, sociological, economic, and political theories relevant to the mission and processes of health promotion. (Formerly numbered Community Health Education 621.)

### **P H 662. Motivating Health Behavior (3)**

Prerequisite: Community Health Education 401.

Application of behavioral change techniques and health education methodology to health promotion targeting individuals and whole communities. (Formerly numbered Community Health Education 606.)

### **P H 663. Health Promotion Communications Theory and Design (3)**

Prerequisite: Community Health Education 402.

Theory, design and implementation of health education communications in community contexts. Extensive use of student design, analysis, and projects.

### **P H 664. Health, Society and Human Behavior (3)**

Prerequisites: Psychology 101, Sociology 101.

Historical and contemporary examination of health problems of individuals and communities. Health needs, resources; impact of society on health and health on society.

### **P H 666. Health Promotion Program Planning and Assessment (3)**

Prerequisites: Public Health 661, 662.

Program planning and assessment, theories, systems and procedures relevant to health promotion and education.

**P H 667. Prevention and Control of Chronic Diseases (3)**

Prerequisites: Public Health 601 and 602.

Health promotion strategies for modification of individual behaviors and social practices to lower risk of chronic disease.

**P H 668. Seminar in Health Promotion Research (3)**

Prerequisite: Graduate standing in public health.

Philosophical, ethical and methodological issues in current health promotion research and services.

**P H 669. Health Risk Appraisal (3)**

Prerequisites: Public Health 601, 602, 661, 662.

Techniques available for identifying personal health risk. Use of these methods for inducing change. Evaluation of effectiveness of methodologies.

**P H 696. Contemporary Topics in Public Health (1-3)**

Intensive study in specific areas of public health and health services administration. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**P H 700. Seminar in Public Health (1-3)**

Prerequisites: Public Health 601, 602, and 603.

Investigation of current problems in one of the fields of public health. May be repeated with new content. See Class Schedule for specific content. Maximum credit nine units of Public Health 700 applicable to a master's degree. These units may be in a single concentration area or any of the public health concentration areas.

**A. Epidemiology****C. Occupational and Environmental Health**

Seminar: Environmental Health: Risk Assessment

Seminar: Research Design

Seminar: Exposure Assessment and Methods of Sampling and Analysis

**E. Health Services Administration**

Seminar: Funds Management in Public Health

**F. Health Promotion**

Seminar: Women's Health

**G. Preventive Medicine**

Seminar: Preventive Medicine

**P H 721. Environmental Epidemiology (3)**

Prerequisites: Public Health 601 and 602. Recommended: Public Health 623.

Uses of epidemiological methods in study of environmental hazards affecting community health and health of workers. Case studies.

**P H 722. Seminar in Clinical Trials (3)**

Prerequisites: Public Health 601 and 602. Recommended: Public Health 627.

Public health perspective on current methodological issues in clinical trials to include study design, concepts of controls, masking, randomization, monitoring, data analysis procedures, and reporting of results.

**P H 724. Advanced Methods in Epidemiology (3)**

Prerequisites: Public Health 601, 602, 623, and 627.

In-depth methodological issues in performance and interpretation of epidemiologic studies. Study design, cluster analysis, effect modification, accuracy and precision, adjustment of attributable risk, life tables, Kaplan-Meier, Cox proportional hazards modeling, and meta-analysis.

**P H 726. HIV/AIDS Epidemiology and Public Health (3)**

Prerequisite: Public Health 601. Recommended: Public Health 621.

State-of-the-art review of HIV and AIDS within a public health framework. Biology, transmission, host susceptibility, screening and surveillance, domestic and international epidemiology, study design, intervention, and options for prevention (including community-based trials).

**P H 729. Ethics for Epidemiology (3)**

Prerequisite: Consent of instructor.

Public health perspective on major ethical concepts and issues confronting researchers, including informed consent, human subjects, environment, justice, beneficence, autonomy, confidentiality, internal investigation, student issues, and mentorship.

**P H 731. Environmental and Occupational Health Policy (3)**

Prerequisite: Credit or concurrent registration in Public Health 604.

Current issues in environmental and occupational health, including risk assessment, policy development, and program management.

**P H 732. Principles of Industrial Hygiene (4)**

Three lectures and three hours of laboratory.

Prerequisites: Chemistry 251, 431, and Physics 180A.

Fundamental principles of recognition, evaluation, and control of hazardous chemical, physical, and biological agents in the work place.

**P H 733. Principles of Industrial Safety (3)**

Prerequisite: Public Health 732.

Introduction to field of industrial safety including accident prevention as a function of training people in safe work behaviors and maintaining and monitoring the machine interface.

**P H 735. Industrial Ventilation (3)**

Two lectures and three hours of laboratory.

Prerequisite: Public Health 732.

Techniques of general, dilution, and local exhaust ventilation. Ventilation system design. Techniques and strategies of ventilation survey and testing. OSHA ventilation regulations.

**P H 736. Principles of Ergonomics (2)**

Prerequisite: Public Health 732.

Application of ergonomics and connection of ergonomics to occupational hygiene. Work-related musculoskeletal disorders, occupational risk factors, work method study and evaluation, risk factor assessment techniques, and tool selection.

**P H 737A. Chemical Agents, Recognition, Evaluation, and Assessment (3)**

Two lectures and three hours of laboratory.

Prerequisite: Public Health 732.

Recognition and exposure assessment of hazardous chemical agents in the workplace. Emphasis on air sampling and analytical procedures.

**P H 737B. Physical and Biological Agents, Recognition, Evaluation, and Assessment (2)**

One lecture and three hours of laboratory.

Recognition and exposure assessment of hazardous physical and biological agents in the workplace.

**P H 738. Topics in Toxicology (3)**

Prerequisite: Public Health 638A.

Topics in toxicology to include food toxicants, pesticides, soil and groundwater pollutants, industrial toxicology and quality assurance, toxicokinetics, genetic toxicology and toxicology in risk assessment.

**P H 740. Financial Principles for Public Health Executives (3)**

Prerequisite: Registration in public health management specialization.

Advanced contemporary financial management in public and non-profit healthcare organizations, including financial statement analysis, budgeting concepts, capital management, long-term financing, and asset valuation.

**P H 741. Public Health Services Organization and Management (3)**

Prerequisite: Public Health 641 and registration in public health management specialization.

Public health management and organizational theory for students with progressively responsible healthcare experience. Emphasis on systems modeling, organizational design, and management practices as applied to public health and nonprofit healthcare organizations and programs.

### **P H 742A. Health Services Financial Management (3)**

Prerequisites: Public Health 641 and Business Administration 650. Activities in health care financial management. Topics include discounted cash flow analysis, long-term debt financing, equity valuation and financing, risk and return, capital budgeting, financial statements and analyses, financial forecasting, and short-term financing.

### **P H 742B. Financing Health Systems and Services (3)**

Prerequisite: Public Health 742A.  
U.S. healthcare financial systems at macro-level. Principles of public programs and private health insurance, types of reimbursement for healthcare organizations and providers, issues of cost containment, effects of uninsurance and underinsurance, and financial practices of other advanced nations.

### **P H 743. Hospitals and Health Systems (3)**

Prerequisite: Public Health 644A.  
Organization and management of hospitals and integrated healthcare systems. Emphasis on governance, management, operations, and clinical systems. Senior executives of regional healthcare organizations participate as guest faculty.

### **P H 744. Ambulatory and Group Practice Management (3)**

Prerequisite: Public Health 644A.  
Organization and management of group practice and other ambulatory or outpatient facilities, services, programs, and plans. Includes managed care aspects of ambulatory health service delivery.

### **P H 746. Quality of Care Assessment and Assurance (3)**

Prerequisite: Public Health 647B.  
Methods for development and evaluation of quality assurance programs in health service organizations. Alternative methods of assessment. Evaluation of consumer, professional, institutional, and governmental responsibilities.

### **P H 748. Health Services Competitive Strategy and Marketing (3)**

Prerequisite: Public Health 644A.  
Ways in which healthcare organizations can gain and sustain competitive advantage. Both organization and service level competition and strategies/tactics examined.

### **P H 750. Advanced Field Practice (3-6) Cr/NC**

Prerequisite: Public Health 650.  
Advanced field instruction in public health setting. Intensification and continuation of application of public health principles and skills to public health problems. Maximum credit six units of Public Health 750 applicable to a master's degree.

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|--------------------------------|----------------------------|
| <b>A.</b> Epidemiology         | <b>E.</b> Health Services  |
| <b>C.</b> Occupational Health  | Administration             |
| <b>D.</b> Environmental Health | <b>F.</b> Health Promotion |

### **P H 751. Studies in Perinatal and Reproductive Health (3)**

Perinatal mortality and morbidity. Review of methods and findings in studies of reproductive exposures and outcomes.

### **P H 761. Programming Health Promotion (3)**

Prerequisites: Public Health 661 and 663.  
Current programs, practices, and problems in health promotion activities of hospitals, clinics, public health departments, and government. Issues necessitating health promotion programs. Formulation of effective promotion programming in various settings.

### **P H 762. Behavioral Medicine (3)**

Prerequisites: Public Health 661 and 662.  
Behavioral management approaches to health care problems. Diseases and conditions that arise from physical, psychological and environmental causes; behavioral interventions that attenuate disease process and improve compliance.

### **P H 797. Research (1-3) Cr/NC/RP**

Prerequisite: Consent of instructor.  
Research in one of the fields of public health. Maximum credit six units applicable to a master's degree. Maximum combined credit six units of Public Health 797 and 798 applicable to a master's degree.

### **P H 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of staff, to be arranged with the director and instructor.  
Individual study. Maximum credit six units applicable to a master's degree. Maximum combined credit six units of Public Health 797 and 798 applicable to a master's degree.

### **P H 799A. Thesis (3) Cr/NC/RP**

Prerequisite: An officially appointed thesis committee and advancement to candidacy.  
Preparation of a project or thesis for the master's degree.

### **P H 799B. Thesis Extension (0) Cr/NC**

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

### **P H 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.  
Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

### **P H 800. Seminar (1-9)**

Prerequisite: Admission to the doctoral program.  
Investigation of a particular topic or issue, emphasis on empirical research; topic to be announced in the Class Schedule. Maximum credit nine units applicable to a doctoral degree.

### **P H 823. Case-Control Studies (3)**

Prerequisites: Public Health 601, 602, 623, and 627. Recommended: Public Health 724.  
Design, conduct, and analysis of case-control studies. Methodologic issues, control of biases and misclassification errors, proper use of interpretation of stratification and logistic regression in study of diseases of multifactorial etiology.

### **P H 824. Cohort Studies (3)**

Prerequisites: Public Health 601, 602, 623, and 627. Recommended: Public Health 724.  
Design, analysis, and application of cohort studies. Cohort study designs, importance of time-varying exposures and outcomes, external and internal validity, and in-depth treatment of approaches to analysis based on cohort sampling methods.

### **P H 825. Grantwriting in Epidemiology and Public Health (1-3)**

Prerequisites: Public Health 601, 602, 623, 627, and 724.  
Trains students to prepare NIH proposal. Students work with community-based organizations, faculty advisers, expert consultants, institutional review board, and SDSU Foundation personnel to complete research proposals and budgets.

### **P H 861. Behavioral Measurement (3)**

Techniques for assessing behaviors related to health and health risks in key content areas. Multimodel assessment and validation procedures. Students will demonstrate ability to create new measures based on theory and reliability and validity of these measures, using multimodel assessment procedures.

### **P H 862. Advanced Theoretical Foundations of Health Behavior Research and Applications (3)**

Philosophy of science, role of theory development and design and conduct of research, with integration of behavioral and biological theories serving as foundation for behavioral science in public health.

### **P H 863. Advanced Communication Technology as Applied to Health Behavioral Interventions (3)**

Prerequisite: Public Health 663.  
Health communication theory and social marketing practice as applied to public health behavior change. Audience segmentation, formative research channel selection, and message development applied to chronic and infectious disease prevention.

**P H 866. Global Issues in Health Behavior Research and Application (3)**

Epidemics in infectious diseases, environmental degradation, population explosion, and other problems with behavioral links threaten the world's population. Global issues such as the role of behavior in disease, bioterrorism, and war.

**P H 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.  
Independent investigation in the general field of the dissertation.

**P H 898. Doctoral Special Study (1-9) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.  
Individual study in the field of specialization. Maximum credit nine units applicable to the doctoral degree.

**P H 899. Doctoral Dissertation (3-15) Cr/NC/RP**

Prerequisites: An officially constituted dissertation committee and advancement to candidacy.  
Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

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# Regulatory Affairs

In the Center for Biopharmaceutical and Biodevice Development  
and the College of Sciences

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**<http://www.cbbd.sdsu.edu/regaffairs>**

## Faculty Members of the Center for Biopharmaceutical and Biodevice Development

- \*A. Stephen Dahms, Ph.D., Professor of Chemistry, Director, Center for Biopharmaceutical and Biodevice Development
- \*Larry E. Gundersen, Ph.D., Senior Staff Scientist (equivalent rank of Professor), Director, Regulatory Affairs Program
- E. Dale Sevier, Ph.D., Director Workforce Development and Operations, CSUPERB
- Gretchen N. Vik, Ph.D., Professor of Information and Decision Systems
- \*Robert Wang, Ph.D., Senior Staff Scientist (equivalent rank of Professor), Director, Corporate Affairs, Associate Director, Center for Biopharmaceutical and Biodevice Development

\*Serves on the Faculty Governing Board which makes recommendations on admissions and curriculum.

## General Information

The Center for Biopharmaceutical and Biodevice Development offers advanced degree programs that focus on training students in areas related to development, manufacturing, and marketing of biopharmaceutical, pharmaceutical, and medical device products. The Center integrates faculty and programs from various departments. The Center addresses research and workforce needs of companies as they make the transition from research and development to manufacturing and production, including the legal, ethical, and regulatory elements that both guide and restrict the industry.

The courses for the degree program are offered only through special sessions. Students in the program enroll in courses through the College of Extended Studies. Since the degree program is self-supporting, the fee structure for courses is different than for courses in programs that are supported with state funding. For more information on degree program admissions, courses, requirements, and fees visit <http://www.cbbd.sdsu.edu/regaffairs>.

The degree program provides a comprehensive background in regulatory science necessary for regulatory affairs professionals to competently address regulatory requirements associated with pharmaceutical, biopharmaceutical, and medical device products. Regulatory affairs courses focus on practical applications and approaches for compliance with development, testing, manufacturing and post-marketing surveillance laws and requirements enforced by the Food and Drug Administration.

Upon successful completion of the degree program, students will have detailed knowledge and understanding of current regulations with an understanding for their practical application to the development and commercialization of drug, biologic, and medical device products. Included in the core of required courses for the degree are graduate level business administration courses that address communications and management skills that are essential for the successful regulatory affairs professional in an industry work environment.

## Master of Science Degree in Regulatory Affairs

(Offered through the College of Extended Studies)

The coursework in this curriculum is offered only in special sessions. Students in special session courses enroll through the College of Extended Studies and follow a fee structure that is different from that for regularly matriculated students. For more information, contact the Director of the Center or call the College of Extended Studies.

This degree program provides a comprehensive background in regulatory science with the additional training and experience required of regulatory affairs professionals to address federal and state regulatory statutes and laws with emphasis on the Food and Drug Administration. The degree is offered through the College of Sciences.

The degree offering focuses on laws and regulations imposed by the Federal government, especially the Food and Drug Administration, related to drug discovery, development, testing, and manufacture of products for commercial distribution. Also included are requirements for ongoing post-marketing surveillance. The degree program will provide students with detailed knowledge and understanding of current regulations and their practical application to the development and commercialization of drug, biologics, and medical device products. Also incorporated into the degree program are business administration courses that will provide students with communication and management skills essential for the successful regulatory affairs professional in an industry work environment.

## Admission to Graduate Study

All students must satisfy the general admission and examination requirements for admission to the University with classified graduate standing, as described in Part Two of the Bulletin of the Graduate Division. In addition, the applicant must satisfy the following requirements before being considered for admission to classified graduate standing by the admissions review committee of the Center:

1. Submit scores on the GRE General Test (verbal and quantitative portions only).
2. Have three letters of recommendation sent from persons who are knowledgeable about the candidate's potential for success in graduate study.
3. Submit an Applicant Essay that describes the applicant's purpose in pursuing graduate studies in regulatory affairs and relationship to personal and career objectives.
4. List any employment or volunteer experience relevant to the proposed new degree major program.

Candidates for admission will typically come from one of the disciplines offered in the life and physical sciences and engineering. In some cases, candidates who have not fully completed the undergraduate requirements may be admitted with conditionally classified standing, subject to space availability, after consideration of those who meet the requirements for classified graduate standing. Students so admitted will be advised as to the nature of their deficiency and the time

allowed to achieve full classified graduate standing. If the student's undergraduate preparation is insufficient, the student will be required to take courses for removal of the deficiency. Courses taken to make up such deficiencies are in addition to the minimum units for the master's degree and may not be included on the student's program of study.

## Advancement to Candidacy

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

## Specific Requirements for the Master of Science Degree

(Major Code: 49045)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program consisting of a minimum of 40 units as follows:

- Complete 25 units of required courses.
 

RA 601	Pharmaceutical, Biotechnology, and Medical Device Industries (3)
RA 602	Food and Drug Law (3)
RA 705	Project Planning for the Biomedical Industries (3)
RA 770	Current Good Manufacturing Practices – General Concepts (3)
RA 774	Investigational and Marketing Applications for Drugs, Biologics, and Medical Devices (3)
RA 799A	Thesis or Project (3) Cr/NC/RP
BA 651	Organizational Behavior (2)
BA 662	Operations Management (2)
IDS 705	Communication Strategies (3)
- Complete 15 units of electives, at least 12 units of which must be chosen from Category A.

### CATEGORY A

RA 696	Advanced Topics in Regulatory Affairs (1-4)
RA 771	Current Good Manufacturing Practices – Advanced Topics (3)
RA 772	Post-Approval Activities, Including Advertising, Promotion, and Labeling (3)
RA 773	Medical Device Regulations (3)
RA 775	Clinical Trials: Issues in Design, Conduct, and Evaluation (3)
RA 776	Validation Aspects of Drugs, Biologics, and Device Product Development and Manufacturing, Including Computer Related Systems and Software (3)
RA 778	Quality Control and Quality Assurance: Pharmaceutical, Biologics, and Medical Devices (3)
RA 779	International Regulatory Affairs (3)
RA 780	Good Clinical Practices (2)
RA 797	Research (1-3) Cr/NC/RP
RA 798	Special Study (1-3) Cr/NC/RP

### CATEGORY B

MGT 721	Seminar in Group Processes and Leadership (3)
MGT 741	Seminar in Organization Power and Politics (3)
IDS 744	Seminar in Quality and Productivity Management (3)
IDS 754	Seminar in Operations Planning and Strategy (3)

### CATEGORY C

Selected courses at California Western School of Law.

## Advanced Certificate in Regulatory Affairs

(Offered through the College of Extended Studies)

The Advanced Certificate in Regulatory Affairs involves the completion of Regulatory Affairs 601, 602, 770, and one course selected from Regulatory Affairs 696 entitled "International Regulatory Affairs," 705, 772, 774 for a total of 12 units. Regulatory Affairs 601 covers the various steps in the development process for pharmaceuticals, biologics and medical devices, with an understanding of the regulatory impact on this process. Regulatory Affairs 602 provides a basic knowledge of the laws and regulations governing these industries. In Regulatory Affairs 770, students learn the basic concepts of good manufacturing practices. To enroll in this certificate program, call (619) 594-5152.

## Courses Acceptable on Master's Degree Program in Regulatory Affairs (R A)

### GRADUATE COURSES

#### R A 601. Pharmaceutical, Biotechnology, and Medical Device Industries (3)

Prerequisite: Chemistry 361A or 365.

Pharmaceutical, biotechnology, and medical device industries. Company organization and product development and commercialization associated activities, e.g., drug discovery, chemical synthesis, quality assurance, regulatory affairs, manufacturing, control and marketing. (Formerly numbered Regulatory Affairs 573.)

#### R A 602. Food and Drug Law (3)

Prerequisite: Regulatory Affairs 601.

Laws governing drug, biological, and medical device products. Discussion of Federal Food, Drug, and Cosmetic Act, U.S. Public Health Service Act, Title 21 Code of Federal Regulations, and various amendments. (Formerly numbered Regulatory Affairs 575.)

#### R A 696. Advanced Topics in Regulatory Affairs (1-4)

Prerequisite: Regulatory Affairs 602.

Selected topics in regulatory affairs. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

#### R A 705. Project Planning for the Biomedical Industries (3)

Prerequisite: Regulatory Affairs 601.

Complexity of biomedical product development. Projects and strategies for effectively planning and managing them. Understanding and utilization of management and planning strategies as applied to these biomedical product development projects. Strategies for planning, scheduling, and effective management of regulatory affairs activities and related tasks associated with development of a biomedical product.

#### R A 770. Current Good Manufacturing Practices – General Concepts (3)

Prerequisite: Regulatory Affairs 602.

Current Good Manufacturing Practice regulations to assure quality of marketed products. Application to manufacturer's organization, personnel, facilities, equipment, control systems, production, process controls, laboratory procedures and records.

#### R A 771. Current Good Manufacturing Practices – Advanced Topics (3)

Prerequisite: Regulatory Affairs 770.

Expanded analysis of current Good Manufacturing Practice regulations to assure quality of marketed drug and biological products. Discussions of FDA methods of enforcement by inspections of manufacturing establishments.

### **R A 772. Post-Approval Activities, Including FDA Advertising, Promotion, and Labeling (3)**

Prerequisite: Regulatory Affairs 602.

FDA and FTC rules and regulations governing advertising, promotion, and labeling for prescription drugs, biologics, medical devices, and over-the-counter drugs.

### **R A 773. Medical Device Regulations (3)**

Prerequisite: Regulatory Affairs 602.

Laws and FDA regulations for medical devices, in vitro diagnostics, radiological devices, FDA jurisdiction, registration, listing labeling requirements, classification, Investigational Device Exemptions (IDE), premarket approval (PMA) and premarket notification (510(R)).

### **R A 774. Investigational and Marketing Applications for Drugs, Biologics, and Medical Devices (3)**

Prerequisite: Regulatory Affairs 602.

Development and informational content for investigational new drug applications (IND), investigational device exemptions (IDE), new drug applications (NDA), product license applications (PLA), and biologics license applications (BLA) for FDA review.

### **R A 775. Clinical Trials: Issues in Design, Conduct, and Evaluation (3)**

Prerequisite: Regulatory Affairs 602.

Issues and requirements in design, conduct, and evaluation of clinical trials for new drugs, biologics, and medical devices. Introduction to biostatistics.

### **R A 776. Validation Aspects of Drugs, Biologics, and Device Product Development and Manufacturing, Including Computer Related Systems and Software (3)**

Prerequisite: Regulatory Affairs 602.

Verification and validation of computer hardware, software, and peripherals for applications in pharmaceutical, biologic, and medical device industries.

### **R A 778. Quality Control and Quality Assurance: Pharmaceuticals, Biologics, and Medical Devices (3)**

Prerequisite: Regulatory Affairs 602.

Review requirements, procedures, controls, and documentation for quality control and assurance in manufacture and commercial distribution of drugs, biologics, and medical devices.

### **R A 779. International Regulatory Affairs (3)**

Prerequisite: Regulatory Affairs 602.

International medical device regulations pertaining to pharmaceuticals, biologics, and devices. Emphasis on European union and other appropriate areas of the world.

### **R A 780. Good Clinical Practices (2)**

Prerequisite: Regulatory Affairs 602.

International regulatory requirements for pharmaceutical development regarding clinical research practices. Current issues in GCP; standards for design, conduct, performance, monitoring, auditing, recording, analysis, and reporting of clinical trials. Regulatory standards also evaluated in light of geo-cultural and implications for practice of medicine.

### **R A 797. Research (1-3) Cr/NC/RP**

Prerequisite: Advancement to candidacy.

Research in the area of regulatory sciences. Maximum credit six units applicable to a master's degree.

### **R A 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

### **R A 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisite: An officially appointed thesis committee and advancement to candidacy.

Preparation of thesis or project for the master's degree.

### **R A 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade of RP.

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

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# Religious Studies

In the College of Arts and Letters

**OFFICE:** Adams Humanities 4231  
**TELEPHONE:** (619) 594-5185  
**FAX:** (619) 594-1004  
**E-MAIL:** [hoagland@mail.sdsu.edu](mailto:hoagland@mail.sdsu.edu)  
<http://www-rohan.sdsu.edu/dept/relstweb/rsweb>

## Faculty

Linda D. Holler, Ph.D., Professor of Religious Studies, Chair of Department  
Risa Levitt Kohn, Ph.D., Associate Professor of Religious Studies  
Rebecca E. Moore, Ph.D., Associate Professor of Religious Studies  
Khaleel Mohammed, Ph.D., Assistant Professor of Religious Studies

## General Information

The department offers advanced coursework in religious studies which may be used toward fulfilling advanced degree requirements in Interdisciplinary Studies and in other departments with the approval of the student's graduate adviser.

### UPPER DIVISION COURSES (REL S)

#### REL S 530. Religion and Revolution (3)

Prerequisite: Three units of religious studies.

Twentieth century liberation movements in their religious expression, from 1960's Latin America through Black theology, feminist theology, eco-theology, and queer theology. International religious liberation movements, particularly in Africa and the Americas.

#### REL S 580. Major Figure (3)

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.

#### REL S 581. Major Theme (3)

Prerequisites: Three units of religious studies and upper division or graduate standing.

Advanced systematic study of a theme or motif selected from major religious traditions. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

#### REL S 582. Major Text (1-3)

Prerequisites: Three units of religious studies and upper division or graduate standing.

Advanced systematic study of a selected scripture or classic text(s) selected from one of the major religious traditions. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

#### REL S 583. Major Tradition (3)

Prerequisites: Three units of religious studies and upper division or graduate standing.

Advanced systematic study of the doctrines, practices, and development of a major religious tradition. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

#### REL S 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 (REL S)

#### REL S 696. Seminar in Selected Topics (3)

Prerequisite: Twelve upper division units in religious studies.

Directed research in a major problem or movement in religious studies. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30 unit master's degree.

#### REL S 798. Special Study (1-3) Cr/NC/RP

Prerequisites: Twelve upper division units in religious studies and consent of staff; to be arranged with department chair and instructor.

Individual study. Maximum credit six units applicable to a master's degree.

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# Rhetoric and Writing Studies

In the College of Arts and Letters

OFFICE: Nasatir Hall 227A  
TELEPHONE: (619) 594-6515  
FAX: (619) 594-6530

## Faculty

Glen McClish, Ph.D., Professor of Rhetoric and Writing Studies,  
Chair of Department  
Carol O. Sweedler-Brown, Ph.D., Professor of Rhetoric and Writing  
Studies  
Richard B. Boyd, Ph.D., Associate Professor of Rhetoric and Writing  
Studies  
Jane E. Hindman, Ph.D., Associate Professor of Rhetoric and Writing  
Studies  
Cezar M. Ornatowski, Ph.D., Associate Professor of Rhetoric and  
Writing Studies (Graduate Adviser)  
Ellen Quandahl, Ph.D., Associate Professor of Rhetoric and Writing  
Studies, Lower Division Writing Director  
E. Jane Robinett, Ph.D., Associate Professor of Rhetoric and Writing  
Studies  
Linn K. Bekins, Ph.D., Assistant Professor of Rhetoric and Writing  
Studies, Technical Writing Program Director  
Suzanne Bordelon, Ph.D., Assistant Professor of Rhetoric and Writing  
Studies  
Christopher Werry, Ph.D., Assistant Professor of Rhetoric and Writing  
Studies

## Associateships

Graduate teaching associateships in rhetoric and writing studies are available to a limited number of qualified students from departments offering graduate degrees. With the guidance of department faculty, teaching associates teach in the lower division writing program. Application forms and additional information may be secured from the Department of Rhetoric and Writing Studies.

## General Information

The Department of Rhetoric and Writing Studies, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in rhetoric and writing studies. Rhetoric and composition is a field of theory, research, and teaching concerned broadly with literacy and written discourse. It emphasizes the centrality of discourse (primarily written discourse) to all processes of learning, knowledge formation, socialization into disciplinary and cultural communities, and professional work. The program builds on the diverse interests of faculty in the Department of Rhetoric and Writing Studies to bring together rhetorical theory, history of rhetoric, composition studies, literacy, writing pedagogy, discourse theory, technical and professional writing, and writing in the disciplines to provide a coherent platform for inquiry into the diverse ways in which literacy and writing are used in academic, professional, and cultural contexts.

The Master of Arts degree in rhetoric and writing studies is a 30-unit program that provides preparation for students wanting to pursue doctoral-level study in the area of rhetoric and writing studies or in related disciplines or for students who plan to terminate their studies at the M.A. level. In addition to a general program, the curriculum also offers specializations in the teaching of writing and in technical and professional writing.

The specialization in the teaching of writing prepares students to teach writing in colleges and furthers the professional development of secondary school teachers. The specialization in technical and professional writing prepares students for careers as professional writers

in business, industry, public agencies, and government within the broader disciplinary context of rhetoric and writing studies, as well as to teach technical and professional writing at colleges or in specific training settings.

The program includes a teaching internship for students in the teaching of writing specialization and a technical writing internship for students in the technical and professional writing specialization and, where appropriate, special study based on work experience.

## Master of Arts Degree in Rhetoric and Writing Studies

### Admission to Graduate Study

Students will be admitted in both the fall and spring semesters. Applications should be submitted by April 15 for the fall and by November 1 for the spring.

To be admitted into the program, students must satisfy the general requirements for admission to graduate study at the University with classified graduate standing, as described in Part Two of this bulletin. In addition applicants must have a GPA of at least 3.0 in the last 60 semester units (90 quarter units) attempted in their bachelor's degree studies.

Applicants should electronically submit the University application available at <http://www.csumentor.edu>.

In addition, applicants should submit the following materials directly to the Department of Rhetoric and Writing Studies:

- (1) Two sets of official transcripts from all academic institutions attended (in sealed envelopes);
- (2) GRE scores (official notification) (or TOEFL scores for international students);
- (3) Letter of application;
- (4) A 750-1000 word statement of purpose;
- (5) A writing sample (minimum 10 pages);
- (6) Three letters of recommendation.

These materials should be mailed to:

Department of Rhetoric and Writing Studies  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4452

### Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement, as stated in Part Two of this bulletin. With the approval of the graduate adviser, each candidate may fulfill the foreign language requirement in one of several ways: 1) by passing a local examination administered by one of the University's foreign language departments, 2) by completing one three-unit upper division foreign language or literature course with a grade of C or better, or 3) by passing an examination to be determined by the graduate adviser if the chosen language is not one taught in a department at San Diego State University.

## Specific Requirements for the Master of Arts Degree in Rhetoric and Writing Studies

(Major Code: 15013)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, a student must complete a program of study approved by the department's graduate adviser. The program must consist of at least 30 units, with at least 18 units of 600- and 700-level courses.

### General Program

**Required courses** (15 units):

RWS 600	Writing, Knowledge, and Culture (3)
RWS 601A	History of Rhetoric I (3)
RWS 602	Modern Rhetoric and Composition Studies (3)
RWS 640	Research Methods in Rhetoric and Writing Studies (3)
RWS 799A	Thesis or Project (3) Cr/NC/RP

**Electives** (15 units)

Fifteen units of thematically focused electives selected with the approval of the Department of Rhetoric and Writing Studies graduate adviser.

### Specialization in the Teaching of Writing

**Required courses** (24 units):

RWS 600	Writing, Knowledge, and Culture (3)
RWS 601A	History of Rhetoric I (3)
RWS 602	Modern Rhetoric and Composition Studies (3)
RWS 609	Theory and Practice of Teaching Composition (3)
RWS 640	Research Methods in Rhetoric and Writing Studies (3)
RWS 796A	Teaching Internship (3) Cr/NC
	<b>or</b>
RWS 798	Special Study (based on work experience, where appropriate and with the approval of the Department of Rhetoric and Writing Studies graduate adviser) (3) Cr/NC/RP
RWS 799A	Thesis or Project (3) Cr/NC/RP

**Electives** (6 units)

Six units of thematically focused electives selected with the approval of the Department of Rhetoric and Writing Studies graduate adviser.

### Specialization in Technical and Professional Writing

**Required courses** (24 units):

RWS 503W	Technical Writing (3)
RWS 504	Problems in Technical Communication (3)
RWS 600	Writing, Knowledge, and Culture (3)
RWS 601A	History of Rhetoric I (3)
RWS 602	Modern Rhetoric and Composition Studies (3)
RWS 640	Research Methods in Rhetoric and Writing Studies (3)
RWS 796B	Writing Internship (3)
	<b>or</b>
RWS 798	Special Study (based on work experience, where appropriate and with the approval of the Department of Rhetoric and Writing Studies graduate adviser) (3) Cr/NC/RP
RWS 799A	Thesis or Project (3) Cr/NC/RP

**Electives** (6 units)

Six units of thematically focused electives selected with the approval of the Department of Rhetoric and Writing Studies graduate adviser.

## Advanced Certificate in Technical and Scientific Writing

The purpose of this certificate program is to prepare students for careers in technical and scientific writing, or for other careers where advanced writing and document design skills are desirable. The program is designed both for students working on degrees in technical or non-technical fields and for professionals seeking career advancement or change.

Applicants to the program must have completed a bachelor's degree from an accredited institution and must have excellent general writing skills (in specific cases, applicants may be required to take additional coursework to improve writing proficiency) and basic computer literacy.

Students in the program will complete 21 units of coursework approved by the director of the program. A minimum grade point average of 3.0 or better must be maintained in certificate coursework, with no less than a C grade in any course. All courses completed with a grade of B or better are applicable to the Master of Arts degree in rhetoric and writing studies with a specialization in technical and professional writing. For further information, contact the Department of Rhetoric and Writing Studies.

**Required courses** (9 units):

RWS 503W	Technical Writing (3)
RWS 504	Problems in Technical Communication (3)
RWS 605	Writing Project Management (3)

**Recommended Electives:** (12 units)

RWS 501	Editing (3)
RWS 502	Tools for Technical Communicators (3)
RWS 506	Writing Internship (3) Cr/NC
RWS 507	Technical Communications in Nonprofit Organizations (3)
RWS 508W	Scientific Writing (3)
RWS 511	Literacy, Rhetoric, and Technology (3)
RWS 608	Scientific Writing (3)

Other electives may be selected with the approval of the program director. A maximum of six units of transfer credit may be applied to the program. Students should consult with the program director before selecting any courses so that an individualized program of study can be developed.

## Courses Acceptable on Master's Degree Program in Rhetoric and Writing Studies (RWS)

### UPPER DIVISION COURSES

#### RWS 500W. Advanced Composition (3) I, II

Prerequisite: Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units, passed Transfer Writing Assessment or Writing Proficiency Assessment with a score of 8 or better or earned a C or higher in RWS 95 or 96 or 280 or 281, and completed the General Education requirement in Composition and Critical Thinking. **Proof of completion of prerequisites required:** Test scores or verification of exemption; copy of transcript.

The theory and practice of expository writing, including the contributions of semantics, rhetoric, and logic.

#### RWS 501. Editing (3) I

Prerequisites: Rhetoric and Writing Studies 305W or 500W.

Fundamentals of professional editing. Functions of an editor. Document development, style, and style guides. Editing tools and technologies. Preparing text for publication and production.

### **RWS 502. Tools for Technical Communicators (3) I, II**

Prerequisite: Rhetoric and Writing Studies 503W.

Fundamental software tools for technical communicators. Electronic document style and format. Preparing text electronically for publication and production. Developing on-line and Internet documentation. Rhetorical issues in electronic writing technologies.

### **RWS 503W. Technical Writing (3) I, II, S**

Prerequisites: Rhetoric and Writing Studies 200. Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units, passed Transfer Writing Assessment or Writing Proficiency Assessment with a score of 8 or better or earned a C or higher in RWS 95 or 96 or 280 or 281, and completed the General Education requirement in Composition and Critical Thinking. **Proof of completion of prerequisites required:** Test scores or verification of exemption; copy of transcript.

Principles and practices of writing required in technical and scientific fields or professions, including technical writing style and rhetorical strategies of designing technical documents.

### **RWS 504. Problems in Technical Communication (3) II**

Prerequisite: Rhetoric and Writing Studies 503W. Recommended: Graphics or drawing course.

Problems in technical writing, including graphics, printing, and reproduction of technical documents; types of technical communication, including reports, manuals, and proposals; manuscript editing and proofreading; audience analysis and readability; writing and recognition of clear technical prose.

### **RWS 506. Writing Internship (3) Cr/NC I, II, S**

Prerequisites: Consent of instructor and successful completion of a 500-level writing course with a grade of B or better.

Intensive experience in writing and editing documents while student is under the joint supervision of an academic instructor and a professional coordinator.

### **RWS 507. Technical Communications in Nonprofit Organizations (3) II**

Prerequisite: Rhetoric and Writing Studies 503W.

Developing specific technical communication skills for nonprofit organizations. Learning nonprofit documentation: proposals, mission statements, advertising, member surveys, capital campaigns. Promoting volunteerism. Interacting with nonprofit boards. Adhering to requisite state and federal regulations.

### **RWS 508W. Scientific Writing (3)**

Prerequisites: Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units, passed Transfer Writing Assessment or Writing Proficiency Assessment with a score of 8 or better or earned a C or higher in RWS 95 or 96 or 280 or 281, and completed the General Education requirement in Composition and Critical Thinking. **Proof of completion of prerequisite required:** Test scores or verification of exemption; copy of transcript.

Developing specific writing skills for scientific research and communication. Learning scientific documentation: research paper, case report, review, abstract, promotional material. Adhering to standards and regulations. (Formerly numbered Rhetoric and Writing Studies 508.)

### **RWS 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.

### **RWS 511. Literacy, Rhetoric, and Technology (3)**

Role that technologies of communication have played in concepts of language, literacy, and cognition. Histories and theories of literacy (with emphasis on rhetorical tradition), and their relevance to research on electronic text.

### **RWS 596. Special Topics in Rhetoric and Writing Studies (1-3)**

Prerequisite: Consent of instructor.

Selected topics in rhetoric and writing studies. May be repeated with new content and 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 master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### **RWS 599. Special Study (1-3) Cr/NC**

Directed individual study. Maximum credit six units.

## GRADUATE COURSES

### **RWS 600. Writing, Knowledge, and Culture (3)**

Intersection of language, epistemology, and culture. Role of written language in the formation of community knowledge, identity, norms, and values.

### **RWS 601A. History of Rhetoric I (3)**

Prerequisite: Good standing in an approved graduate program.

Major works of rhetoric from Greek Sophists through Imperial Rome. Themes and core concepts that shape the discipline of rhetoric. How the works informed pedagogy and public life. Relationship of historical texts to contemporary rhetorical practices. (Formerly numbered Rhetoric and Writing Studies 601.)

### **RWS 601B. History of Rhetoric II (3)**

Prerequisite: Good standing in an approved graduate program.

Major works of rhetoric from medieval period through the nineteenth century. Themes and core concepts that shape the discipline. How these works informed pedagogy and public life. Relationship of historical texts to contemporary rhetorical practices. Not open to students who have taken Rhetoric and Writing Studies 601.

### **RWS 602. Modern Rhetoric and Composition Studies (3)**

Twentieth century rhetoric and composition theory, and their relationship to study and teaching of written discourse.

### **RWS 605. Writing Project Management (3)**

Prerequisites: Rhetoric and Writing Studies 503W and 504.

Managing technical documentation projects. Collaborative writing. Managing writing teams. Conducting task analysis, estimating cost and schedule, preparing document plans, gathering information, testing documents, and managing project documentation. (Formerly numbered Rhetoric and Writing Studies 505.)

### **RWS 608. Scientific Writing (3)**

Prerequisite: Rhetoric and Writing Studies 503W. Open to advanced students in the sciences.

Developing specific writing skills for a career in scientific and medical communication. Learning scientific documentation process: creating persuasive technical documents, building complex facts into coherent messages, adhering to standards and regulations, and contributing to the effective marketing of new products with promotional pieces that meet legal and ethical standards.

### **RWS 609. Theory and Practice of Teaching Composition (3)**

Research and theory in field of teaching composition. Links research to classroom practice. Prepares students to teach composition at SDSU and other post-secondary settings. Prerequisite for teaching associateships in Rhetoric and Writing Studies.

### **RWS 610. Seminar in Disciplinary Rhetorics (3)**

Practice in and analysis of professional academic discourse, including major genres of disciplinary writing; strategies of written inquiry, argument, and professional conversation; cultural norms of professional practice.

**RWS 640. Research Methods in Rhetoric and Writing Studies (3)**

Prerequisites: Rhetoric and Writing Studies 600, 601A, 602.

Research methods and critical approaches to advanced study of rhetoric and writing, with attention to basic reference works, scholarly journals, and bibliographical techniques. (Formerly numbered Rhetoric and Writing Studies 745.)

**RWS 696. Topics in Rhetoric and Writing Studies (3)**

Intensive study in specific areas of rhetoric and writing studies. May be repeated with new content and consent of instructor. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**RWS 740. Feminist Rhetorics (3)**

Prerequisites: Rhetoric and Writing Studies 600, 601A, 602.

Gender's interface with epistemology, authorship, and teaching. Contemporary issues related to feminist creation and critique of knowledge-construction, discourse, pedagogical, and research methods.

**RWS 744. Seminar in Issues in Rhetorical Theory and Practice (3)**

Prerequisites: Rhetoric and Writing Studies 600, 601A, 602.

Problems in teaching of rhetoric and writing, both practical and theoretical. Advanced study of topics such as teaching practices, genres, stylistics, or a major figure. May be repeated with new content. Maximum credit six units.

**RWS 750. Seminar in Rhetorics of Science and Technology (3)**

Prerequisites: Rhetoric and Writing Studies 600, 601A, 602.

Rhetorical approaches to scientific and technical work, knowledge, texts, and debates. Includes rhetorical studies of workplace writing in organizational contexts.

**RWS 796A. Teaching Internship (3) Cr/NC**

Prerequisite: Completion of Rhetoric and Writing Studies 609 and consent of graduate adviser.

Teaching experience while student is under joint supervision of college-level teacher and academic instructor. Maximum credit three units.

**RWS 796B. Writing Internship (3)**

Prerequisites: Rhetoric and Writing Studies 501, 503W, 504, 600, 601A, 602, and consent of graduate director.

Intensive experience in writing and editing documents while student is under joint supervision of an academic instructor and a professional coordinator. Maximum credit three units applicable to a master's degree.

**RWS 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

**RWS 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**RWS 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

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# Russian

In the Department of European Studies  
In the College of Arts and Letters

OFFICE: Business Administration 304  
TELEPHONE: (619) 594-5111  
FAX: (619) 594-8006  
E-MAIL: [russian.coord@sdsu.edu](mailto:russian.coord@sdsu.edu)  
<http://www-rohan.sdsu.edu/~russian/>

Chair of Department: Edith J. Benkov

## Faculty

Veronica Shapovalov, Ph.D., Professor of Russian

## General Information

The Department of European Studies offers coursework in Russian which may be used toward fulfilling advanced degree requirements in Interdisciplinary Studies and other departments with the approval of the student's graduate adviser.

### UPPER DIVISION COURSES (RUSSN)

#### **RUSSN 501. Translation (3)**

Prerequisite: Russian 301.

Comparison of Russian and English through translation of a variety of texts from Russian to English and from English to Russian.

#### **RUSSN 555. Russian Literature of the Nineteenth Century (3)**

Prerequisite: Russian 200B.

Development of Russian novel, short story, drama and poetry of the nineteenth century.

#### **RUSSN 580. Russian Syntax and Stylistics (3)**

Prerequisite: Russian 301. **Proof of completion of prerequisite required:** Copy of transcript.

The structure of contemporary Russian.

#### **RUSSN 596. Topics in Russian Studies (3) I, II**

Prerequisite: Russian 305B (for literary topics). **Proof of completion of prerequisite required:** Copy of transcript.

Topics in Russian language, literature, or linguistics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### GRADUATE COURSES (RUSSN)

#### **RUSSN 696. Topics in Russian Studies (3)**

Intensive study in specific areas of Russian. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. Maximum credit of six units of 596 and 696 applicable to a 30-unit master's degree.

#### **RUSSN 798. Special Study (1-3) Cr/NC/RP**

Prerequisites: Eighteen upper division units in Russian and consent of staff; to be arranged with department chair and instructor.

Individual study. Maximum credit six units applicable to a master's degree.

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# Social Work

In the College of Health and Human Services

**OFFICE: Hepner Hall 119**  
**TELEPHONE: (619) 594-6865**

## Faculty

Anita S. Harbert, Ph.D., Professor of Social Work,  
Director of School  
John D. Clapp, Ph.D., Professor of Social Work  
Maria R. DeGennaro, Ph.D., Professor of Social Work  
Loring P. Jones, D.S.W., Professor of Social Work  
John A. Landsverk, Ph.D., Professor of Social Work  
Concepcion Barrio, Ph.D., Associate Professor of Social Work  
David W. Engstrom, Ph.D., Associate Professor of Social Work  
Daniel J. Finnegan, Ph.D., Associate Professor of Social Work  
Olita D. Harris, Ph.D., Associate Professor of Social Work, Associate  
Dean, College of Health and Human Services  
Melinda M. Hohman, Ph.D., Associate Professor of Social Work  
Margaret Jean Hughes, Ph.D., Associate Professor of Social Work  
Thomas R. Packard, D.S.W., Associate Professor of Social Work  
Lucinda A. Rasmussen, Ph.D., Associate Professor of Social Work  
(Graduate Adviser)  
Audrey M. Shillington, Ph.D., Associate Professor of Social Work  
Terry E. Carrilio, Ph.D., Assistant Professor of Social Work  
Sigrid James, M.S.W., Assistant Professor of Social Work  
Sally G. Mathiesen, Ph.D., Assistant Professor of Social Work  
Jong Won Min, Ph.D., Assistant Professor of Social Work

## Master of Social Work Degree

### General Information

The School of Social Work offers a two year full-time or three/four year part-time accredited graduate program leading to a Master of Social Work degree. The program qualifies students to apply for the Licensed Clinical Social Worker (LCSW) certification process by the Board of Behavioral Science Examiners of the State of California.

The goal of the Master of Social Work program is the education of advanced social work practitioners that enables them to provide services that assure people equal access to resources, programs, and opportunities; assist individuals in the accomplishment of life tasks, the alleviation of individual and social distress and the realization of aspirations as they relate to oneself, others and the society as a whole; and finally, because of its special geographic location in the Southern California border region, the school seeks to prepare professionals who will work with the predominate ethnic minority groups of the region in order to enhance the quality of life for economically disadvantaged groups. Special emphasis is currently given to those human needs that relate to the continuum of health care and well-being, families in transition, and social/environmental factors that create stress as it relates to individuals and groups in the home, workplace, and community.

The program is organized around student experience in a generalist social work foundation in their first year and a methods focus (direct practice or administration) in their second year. The school is extensively involved in local, state and national human service issues through individual faculty research and community intervention programs. In addition, the school has made commitments in the area of chemical dependency research and practice through the Center on Substance Abuse and policy research and intervention through the Social Policy Institute.

## Admission to Graduate Study

The School of Social Work admits new students to the MSW program only in the fall of each academic year. New students are not admitted to the program during the spring semester. To be guaranteed a space in the two year program, new students must apply between November 1 and February 1 of the year before they desire entry. Applications received after the February 1 deadline but before April 30 will be considered on a space available basis. Students currently enrolled or on leave of absence from CSWE accredited schools of social work are considered transfer students and can apply to the program for either fall or spring admission.

All applicants must file two separate applications: one to the Office of Graduate Admissions and one to the School of Social Work. The School of Social Work will not consider any applicant who has not filed both required applications. Specific University admission requirements and procedures are outlined in Part Two of this bulletin. Specific School of Social Work requirements and procedures are outlined in the admissions packet as well as on the School of Social Work Web site at <http://chhs.sdsu.edu/sw>.

Please be advised that the School does not accept life/work experience in lieu of any course requirements. The School does not accept transfer credit based on life/work experience. Students will have to retake any courses for which life/work experience was counted.

In addition to the regular application material, the University requires all applicants to take the Graduate Record Examination for admission. Scores must be reported to both the University and the School of Social Work. Applicants will not be reviewed by the School unless GRE scores are on file. Applicants must have taken and successfully passed one course in statistics and a liberal arts foundation at the undergraduate or graduate level.

The School cannot accept any student into the program until the University has accepted them into graduate study. For this reason, we urge interested students to submit both applications as early as possible. Students who are qualified for admission but who submit applications after all students have been accepted are placed on a waiting list and can be admitted up until August 1.

## Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. In addition, the student must: (1) have earned at least 24 units of postbaccalaureate study with a minimum grade point average of 3.0 (B) and received credit (Cr) in field practicum; (2) have no incomplete grades; (3) be recommended by the faculty of the School of Social Work; (4) be approved for advancement by the Graduate Division; (5) successfully pass a written qualifying examination given during the spring semester in which the student will complete 31 units of first year coursework.

## Specific Requirements for the Master of Social Work Degree

**(Major Code: 21041)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree in Part Two of this bulletin, the student must complete an officially approved 60 unit course of study including:

1. 25 units in generalist/foundation courses (SWORK 601, 619, 630, 631, 632, 650, 690);
2. Three units of computer applications for social work (SWORK 610);
3. 32 units of advanced study, including:
  - a. 3-6 units of advanced human behavior (SWORK 620A, 620B, 720);
  - b. 3 units of advanced social policy (SWORK 702);
  - c. 3 units of advanced research methods (SWORK 791 or 797).
  - d. 6-9 units of social work electives (SWORK 758, 780, 781, 798, 799A);

14 units in a Social Work Methods Focus Area (Direct Practice or Administration).

<b>Direct Practice</b>	<b>OR</b>	<b>Administration</b>
SWORK 739 (3)		SWORK 740 (3)
SWORK 744 (3)		SWORK 745 (3)
SWORK 750A (8)		SWORK 750B (8)

In addition to the above courses, students must complete either a Thesis (Plan A) or a comprehensive written examination (Plan B). Students doing the thesis, may count Social Work 799A as 3 units of elective.

At least 30 units of the program must be completed in residence at San Diego State University. A maximum of 30 units is transferable from another accredited graduate program in social work.

Six units of elective credit may be taken from other schools or departments within the University with the permission of the graduate adviser. See Student Handbook for specific elective policies. To receive the degree, students must earn a 3.0 (B) grade point average in academic courses and demonstrate professional competence for required practicum (Cr for all semesters).

In addition, the National Association of Social Workers (NASW) Code of Ethics represents the professional standards of the MSW program. The NASW Code of Ethics is available in the student handbook. All students are expected to know and adhere to its principles of professional conduct. Students who knowingly or unknowingly violate any part of the ethical code may be dismissed from the program without further qualification regardless of coursework, research, or other academic achievement.

## Student Handbook

The School of Social Work has a student handbook for graduate students. The handbook contains policies and procedures not specified in this bulletin in addition to information to aid students in completing the MSW degree program. Students must obtain a revised handbook at the beginning of fall as long as they are in the program. Handbooks are on sale at the SDSU Bookstore under Social Work.

## Program of Study

The program is organized in the first year around a generalist/foundations. The second year program is organized around a methods focus area. Students will select one of the methods focus areas described below during the semester before the beginning the second year of the program.

### Methods Focus Areas

#### Direct Practice Social Work

Focus is on interpersonal conflicts and social functioning with emphasis on appropriate intervention methods used primarily with individuals, families, and groups. Emphasis is placed on a problem-solving framework that utilizes assessment/diagnosis, intervention/treatment and evaluative skills.

#### Social Work Administration

Focus is on intervention in inter- and intra-organizational functioning of social welfare agencies. Particular emphasis is placed on intervention in problems of organizational administration and development of voluntary and public social agencies. The skills emphasized include service delivery design, budgeting, team building and organizational decision making.

In addition to the methods focus of the program of study, the curriculum provides students the opportunity to develop knowledge and skills in a specialized field of service while meeting their advanced human behavior, advanced social policy, advanced field practicum, and elective requirements. Students, with guidance from the graduate adviser and a faculty member serving as a professional mentor, select coursework that address their specific educational and career goals. Based on the current strengths of the school's faculty, students can use their coursework and their field practicum to develop specialized knowledge in the areas of child welfare, family services, mental health, aging, substance abuse, and health. In addition, students may use thesis research to extend their knowledge in one of these areas.

## Master of Social Work and Juris Doctor Degree

### General Information

The School of Social Work and the California Western School of Law offer a four-year concurrent graduate program which allows students to earn simultaneously a Master of Social Work and a Juris Doctor (JD) degree in law. The objective of the concurrent degrees program is to prepare students who are competent in advanced practice where social work and law converge.

### Admission to Graduate Study

To request application materials for the concurrent dual degrees program in social work and law, applicants should contact the Office of Admissions at the School of Social Work, San Diego State University, and the Office of Admissions at California Western School of Law. Two separate application processes must be followed. Please see the Admission to Graduate Study section in this bulletin under the Master of Social Work degree program. (The only difference is that students earning the two degrees simultaneously may substitute the results of the LSAT examination for the GRE examination.) Applicants should indicate on the appropriate section of each application that they are applying for the concurrent dual degrees MSW/JD program. Please contact the MSW/JD program coordinator at California Western School of Law at (619) 525-1463 for more specific information about admissions processes and requirements.

### Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. In addition, students must also meet all criteria outlined under the Advancement to Candidacy section for the Master of Social Work program.

### Specific Requirements for the MSW/JD Concurrent Degree Program

(Major Code: 21045)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin and all requirements listed in the California Western School of Law catalog for the JD degree, the student must complete an officially approved course of study as outlined below.

**School of Social Work**

**(60 Units—Including six units transferred from California Western School of Law)**

SWORK 601	Seminar in Social Welfare Policy and Services (3)
SWORK 619	Human Behavior in the Social Environment (3)
SWORK 620A or 620B	Seminar in Human Behavior and the Social Environment (3)
SWORK 630	Social Work Practice: A Generalist Perspective (3)
SWORK 631	Social Work Practice: Individuals, Families, and Groups (3)
SWORK 632	Social Work Practice: Organizations and Communities (3)
SWORK 650	Field Practicum (7) Cr/NC
SWORK 690	Seminar in Social Work Research Methods (3)
SWORK 702D	Seminar in Social Welfare Policy and Services: Children, Youth, and Families (3)
SWORK 720	Seminar in Selected Topics in Human Behavior and Social Environment (3)
SWORK 750	Advanced Field Practicum (8) Cr/NC
SWORK 797	Research (3) Cr/NC/RP
SWORK 799A	Thesis (3) Cr/NC/RP
Electives:	Six units transferred from California Western School of Law courses and six units in a second year practice concentration.

<b>Direct Practice</b>	<b>OR</b>	<b>Administration</b>
SWORK 739 (3)		SWORK 740 (3)
SWORK 744 (3)		SWORK 745 (3)

**California Western School of Law**

**(89 Units—Including 12 units transferred from the School of Social Work)**

Civil Procedures I and II (6)
Contracts I and II (6)
Criminal Law I (3)
Legal Skills I and II (4)
Property I and II (6)
Torts I and II (6)
Constitutional Law II (3)
Criminal Procedure I (3)
Evidence (4)
Professional Responsibility (2)
Interdisciplinary Program for Child Abuse and Neglect (6)
Independent Study (3)
Internship (5)
Electives: 32 units (includes 12 units from SDSU)

The specific sequence of courses over the four year period is listed in the admissions material. Students attend the schools in the following pattern:

Year 1	California Western School of Law only
Year 2	San Diego State University School of Social Work only
Year 3	(Fall) Both Schools
Year 3	(Spring) California Western School of Law only
Year 4	Both Schools

**Master of Social Work and Master of Public Health Degrees**

**General Information**

The School of Social Work and the Graduate School of Public Health offer a three year concurrent graduate program leading to a Master of Social Work and a Master of Public Health. The objective of the concurrent program is to offer preparation in the fields of public health and social work. Students in this concurrent program must select the social work administration methods focus area.

**Admission to Graduate Study**

For additional admission information refer to Admission to Graduate Study for the MSW. In order to be considered for the concurrent MSW/MPH program, applicants must:

1. Meet the general requirements for admission to graduate study at the University (see Part Two of this bulletin).
2. Have a minimum 2.85 grade point average in the last 60 semester or 90 quarter units in undergraduate work completed. Undergraduate preparation in at least one of the following areas is preferred: social work, social or behavioral sciences, or health science.
3. A satisfactory score on the GRE General Test. Applicants already holding another master's degree or higher degree from an acceptable accredited graduate school are exempt from the GRE.
4. Submit a narrative statement as described in Instructions for Applicants.
5. Submit three letters of recommendation.

A committee composed of faculty from Social Work and Public Health will make all admission recommendations to the Dean of the Graduate Division.

**Advancement to Candidacy**

All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. All core courses in social work and public health must be completed prior to advancement. In addition, the student must: (1) have earned at least 24 units of graduate study within the concurrent program with a minimum grade point average of 3.0 and no grade less than a B- in each core course (applies to Public Health courses only); (2) have been recommended for advancement by the combined faculty advisory committee; received credit (Cr) in field practicum; (3) have a thesis proposal approved by the combined faculty advisory committee.

Upon advancement to candidacy, the student will enroll in Social Work 797 (Research), Public Health 797 (Research), and Social Work 799A (Thesis) or Public Health 799A (Thesis). A thesis (Plan A) incorporating theory, method, and analytic techniques from both disciplines is the culminating experience for the concurrent program leading to the MSW and MPH degrees.

**Specific Requirements for the MSW/MPH Degree**

**(Major Code: 12991)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete an officially approved course of study of not less than 83 units as outlined below.

**Social Work/Public Health-Health Services Administration**

Courses prerequisite to the program are Public Health 640 and Business Administration 650 or their equivalents as determined by the graduate adviser. If these courses or the equivalents have not been completed prior to admission, they should be included in the first semester course requirements.

BA 650	Financial Reporting and Analysis I (2)
PH 640	Public Issues in Financing Health Care (3)
SWORK 601	Seminar in Social Welfare Policy and Services (3)
SWORK 619	Human Behavior in the Social Environment (3)
SWORK 630	Social Work Practice: A Generalist Perspective (3)
SWORK 631	Social Work Practice: Individuals, Families, and Groups (3)
SWORK 632	Social Work Practice: Organizations and Communities (3)
SWORK 650*	Field Practicum (7) Cr/NC
SWORK 690	Seminar in Social Work Research Methods (3)
SWORK 702	Seminar in Social Welfare Policy and Services: Health and Aging (3)
SWORK 740	Advanced Seminar in Social Work Administration (3)
SWORK 745	Advanced Seminar in Selected Topics in Social Work Administration (3)
SWORK 750B*	Advanced Field Practicum: Social Work Administration (8) Cr/NC/RP
SWORK 797	Research (3) Cr/NC/RP
PH 601	Epidemiology (3)
PH 602	Biostatistics (3)
PH 604	Environmental Determinants of Human Health (2)
PH 641	Introduction to Health Services (3)
PH 644A	Health Services Organizations (3)
PH 644B	Health Services Management (3)
PH 645	Health Economics (3)
PH 647A	Quantitative Methods and Health Data Analysis (3)
PH 742A	Health Services Financial Management (3)
PH 742B	Financing Health Systems and Services (3)
PH 797	Research (3) Cr/NC/RP
PH 799A or SWORK 799A	Thesis (3) Cr/NC/RP
Electives:	Three units selected from a graduate-level course in Social Work. This may include any 600-level or above course in social work with the approval of the faculty adviser.

\* Social Work 650 and 750 (field practica) must have the approval of the faculty advisory committee. Responsibility for faculty field supervision will be assigned in social work.

Transfer units will not be accepted toward the concurrent MSW/MPH degree program. Graduate study or degrees obtained previously will not be accepted toward meeting the unit requirements of the concurrent MSW/MPH degree program.

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

**Pupil Personnel Services Credential**

The School of Social Work is accredited by the State of California Department of Education to offer the Pupil Personnel Services Credential in School Social Work and the Pupil Personnel Services Credential in Child Welfare and Attendance. The credentials can be awarded under two conditions:

1. As part of the regular MSW program being completed during the second year coursework. Students would be assigned to a second year SWORK 750A (Direct Practice/Children, Youth and Families) internship in an approved and supervised school placement. In addition, students must take SWORK 758 (School Social Work) as their fall elective course, and SWORK 758 (Practice in the Educational Arena) as their spring elective course.
2. As a post MSW student through the College of Extended Studies. Interested professionals must contact the PPS coordinator and apply for the program which consists of 14 units taken over two semesters beginning in the fall of each year. The program includes SWORK 758 (School Social Work—3 units), SWORK 758 (Practice in the Educational Arena—3 units), and SWORK 750A (4 units) each semester. SWORK 750A is a 20-hour per week internship required to accumulate the necessary time for the credentials.

**Admission**

Current students interested in the PPS credential need only file the regular SWORK 750A application during the spring semester prior to enrollment. Unless demand is high, students will generally be admitted to the credential program.

Post MSW students must obtain the information packet for SWORK 750 in February of the year they wish to begin the program. Post MSW students must then file the necessary application to the Coordinator of Field Education by the deadline date established for all students. In entering the program, admission is based upon available internship sites. Preference is given to current students. Official acceptance does not occur until late spring when all current students have been placed.

For further information contact Dr. Daniel J. Finnegan, PPS Coordinator, (619) 594-6850, or email: dfinnega@mail.sdsu.edu.

**Courses Acceptable on Master's Degree Programs in Social Work (SWORK)**

**UPPER DIVISION COURSE**

**SWORK 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**

**SWORK 601. Seminar in Social Welfare Policy and Services (3)**

Social welfare as a social institution; philosophical, historical, and comparative analysis of the welfare functions, issues and problems in both policy and program development, implementation, and evaluation.

**SWORK 610. Computer Application in Social Work Practice (3)**

Prerequisite: Social Work 690.

Computer technology in social work practice with emphasis on clinical and administrative applications, program monitoring, and support of service provision and delivery.

**SWORK 619. Human Behavior in the Social Environment (3)**

Conceptual framework to view and interpret behavior and to understand functioning of individuals, families, groups, organizations, and communities within ecological systems.

**SWORK 620. Seminar in Human Behavior and Social Environment (3)**

Prerequisite: Social Work 619.

Human behavior theories and concepts appropriate to a methods concentration.

- A. Direct Practice
- B. Administration

**SWORK 630. Social Work Practice: A Generalist Perspective (3)**

Prerequisite: Concurrent registration in Social Work 650.

Overview of generalist social work practice as a method and process. Generalist social work presented as a basic helping approach used to assist individuals, groups, families, organizations, and communities to achieve personal and social change.

**SWORK 631. Social Work Practice: Individuals, Families, and Groups (3)**

Prerequisites: Social Work 630 and concurrent registration in Social Work 650.

Preparation for direct intervention with individuals, families, and groups.

**SWORK 632. Social Work Practice: Organizations and Communities (3)**

Prerequisites: Social Work 630 and concurrent registration in Social Work 650.

Theoretical knowledge of elementary organizational and interorganizational decision making in human service programs.

**SWORK 650. Field Practicum (3-8) Cr/NC**

Field instruction in public or voluntary social work setting. Seven units required. Maximum credit seven units. Experiences emphasize application of social work objectives, principles, and skills in service to individuals, families, groups, organizations, and communities.

**SWORK 690. Seminar in Social Work Research Methods (3)**

Definition and purpose of research in social work. Techniques and methods used in collecting, organizing, and interpreting social welfare and related data; steps involved in planning a research project and selecting a research design.

**SWORK 696. Seminar on Selected Topics (3)**

Intensive study in specific areas of social work. May be repeated with new content. See Class Schedule for specific content. Maximum credit of nine units of 696 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**SWORK 702. Seminar in Selected Social Welfare Policy and Services (3)**

Prerequisite: Social Work 601.

Selected social welfare policies used to examine processes of policy formulation, policy analysis skills, and relationships of policy decisions and indecisions to outcomes of social welfare interventions. Maximum credit six units applicable to a master's degree. (Formerly numbered Social Work 702B, 702C, 702D.)

**SWORK 720. Seminar in Selected Topics in Human Behavior and Social Environment (3)**

Prerequisite: Social Work 620A or 620B.

Selected topics related to current theories of natural and induced change in human behavior which have utility for social work practice within fields of service. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**SWORK 739. Advanced Seminar in Social Work Practice with Families (3)**

Prerequisites: Social Work 744 and concurrent registration in Social Work 750A.

Family dynamics and social work practice related to family change.

**SWORK 740. Advanced Seminar in Social Work Administration (3)**

Prerequisite: Social Work 631, 632, and concurrent registration in Social Work 750B.

Problems and roles of administrators in social agencies; administrative and organizational theories; executive functions of planning, budgeting, directing, reporting and staffing; multilevel relationships and communications.

**SWORK 744. Advanced Seminar in Selected Topics in Direct Practice Social Work (3)**

Prerequisites: Social Work 631, 632, and concurrent registration in Social Work 750A.

Study of a selected aspect of direct practice social work. Topics include treatment methodology, theoretical approaches, levels of practice, specific client groups, or special problem areas. See Class Schedule for specific content.

**SWORK 745. Advanced Seminar in Selected Topics in Social Work Administration (3)**

Prerequisite: Social Work 740 and concurrent registration in Social Work 750B.

Study of a selected aspect of social work management in human services. Topics may cover such foci as program development, program evaluation, grant writing, resource development, financial management or management of nontraditional programs/projects. See Class Schedule for specific content.

**SWORK 750. Advanced Field Practicum (4-8) Cr/NC/RP**

Prerequisites: Social Work 650 and concurrent registration in Social Work 739 or 740 and 744 or 745.

Advanced field instruction in public or voluntary social work setting. Eight units required. Continuation and intensification of experiences in application of social work objectives, principles and skills in service to individuals, families, groups and communities related to:

- A. Direct Practice Social Work
- B. Social Work Administration

**SWORK 758. Seminar in Social Work and Selected Fields of Practice (1-3)**

Traditional and emerging fields of practice and related social work responsibilities and roles. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**SWORK 780. Seminar in Social Work and Selected Populations-at-Risk (3)**

Social work practice with selected populations-at-risk such as one-parent families, children in institutions, ethnic minority immigrants, Native-Americans in the urban scene, and foreign-born brides of U.S. servicemen. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**SWORK 781. Seminar on Selected Populations-at-Risk (3)**

Knowledge about and analysis of selected populations-at-risk, social work responsibilities in emerging service demands by diverse and needful, high risk segments of the population in a complex society, and implications for social work practice. Population-at-risk for study to be announced in Class Schedule. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**SWORK 791. Applied Social Work Practice Research Seminar (3)**

Prerequisite: Social Work 690.

Preparation for practitioner-researcher role through application of social work research concepts and procedures in practice situations (in class and field) of social work interventions. Maximum credit six units applicable to a master's degree. (Formerly numbered Social Work 791A, 791B.)

**SWORK 797. Research (3) Cr/NC/RP**

Prerequisite: Consent of Instructor.

Research in one of the areas of social work. Maximum credit three units applicable to a master's degree.

**SWORK 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of staff; to be arranged with director and instructor.

Individual study. Maximum credit three units applicable to a master's degree.

**SWORK 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a thesis for the master's degree.

**SWORK 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

**SWORK 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Sociology

In the College of Arts and Letters

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<http://www.rohan.sdsu.edu/dept/sdsusoci/sociology.html>

## Faculty

Phillip T. Gay, Ph.D., Professor of Sociology,  
Chair of Department  
Robert E. Emerick, Ph.D., Professor of Sociology  
Charles F. Hohm, Ph.D., Professor of Sociology, Associate Dean of the  
College of Arts and Letters  
Bohdan Kolody, Ph.D., Professor of Sociology  
Paul Wong, Ph.D., Professor of Sociology, Dean of the College of Arts  
and Letters  
James L. Wood, Ph.D., Professor of Sociology  
Robert E. Buck, Ph.D., Associate Professor of Sociology  
Shelly E. Chandler, Ph.D., Associate Professor of Sociology, Emeritus  
(Graduate Adviser)  
Ruth X. Liu, Ph.D., Associate Professor of Sociology  
Norma Ojeda, Ph.D., Associate Professor of Sociology  
Jana L. Pershing, Ph.D., Associate Professor of Sociology  
Sheldon X. Zhang, Ph.D., Associate Professor of Sociology  
Jill Esbenshade, Ph.D., Assistant Professor of Sociology  
Michael A. McCall, M.A., Assistant Professor of Sociology  
Paul W. Sargent, Ph.D., Assistant Professor of Sociology  
Jung M. Choi, Ph.D., Adjunct Associate Professor of Sociology,  
Director of University Honors Program

## Associateships and Assistantships

Graduate teaching associateships and graduate assistantships in sociology are available to a limited number of qualified students. Application blanks and further information may be obtained from the department office.

## General Information

The Department of Sociology offers graduate work leading to the Master of Arts degree in Sociology. Research facilities provided by the Department of Sociology include a well-equipped Social Science Research Laboratory for use by the faculty and graduate students. Faculty in the Department of Sociology are involved in a wide range of research activities with a focus on applied sociological research. Regular opportunities exist for participation in these projects by graduate students within the department.

## Admission to Graduate Study

Students will be admitted for the fall and spring semester. For fall admission, application packages must be received and complete by April 15. For spring admission, application packages must be received and complete by November 1.

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. The graduate advisory committee may consider conditionally classified standing for students whose preparation is deemed insufficient. They will be required to complete specified courses in addition to the minimum of 33 units required for the degree.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to:

Department of Sociology  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4423

- (1) GRE scores (official notification);
- (2) Three letters of recommendation;
- (3) A personal statement;
- (4) A writing sample (preferably an academic paper). If this is not available, send an extended, three to five page personal statement. See application information on the Department of Sociology home page at <http://www.rohan.sdsu.edu/dept/sdsusoci/sociology.html>.

Applicants should obtain a current information brochure from the department office for detailed information.

Meeting all the indicated criteria does not guarantee admission to the program, since admission is also dependent on the facilities and resources available in the department.

## Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Two of this bulletin. Students must take at least three of the four 600-level core courses (Sociology 601, 602, 603, and 604) and must achieve a minimum "B" (3.0) grade average by the end of the first year in the master's program and no less than a B- grade in each core course. A student may seek exemption from a maximum of two core courses by passing an examination in the respective areas.

## Specific Requirements for the Master of Arts Degree

(Major Code: 22081)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree, as described in Part Two of this bulletin, students must complete an approved graduate program in sociology (general or applied). While six units of electives may be taken in other departments, these courses must be acceptable for master's degree credit in the particular departments in which they are offered and be approved by the graduate adviser. Students must include in their graduate program at least 18 units of sociology courses from the list of 600- and 700-numbered courses. Sociology 799A (Thesis) and an oral examination on the thesis are required. The student will be expected to relate the narrower concerns of the thesis to a more comprehensive treatment of theoretical and methodological issues. Before the student proceeds with the thesis, approval must be obtained based upon a detailed thesis proposal, usually undertaken through Sociology 797.

There is no foreign language requirement, but students who wish to pursue a doctorate at another university are advised to acquire a reading knowledge of one or two foreign languages.

The Master of Arts degree in sociology is obtained with a specialization in one of the following areas:

**General Sociology.** Students master theory and methods with an emphasis on surveying the discipline in preparation for teaching or more advanced graduate study.

Courses required for the general sociology specialization: 33 units to include 15 units of core courses, Sociology 600, 601, 602, 603, and 604; a minimum of six additional units in sociology courses from the list of 700-level seminar courses; Sociology 799A (Thesis); and a minimum of nine additional units, chosen from 500-, 600-, and 700-numbered courses (a maximum of six units may be selected from other departments, with approval of the graduate adviser).

**Applied Sociology.** Students master theory and methods, but with an emphasis on applying social theory and methods to specific real-world research problems, in preparation for employment as applied researchers in academic and non-academic settings.

Courses required for the applied sociology specialization: 33 units to include Sociology 600, 601, 602, either 603 or 604, 760, 796; one 3-unit 700-level seminar; six units of Sociology 597 (to be arranged with faculty and graduate adviser); 799A; and three elective units from courses numbered Sociology 500-700.

## Courses Acceptable on Master's Degree Program in Sociology (soc)

### UPPER DIVISION COURSES

#### SOC 505. Applied Sociological Research (3)

Prerequisites: Sociology 250 and Sociology 407 or 408.

Types and methods of applied sociological research; and an overview of their application in substantive areas. Practical research skills.

#### SOC 522. The Family in Comparative and Cross-Cultural Perspectives (3)

Prerequisite: Sociology 101. Recommended: Sociology 421.

Comparative study of selected family systems in the past and present. Comparative analysis of major social and demographic changes in marriage and family in post-industrial nations and less developed countries. Cross-cultural comparisons of family arrangements in contemporary America by social classes and racial-ethnic groups.

#### SOC 531. Working and Society (3)

Prerequisite: Sociology 101.

Structure and change in labor force, nationally and internationally. Social drama of work: self, roles, conflict, subcultures. Includes exploration of student work experiences, workers in the community, literacy, and film depictions of work worlds.

#### SOC 532. Workers, Managers, and Bureaucracy (3)

Prerequisite: Sociology 101.

Sociology of work in formal organizations. From classic theories on division of labor, industrial capitalism, and bureaucracy, to transformation of work in the twentieth century. Experiences of workers and managers in the U.S. and other societies.

#### SOC 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.

#### SOC 539. Sociology of Education (3)

Prerequisite: Sociology 101.

Social organization of education in the United States and other societies. Structure and functions of educational institutions. Formal and informal education. Class, ethnic, and other social factors affecting the educational process. Implications of educational decision making and testing.

#### SOC 543. Police, Courts, and Corrections: The Sociology of Crime and Punishment (3)

Prerequisite: Sociology 101.

Historical sociology of the American criminal justice system. Development and functions of police, criminal courts, prisons, parole, and probation. Theories and ideologies of punishment and rehabilitation. Review of contemporary research.

#### SOC 555. Immigrants and Refugees in Contemporary American Society (3)

Prerequisite: Sociology 101.

Contemporary migration to the United States, especially from Latin America and Asia. Political and economic migration. Immigrant and refugee adaptation. Theoretical controversies, research applications, and policy implications.

#### SOC 596. Current Topics in Sociology (1-3)

Prerequisite: Sociology 101.

Selected specialized, controversial or currently relevant topics in sociology. Maximum opportunity provided for student initiative in determining course content and procedures. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

#### SOC 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

#### SOC 600. Proseminar in Sociology (3)

Prerequisite: Conditional graduate standing.

Elements of profession of sociology and sociological research procedures. Connection between theoretical perspectives and appropriate research methods. Practice in scientific sociological writing styles to develop a master's thesis proposal.

**SOC 601. Advanced Social Theory: Core Course (3)**

Prerequisites: Conditional graduate standing, Sociology 401.

Systematic treatment of the original European and American classic sociological writing and an overview of the major developments in contemporary social theory.

**SOC 602. Advanced Research Methods: Core Course (3)**

Prerequisites: Conditional graduate standing; Sociology 406, 407, or 408.

Problems and techniques in social research with stress on philosophy of science, theory building, research design, measurement, and data analysis including fundamental critiques and alternatives.

**SOC 603. Advanced Social Psychology (Sociological Approaches): Core Course (3)**

Prerequisites: Conditional graduate standing, Sociology 410.

Investigation and analysis of original works in classical social psychological theory focusing on implications for research on topics such as socialization, motivation, perception, role, self, interaction and symbolic processes.

**SOC 604. Advanced Social Organization: Core Course (3)**

Prerequisites: Conditional graduate standing, Sociology 430.

Concepts, theories and findings concerning structure and change in society, institutions, formal organizations, the community and small groups. Special attention given key concepts of culture, stratification, division of labor, power, bureaucracy, role relationships and interaction.

**SOC 695. Topics in Directed Readings (3)**

Prerequisite: Credit or concurrent registration in at least one core course or one seminar.

Selected reading providing coverage of social theory, social disorganization, social organization, social institutions, social psychology (sociological approaches), community research methods, population and demography, or special topics. Maximum credit six units applicable to a master's degree.

**SOC 696. Experimental Topics (3)**

Prerequisite: Graduate standing.

Intensive study in specific areas of sociology. May be repeated with new content. See Class Schedule for specific content. Maximum credit of six units of 696 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**SOC 700. Seminar in Social Theory (3)**

Prerequisites: Sociology 401 and 407.

Classics of sociology, American social theory, theory construction, application of theory to research, theoretical models, sociology of knowledge, special topics. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**SOC 730. Seminar in Social Institutions (3)**

Prerequisites: Sociology 407 and 430.

The family and kinship, political organization, economic organization, religion, education, industry, occupations and professions, social stratification, special topics. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**SOC 740. Seminar in Social Psychology: Sociological Approaches (3)**

Prerequisites: Sociology 407 and 410.

Socialization, role theory, motivation, perception, self, social context of personality, attitude theory, interaction, language and symbolic process, social types, collective behavior, small groups, special topics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**SOC 743. Seminar in Criminology and Criminal Justice Theory (3)**

Prerequisites: Graduate standing, 12 graduate units, Sociology 401.

History of criminological theory and review of leading contemporary theories of crime and criminal justice with focus on interconnection among social context, theory, and policy making.

**SOC 760. Seminar in Research Methods (3)**

Prerequisites: Sociology 401 and 407.

Analysis of methods used in current sociological research, including evaluation of reported findings. Discussion of research designs appropriate to particular types of projects. Evaluation of research in progress by members of the seminar. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**SOC 796. Field Practicum (3) Cr/NC**

Prerequisites: Sociology 601, 602, and either 603 or 604.

Supervised field placement in community agency. Application of sociological theories and methods to policy and research needs of agency. Maximum credit six units applicable to a master's degree.

**SOC 797. Research (3) Cr/NC/RP**

Prerequisite: Sociology 407.

Independent investigation of special topics. Maximum credit six units applicable to a master's degree.

**SOC 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

**SOC 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**SOC 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

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# Spanish

In the Department of Spanish and Portuguese  
Languages and Literatures  
In the College of Arts and Letters

**OFFICE: Business Administration 403**  
**TELEPHONE: (619) 594-6588**  
**FAX: (619) 594-5293**

## Faculty

Kathleen V. Kish, Ph.D., Professor of Spanish,  
Chair of Department  
Margarita G. Hidalgo, Ph.D., Professor of Spanish  
Gail L. Robinson, Ph.D., Professor of Spanish  
Malcolm N. Silverman, Ph.D., Professor of Spanish  
Carlos G. Wilson, Ph.D., Professor of Spanish  
José Mario Martín-Flores, Ph.D., Associate Professor of Spanish  
Claudia V. Angelelli, Ph.D., Assistant Professor of Spanish  
Juan M. Godoy, Ph.D., Assistant Professor of Spanish  
Maria Irene Moyna, Ph.D., Assistant Professor of Spanish  
Darlene Múzquiz-Guerreiro, Ph.D., Assistant Professor of Spanish  
Brett A. Rosenberg, Ph.D., Assistant Professor of Spanish  
Nora Strejilevich, Ph.D., Assistant Professor of Spanish  
Francisco Zabaleta, Ph.D., Assistant Professor of Spanish

## Associateships

Graduate teaching associateships in Spanish are available to a limited number of qualified students. New teaching associates are required to enroll in Spanish 770 during their first semester as teaching associates. Application blanks and additional information may be secured from the chair of the department.

## General Information

The Department of Spanish and Portuguese Languages and Literatures offers graduate study leading to the Master of Arts degree in Spanish.

Library facilities include rich resources in Spanish literature and linguistics, including books, periodicals and newspapers. A Language Acquisition Resource Center with modern equipment is available to both graduate and undergraduate students.

## Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. An undergraduate major in Spanish, including 24 upper division units, must have been completed, at least six units of which must have been in a survey course in Spanish literature.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>.

The following materials should be submitted as a complete package directly to the graduate adviser in the Department of Spanish and Portuguese:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) GRE scores (official notification);
- (3) Three letters of reference;
- (4) Statement of purpose.

Mail or deliver your complete admissions package to:

Department of Spanish and Portuguese  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7703

## Advancement to Candidacy

In addition to meeting the requirements for advancement to candidacy as described in Part Two of this bulletin, students may be required to pass a qualifying examination in Spanish given by the Department of Spanish and Portuguese Languages and Literatures.

## Specific Requirements for the Master of Arts Degree

**(Major Code: 11051)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete an approved graduate program of at least 30 units. Each program must include Spanish 601, 602, and for teaching associates, Spanish 770.

Candidates for the master's degree in Spanish may select one of the following areas of specialization:

1. **Spanish Linguistics:** Spanish 601, 602, three units from the area of formal/historical linguistics (Spanish 549, 609, 611, 790); three units from the area of Spanish language acquisition (Spanish 561, 612, 661, 770, 780, 781), three units from the area of sociolinguistics (Spanish 581, 582, 612, 681, 682, 792); 12 units from any combination of the courses above not taken to fulfill specific area requirements, or Spanish 799A; three units in Spanish or Spanish American literature selected from 600- or 700-level courses. With the approval of the graduate adviser, a maximum of six units selected from the following courses will be accepted for graduate credit in Spanish linguistics: Linguistics 640, 650.
2. **Spanish American Literature:** Spanish 601, 602, 620, and three units of Spanish linguistics; 15 units in Spanish with Spanish American literature content selected from 500-, 600- or 700-level courses; Spanish 799A or three units of electives in Spanish American or Spanish literature content.
3. **Spanish Literature:** Spanish 601, 602, 620, and three units of Spanish linguistics; 12 units in Spanish with Spanish literature content selected from 500-, 600-, or 700-level Spanish courses; three units in Spanish with Spanish American literature content selected from 500-, 600-, or 700-level courses; Spanish 799A or three units of electives in Spanish or Spanish American literature content.

In addition, all candidates must demonstrate a knowledge of Portuguese by passing an examination administered by the department or by completing Portuguese 101 or 201.

In consultation with the graduate adviser, students may elect either Plan A, requiring a thesis, Spanish 799A; or Plan B, requiring a comprehensive written and oral examination in lieu of the thesis.

## Courses Acceptable on Master's Degree Programs in Spanish (PORT) (SPAN)

### Spanish (SPAN) UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

#### SPAN 501. Genre Studies in Spanish Literature (3)

Prerequisites: Spanish 405A-405B.

A specific literary genre: overview of the genre's development in Spanish literature (Spanish novel, short story, theatre) or focus on a narrower period (contemporary narrative, modern poetry). May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

#### SPAN 502. Genre Studies in Spanish American Literature (3)

Prerequisites: Spanish 406A-406B.

A specific literary genre: overview of the genre's development in Spanish American literature (the Spanish American novel, short story, theatre) or focus on a narrower period (vanguardista poetry, the "Boom"). May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

#### SPAN 515. Mexican Literature (3)

Prerequisites: Spanish 406A-406B.

Mexican literature from the Romantic period to the present. Special emphasis placed on contemporary era.

#### SPAN 520. Caribbean Area Countries Literature (3)

Prerequisites: Spanish 406A-406B.

Literature of Caribbean Islands, Central America, Colombia and Venezuela, from colonial period to present. Special emphasis on contemporary era.

#### SPAN 549. Spanish Phonetics and Phonology (3) I

Prerequisite: Spanish 448.

Sounds of Spanish: consonants, vowels, semivowels, syllabic structure, rhythm, stress. Sound system of Spanish: phonemes and allophones. Main differences between English and Spanish and between regional and social varieties of Spanish. Alternative analytical paradigms. Not open to students with credit in Spanish 449.

#### SPAN 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.

#### SPAN 557. Seminar in Interpretation Issues and Theories (3) II

Prerequisites: Spanish 350, 491; Rhetoric and Writing Studies 305W with a grade of B (3.0) or better.

Modes and settings of language interpretation. Similarities and differences in principles applicable to court, conference, community, and medical interpreting discussed in terms of type of discourse, interlocutors, institutional, and cultural framework.

#### SPAN 561. Methods in Teaching Spanish as a Second Language (3)

Prerequisite: Spanish 350 or 448.

Teaching of Spanish as a second language: contemporary theory and methods. Not open to students with credit or concurrent enrollment in French 561.

#### SPAN 572. Spanish American Theatre (3) (Offered only at IVC)

Prerequisites: Spanish 406A-406B.

Principal Spanish American dramatists and movements. Special emphasis on contemporary era.

#### SPAN 581. Mexican Sociolinguistics (3)

Prerequisites: Spanish 350 and 448.

Sociolinguistic phenomena occurring in Mexico from pre-Columbian times to the present. Language diversity before 1521 and throughout the colony; language contact and bilingualism; language policy and loss of indigenous languages. Emergence of Spanish as the national standard code in the nineteenth century. Regional dialects of Mexican Spanish.

#### SPAN 582. Sociolinguistics of U.S. Spanish (3)

Prerequisites: Spanish 350 and 448.

Contact of Spanish and English in the U.S. Southwest from 1848 to the present. Spanish language loss in the nineteenth century. Bilingualism in urban and rural communities; language maintenance and shift in the twentieth century. Language attitudes and bilingual education. Varieties of Spanish in the Southwest, the Northeast, and Florida.

#### SPAN 594A. Consecutive English/Spanish Interpretation (3)

Prerequisites: Spanish 350 or 391.

Consecutive interpretation techniques focusing on current events to include notetaking technique for interpreters, preparation for meetings, language register, active listening, structure of a speech, abstracting meaning, sight translation in the booth.

#### SPAN 594B. Simultaneous English/Spanish Interpretation (3)

Prerequisite: Spanish 594A with a grade of B (3.0) or better.

Simultaneous interpretation techniques focusing on current events. Simultaneous, whispered, and relay interpretation, preparation for meetings, language register, listening, structure of a speech, abstracting, sight translation in the booth.

#### SPAN 596. Selected Studies in Spanish (3)

Prerequisite: Spanish 302 or 381.

Topics in Spanish or Spanish American language, literature, culture and linguistics. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### Portuguese (PORT) UPPER DIVISION COURSES

#### PORT 534. Portuguese Literature (3)

Prerequisite: Portuguese 401.

Important movements, authors, and works in the literature of Portugal from its beginnings to the present.

#### PORT 535. Brazilian Literature (3)

Prerequisite: Portuguese 401.

Important movements, authors, and works of the literature of Brazil from the colonial period to modern times.

### GRADUATE COURSES IN SPANISH (SPAN)

*All graduate courses in the Department of Spanish and Portuguese Languages and Literatures have a prerequisite of 12 upper division units in Spanish or consent of instructor.*

#### SPAN 601. Seminar in Hispanic Literary Theory (3)

Prerequisite: Two upper division literature courses in Spanish.

Critical issues in Hispanic literary theory from medieval to modern times. Emphasis on contemporary theory: formalism, hermeneutics, phenomenology, structuralism, and post-structuralism, including semiotics and deconstructionism.

#### SPAN 602. Foundations of Hispanic Linguistics (3)

Prerequisite: Spanish 448.

Linguistics as a cognitive and a social science. Morphology, phonology, syntax of Spanish. History and main regional varieties. Sociolinguistics and pragmatics of Spanish. Language acquisition, bilingualism, contact varieties. Spanish in teaching and translation.

### **SPAN 609. History of the Spanish Language (3)**

Prerequisite: Spanish 448 or 602.

Evolution of Spanish language from its origins to present day. General notions of structures of Latin. Sound changes, morphosyntactic changes, semantic, and lexical changes in Spanish. Origins of diversity of modern Spanish dialects. (Formerly numbered Spanish 510.)

### **SPAN 610. Seminar in Medieval Spanish (3)**

Prerequisite: Credit or concurrent enrollment in Spanish 448 or 549.

History of Castilian language from Latin to medieval Spanish with readings from medieval Spanish literature, especially *El poema de Mío Cid* and *Berceo*.

### **SPAN 611. Advanced Topics in Spanish Linguistics (3)**

Prerequisite: Spanish 448 or 602.

Specific aspect of Spanish descriptive, historical, or theoretical linguistics. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **SPAN 612. Seminar in Spanish Discourse Analysis (3)**

Prerequisite: Spanish 448 or 602.

Analysis of oral discourse in Spanish. Basic readings in field and strategies to collect and analyze data. (Formerly numbered Spanish 570.)

### **SPAN 620. Cervantes (3)**

Prerequisite: Spanish 405A or 601.

The principal prose works of Cervantes: The *Novelas ejemplares* and *Don Quixote*.

### **SPAN 630. Golden Age Drama (3)**

Prerequisite: Spanish 405A or 601.

The works of Lope de Vega and Calderón among others.

### **SPAN 631. Spanish Women Writers (3)**

Prerequisite: Spanish 405A or 601.

Feminist and cultural studies approach to works of Spanish women writers. Analysis of issues on gender, class, race. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **SPAN 661. Issues in the Study of Spanish Bilingualism (3)**

Prerequisite: Spanish 448 or 602.

Theories and research on bilingualism with special emphasis on Spanish/English. Definitions of bilingualism. Bilingual typologies. Acquisition of bilingual abilities. Bilingualism and testing. Intersection of bilingualism and translation/interpreting studies. Individual and societal bilingualism.

### **SPAN 670. The Generation of 1898 (3)**

Prerequisite: Spanish 405B or 601.

Major authors and works of the generation of 1898 in Spain: novel, drama, poetry, and essay.

### **SPAN 675. Contemporary Spanish Prose Fiction (3)**

Prerequisite: Spanish 405B or 601.

Development of Spanish prose fiction since the Spanish Civil War.

### **SPAN 681. Spanish/Spanish American Dialectology (3)**

Prerequisite: Spanish 448 or 602.

Dialects of Spain and Latin America; emphasis on differences in pronunciation, syntax, and lexicon.

### **SPAN 682. Spanish Language Policy and Language Planning (3)**

Prerequisite: Spanish 448 or 602.

Relationship between political power and language in Spanish-speaking world. Ideology and language policy. Language policy with and without language planning in Latin America, United States, and Spain. Types of language planning and their explicit and underlying objectives.

### **SPAN 695. Contemporary Spanish American Prose Fiction (3)**

Prerequisite: Spanish 406B or 601.

The principal writers of prose fiction in Spanish America from the mid-thirties to today.

### **SPAN 696. Selected Topics (3)**

Prerequisites: Twelve upper division units in Spanish.

Intensive study in specific areas of Spanish. May be repeated with new content. See Class Schedule for specific content. Maximum credit of six units of 696 applicable to a master's degree.

### **SPAN 750. Seminar in Spanish American Literature (3)**

Prerequisite: Spanish 406B or 601.

A genre or movement of Spanish America. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **SPAN 755. Seminar in Spanish American Culture and Thought (3)**

Prerequisite: Spanish 406B or 601.

Works of representative authors of Spanish America. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

### **SPAN 770. Applied Spanish Linguistics for Teachers (3)**

Prerequisite: Spanish 448 or 602.

The application of linguistic theory to the teaching of Spanish at the secondary and college levels.

### **SPAN 780. Multimedia Methods for Teaching Spanish (3)**

Prerequisite: Spanish 448 or 602.

Theory and applications of teaching Spanish through multimedia and interactive technologies. Research and development of interactive multimedia programs for use in the classroom and in the language laboratory.

### **SPAN 781. Spanish Language Testing (3)**

Prerequisite: Spanish 448 or 602.

Theories and research on language testing with emphasis on Spanish. Types and purposes of language measurement instruments. Characteristics of tests: practicality, instructional value, validity, reliability, test difficulty. Overview of test formats/methods and their consequences.

### **SPAN 790. Seminar in Spanish Syntax and Morphology (3)**

Prerequisite: Spanish 448 or 602.

Advanced study of the grammatical structures of Spanish.

### **SPAN 792. Spanish Language and Society (3)**

Prerequisite: Spanish 448 or 602.

Basic notions of relationship between language and society in Spanish-speaking world. Methodologies applied to data from monolingual and bilingual speech communities. Variationism, ethnography of communication, and sociology of language in Spanish-speaking world.

### **SPAN 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

### **SPAN 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

### **SPAN 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

### **SPAN 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Statistics

In the Department of Mathematics and Statistics  
In the College of Sciences

**OFFICE: Geology/Mathematics/Computer Science 413**  
**TELEPHONE: (619) 594-6191**

## Faculty

F. David Lesley, Ph.D., Professor of Mathematics, Chair of Department  
Kung-Jong Lui, Ph.D., Professor of Statistics (Graduate Adviser for the  
M.S. in Statistics)

Duane L. Steffey, Ph.D., Professor of Statistics (Statistics Coordinator)

Colleen Kelly, Ph.D., Associate Professor of Statistics (Graduate  
Adviser for the M.S. in Statistics with Concentration in Biostatistics)

Juanjuan Fan, Ph.D., Assistant Professor of Statistics

Richard Levine, Ph.D., Assistant Professor of Statistics

Chii-Dean Lin, Ph.D., Assistant Professor of Statistics

## Associateships

Graduate teaching associateships in statistics and biostatistics are available and are awarded on a competitive basis by the Department of Mathematics and Statistics. Application forms and additional information may be secured from the office of the Department of Mathematics and Statistics.

## General Information

The Department of Mathematics and Statistics offers graduate study leading to the Master of Science degree in statistics. Students may pursue either the general degree or a concentration in biostatistics that emphasizes statistical methods and applications in the biological, health, and medical sciences.

Statisticians and biostatisticians are engaged in the acquisition and use of knowledge through the collection, analysis, and interpretation of data. Today, almost all disciplines – from economics to engineering, from social science to medicine – employ statistical methods. Such methods are essential in studying relationships, predicting results, and making informed decisions in many different contexts. This diversity of application of this field has stimulated the current demand for well-trained statisticians and biostatisticians at all degree levels.

The Master of Science degree provides advanced training, with emphasis on statistical methodology, and prepares students for careers in industry and government as applied statisticians or biostatisticians, or for entry into a doctoral program in statistics or biostatistics.

As part of the degree requirements, graduate students conduct theses or research projects under the guidance of faculty with active research interests in most general areas of probability, statistics, and biostatistics. These research areas include biostatistical methods, survival analysis, mathematical demography, data analysis, inference, stochastic processes, time series, Bayesian statistics, categorical data analysis, statistical computing, nonparametric statistics, sample surveys, multivariate analysis, linear models, experimental design, and clinical trials.

## Admission to Graduate Study

All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin.

## Advancement to Candidacy

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

## Specific Requirements for the Master of Science Degree in Statistics

**(Major Code: 17021)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the students must meet the following program requirements:

The student should have completed before entering the program the following undergraduate coursework: three semesters of calculus; and one semester each of linear algebra and probability theory. The student should also have working knowledge of a programming language before entering the program. Students lacking some of the above undergraduate coursework may be admitted conditionally and may make up this coursework during the first year of the program (these courses will not count toward the degree course requirements).

The student must complete a minimum of 30 units of coursework as described below. Upon entry to the program, the student will be assigned to a graduate adviser in statistics. Thereafter, the adviser will meet with the student each semester and discuss his or her academic program. A program of study must be approved by the graduate adviser in statistics.

1. Complete Statistics 560, 670A, 670B with no grade less than B in each course. These are core statistics courses.
2. Complete nine units of courses in statistics and biostatistics, selected from the following with the approval of the graduate adviser in statistics: Statistics 570, 671, 672, 676, 677, 678, 679, 680A, 680B.
3. Complete three additional units of 600- and 700-numbered courses offered by the Department of Mathematics and Statistics, except that Mathematics 600, 601, 602, and Statistics 799A may not be used to fulfill these units required.
4. Complete three additional units of graduate level or approved 500-level courses offered by the Department of Mathematics and Statistics, not including Statistics 799A.
5. Complete three units of approved electives.
6. The thesis option (Plan A) requires approval of the graduate adviser and the statistics division faculty member who will chair the thesis committee. Students who choose Plan A must include Statistics 799A in the 30-unit program and are required to pass a final oral examination on the thesis, open to the public.

7. In other cases, Plan B will be followed. Students who choose Plan B are required to complete at least two units of Statistics 795, one unit of Statistics 720 or 790 or one additional unit of 795, and pass a comprehensive written examination. Policy and procedures for the Plan B examination are documented and available from the Department of Mathematics and Statistics.

## Specific Requirements for the Master of Science Degree in Statistics with Concentration in Biostatistics

**(Major Code: 17021)**

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

The student should have completed before entering the program the following undergraduate coursework: three semesters of calculus and one semester each of linear algebra and probability theory. The student should also have working knowledge of a programming language before entering the program. Students lacking some of the above undergraduate coursework may be admitted conditionally and may make up this coursework during the first year of the program (these courses will not count toward the degree course requirements).

The student must complete a minimum of 30 units of coursework as described below. Upon entry to the program, the student will be assigned to a graduate adviser in biostatistics. Thereafter, the adviser will meet with the student each semester and discuss his or her academic program. A program of study must be approved by the graduate adviser in biostatistics.

1. Complete Statistics 560, 670A, 670B with no grade less than B in each course. These are core statistics courses.
2. Complete Statistics 680A and 680B with no grade less than B in each course. These are biostatistics concentration courses.
3. Complete at least six units of courses in biostatistics and statistics, selected from the following with the approval of the graduate adviser in biostatistics: Statistics 510, 520, 570, 596, 671, 672, 676, 677, 678, 679, 696, 720, and 798.
4. Complete at least six units of 500-level or graduate courses from a science of application of biostatistics (e.g., bioscience, health science, or medical science), selected with the approval of the graduate adviser in biostatistics. If the student has an undergraduate degree in an area of application of biostatistics, 500-level or graduate mathematical sciences courses may be substituted with the approval of the graduate adviser in biostatistics.
5. With approval of the graduate adviser and the faculty member who will chair the thesis committee, the student may choose Plan A and complete three units of Statistics 799A. The chair of the thesis committee must be a faculty member from the division of statistics in the Department of Mathematics and Statistics. One of the other two members of the thesis committee must be a faculty member from a science of application of biostatistics (i.e., bioscience, health science, or medical science). The student must pass an oral defense of the thesis, open to the public.
6. In other cases, Plan B will be followed. Students who choose Plan B are required to complete at least two units of Statistics 795, one unit of Statistics 720 or 790 or one additional unit of 795, and pass a comprehensive written examination. Policy and procedures for the Plan B examination are documented and available from the Department of Mathematics and Statistics.

## Courses Acceptable on Master's Degree Programs in Statistics (STAT)

### UPPER DIVISION COURSES

**(Note:** Statistics 550, 551A, or 551B are not acceptable on the Master of Science degree in Statistics.)

**(Note:** Proof of completion of prerequisites required for all upper division courses: Copy of transcript.)

#### STAT 510. Applied Regression Analysis (3) I

Prerequisite: Statistics 250 or comparable course in statistics.

Methods for simple and multiple regression models, model fitting, variable selection, diagnostic tools, model validation, and matrix forms for multiple regression. Applications of these methods will be illustrated with SAS, SPSS, and/or S-Plus computer packages. (Formerly numbered Statistics 554A.)

#### STAT 520. Applied Multivariate Analysis (3) II

Prerequisite: Statistics 350A or comparable course in statistics.

Multivariate normal distribution, multivariate analysis of variance, principal components, factor analysis, discriminant function analysis, classification, and clustering. Statistical packages will be adapted for data analysis. (Formerly numbered Statistics 554B.)

#### STAT 550. Applied Probability (3) I, II, S

Prerequisites: Mathematics 151 and 254.

Computation of probabilities via enumeration and simulation, discrete and continuous distributions, moments of random variables. Markov chains, counting and queuing processes, and selected topics.

#### STAT 551A. Probability and Mathematical Statistics (3) I

Prerequisite: Mathematics 252.

Discrete and continuous random variables, probability mass functions and density functions, conditional probability and Bayes' theorem, moments, properties of expectation and variance, joint and marginal distributions, functions of random variables, moment generating functions. Special distributions and sampling distributions.

#### STAT 551B. Probability and Mathematical Statistics (3) II

Prerequisite: Statistics 551A.

Point and interval estimation and hypothesis testing in statistical models with applications to problems in various fields.

#### STAT 560. Sample Surveys (3) I

Prerequisite: Statistics 550 or 551A.

Methods for design and analysis of sample surveys with applications to social and biological sciences. Simple random sampling, stratification and clustering, ratio and regression estimators, subsampling, selected topics in survey methodology. (Formerly numbered Statistics 552.)

#### STAT 570. Stochastic Processes (3)

Prerequisite: Statistics 550 or 551A.

Introduction to stochastic processes with selected applications. (Formerly numbered Statistics 553.)

#### STAT 575. Actuarial Modeling (3)

Prerequisite: Statistics 550 or 551A.

Actuarial models and applications of probability and statistics to insurance and other financial risks. Utility theory; risk models, compound processes; survival distributions and life tables; life insurance, annuities and benefits.

#### STAT 596. Advanced Topics in Statistics (1-4) I, II

Prerequisite: Consent of instructor.

Selected topics in statistics. 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

**STAT 670A-670B. Advanced Mathematical Statistics (3-3)**

Prerequisite: Statistics 550 or 551A. Statistics 670A is prerequisite to 670B.

Distribution of random variables, characteristic functions, limiting distributions, sampling distributions, hypothesis testing and estimation, optimality considerations, applications of the linear hypothesis, invariance and unbiasedness to analysis of variance and regression problems, sequential techniques, decision theory.

**STAT 671. Statistical Computing (3)**

Prerequisite: Statistics 551B or 670B.

Machine computation in the development, application, and evaluation of advanced statistical techniques. Floating point arithmetic and algorithm stability; numerical methods for parameter estimation (including maximum likelihood) and multivariate probability integration; Monte Carlo simulation and other computer-intensive statistical techniques.

**STAT 672. Nonparametric Statistics (3)**

Prerequisite: Statistics 551B or 670B.

Theory and application of commonly used distribution-free test statistics, including sign and Wilcoxon tests, and corresponding nonparametric point and interval estimators. Kruskal-Wallis and Friedman tests for analysis of variance, nonparametric regression methods, and other selected topics.

**STAT 676. Bayesian Statistics (3)**

Prerequisite: Statistics 551B or 670B.

Bayes' theorem; conjugate priors; likelihood principle; posterior probability intervals; Bayes factors; prior elicitation; reference priors; computational techniques; hierarchical models; empirical and approximate Bayesian inference; posterior sensitivity analysis; decision theory.

**STAT 677. Design of Experiments (3)**

Prerequisite: Statistics 550 or 551A.

Methods for design and analysis of experiments with applications to industry, agriculture, and medicine. Concepts of randomization, blocking, and replication. Incomplete block designs, fractional factorial experiments, response surface methods, selected topics.

**STAT 678. Survival Analysis (3)**

Prerequisites: Statistics 551B or 670B.

Survival distributions; inference in parametric survival models; life tables; proportional hazards model; time-dependent covariates; accelerated time model and inference based on ranks; multivariate time data and competing risks.

**STAT 679. Analysis of Discrete Data (3)**

Prerequisite: Statistics 551B or 670B.

Discrete sampling models; goodness-of-fit testing; methods for binary data with covariates, including logistic regression and probit analysis; loglinear modeling of multidimensional contingency tables; ordered categories; incomplete tables; Bayesian methods; hierarchical models.

**STAT 680A-680B. Advanced Biostatistical Methods (3-3)**

Prerequisites: Statistics 550 or 551A. Statistics 680A is prerequisite to 680B.

Design, conduct, and analysis of experimental and observational studies. Cohort studies. Multifactor screening. Survival studies. Case-control studies. Biological assays. Selected current topics.

**STAT 696. Selected Topics in Statistics (3)**

Prerequisite: Graduate Standing.

Intensive study in specific areas of statistics. May be repeated with new content. See Class Schedule for specific content. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**STAT 720. Seminar (1-3)**

Prerequisite: Consent of instructor.

An intensive study in advanced statistics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

**STAT 790. Practicum in Teaching of Statistics (1) Cr/NC**

Prerequisite: Award of graduate teaching associateship in statistics.

Supervision in teaching statistics. Lecture writing, style of lecture presentation and alternatives, test and syllabus construction, and grading system. Not applicable to an advanced degree. Required for first semester GTA's. Maximum credit four units applicable to a master's degree.

**STAT 795. Practicum in Statistical Consulting (1-2) Cr/NC**

Prerequisite: Statistics 670B.

Statistical communication and problem solving. Short-term consulting to campus clients in design and analysis of experiments, surveys, and observational studies. Heuristics for effective problem identification, client interactions, oral and written presentations. Maximum credit three units applicable to a master's degree.

**STAT 797. Research (1-3) Cr/NC/RP**

Prerequisite: Six units of graduate level statistics.

Research in one of the fields of statistics. Maximum credit six units applicable to a master's degree.

**STAT 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit six units applicable to a master's degree.

**STAT 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**STAT 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

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# Television, Film and New Media Production

In the School of Theatre, Television, and Film  
In the College of Professional Studies and Fine Arts

**OFFICE: Little Theatre 171B**  
**TELEPHONE: (619) 594-1375**  
**FAX: (619) 594-1391**  
<http://tff.sdsu.edu>

## Faculty

W. Nick Reid, M.F.A., Professor of Theatre, Television, and Film  
Director of the School  
Carroll Parrott Blue, M.F.A., Professor of Theatre, Television, and Film  
Gregory C. Durbin, M.F.A., Professor of Theatre, Television, and Film  
(Graduate Adviser)  
Jack Ofield, Professor of Theatre, Television, and Film, Filmmaker in Residence  
Mark W. Freeman, M.F.A., Assistant Professor of Theatre, Television, and Film  
Timothy A. Powell, Ph.D., Assistant Professor of Theatre, Television, and Film

## Associateships and Assistantships

Graduate teaching associateships and graduate assistantships are available to a limited number of qualified students. Application forms and further information may be obtained from the school.

## General Information

The School of Theatre, Television, and Film offers graduate study leading to the Master of Arts degree in television, film and media production. The degree prepares students for careers in creative areas of media design and production.

The School of Theatre, Television, and Film houses the Production Center for Documentary and Drama. Established in 1990, the Center has produced over 200 national and regional television programs and non profit social, cultural, and institutional documentaries. These productions offer seniors and graduates opportunities to work in key roles (writer, director, line producer, crew, editor, composer, graphic design, etc.). The Center exists to serve the School, University and community, to mentor senior and graduate film/video projects, and develop forums for their exhibition. An example is the Emmy Award-winning, "The Short List," the long-running public TV showcase for U.S. and international short film, produced in the Production Center since 1992.

## Filmmaker in Residence

The position of Filmmaker in Residence is unique in the CSU system. It was established to provide a professional link between the Television and Film program and the media industry in a rapidly evolving technological environment. The Filmmaker in Residence is the film and television producer, Jack Ofield.

## Master of Arts Degree in Television, Film and New Media Production

The School of Theatre, Television, and Film, in the College of Professional Studies and Fine Arts, offers graduate study leading to the Master of Arts degree in television, film and new media production. This degree is especially useful for those pursuing careers in film, television, radio, new media, or related production activities where sophisticated and disciplined ability to conceive, initiate and complete

original media messages is required. Graduates of this program occupy leadership positions in the media industries. This degree offers advanced study in the history and criticism of broadcasting and film; scriptwriting; financing, preproduction, and postproduction; advanced audio, video, and film production; broadcast and film performance; international broadcasting and cinema; educational and instructional media; and development of production expertise in a wide range of emerging communication technologies. The Master of Arts degree in television, film and new media production emphasizes advanced media design and production. Admission to this degree program requires undergraduate preparation, documented through submission of a portfolio of previous creative activity or other evidence of creativity. Postbaccalaureate students who are without previous media production education or experience and who wish to learn television and film production should consider pursuing a second bachelor's degree in media production or completing basic production courses elsewhere before enrolling in graduate study at San Diego State University.

Teaching facilities in the School of Theatre, Television, and Film include a large color television studio, digital editing suites, Foley room, animation suite, scene shop and an equipment checkout center stocked with film and digital cameras and recording equipment, lighting, and grip equipment. Major public broadcasting stations, KPBS-TV and KPBS-FM, are located on campus and offer internship opportunities. The University operates a campuswide, closed-circuit, instructional television service and Multimedia Center, and is also home to the International Center for Communications and a student-operated radio station. San Diego offers abundant internship opportunities in production companies and television and radio stations, such as the leading cable carrier, Cox Communications.

## Admission to Graduate Study

Students will be admitted for the fall and spring semester. For fall admission, application packages must be received and complete by the previous March 1. For spring admission, application packages must be received and complete by October 1 (or August 31 for international students).

In addition to meeting the general requirements for admission to the University with classified graduate standing, as outlined in Part Two of this bulletin, students applying for admission to the Master of Arts degree in television, film and new media production are evaluated according to the following criteria:

1. Undergraduate major or minor in television, film, or a related communication discipline. Those lacking adequate undergraduate preparation or equivalent professional experience for the program will be required to complete one or more lower division and upper division proficiency courses as determined by the graduate adviser. Proficiency courses do not count toward the 30 units of a student's graduate program.

2. Minimum grade point average of 2.85 (when A equals 4.0) in the last 60 semester (90 quarter) units attempted (this calculation may not include lower division courses taken after award of a baccalaureate degree).
3. All applicants must post a Graduate Record Examination (GRE) verbal score of 450 or higher; a GRE quantitative score of 450 or higher; a combined GRE verbal and quantitative score of 950 or higher; and a GRE writing assessment (GRE-W) of level 4 or higher. For applicants deficient in the GRE quantitative, a score of 450 or higher on the GRE analytic may be substituted.
4. For international applicants for whom English is not their first language, TOEFL paper scores of 550 (or 213 online) or higher and a Certificate in Advanced English (CAE), indicating successful passage of the reading, writing, listening, and English usage test offered by the Cambridge English for Life (EFL) testing program.
5. Three letters of recommendation. At least one letter from an academic reference and at least one letter from a professor or professional acquainted with the applicant's creative activities.
6. A resume that includes any film and/or video production experience you have had. (Note: Candidates with no previous production experience will be required to take an intensive undergraduate film production course that does not count toward the graduate degree.)
7. The best evidence applicant can provide of creativity, technical skill level, and command of the medium. Generally, a sample reel is the most useful. The sample reel should be a film, videocassette (VHS) or DVD of work in which applicant held a key creative role (writer/director, cinematographer, editor, sound designer, production designer). Credits must be clearly indicated. Even though long work may be submitted, no more than 10 minutes of the work provided will be viewed, so cue, or specify appropriate cueing, of sample. In lieu of a sample reel, other examples might include a sample of original textual work (play, story, or screenplay for writers/directors) or visual material (drawings, storyboards, designs, or studio photography that may reflect lighting, framing, or composition skills).
8. A list, by author and title, of six books (novels, plays, essays) that have influenced applicant artistically.
9. A list of three films (narratives, documentaries, experimental), plays or television programs that applicant admires, devoting one paragraph to each work.
10. A list and description (in a sentence) of applicant's hobbies and interests outside of film, video, and theatre.
11. Personal Statement: A short essay describing your creative and career goals and how you think this program will benefit you. (Maximum two pages.)

Admission to the program is competitive, and satisfying these requirements does not guarantee admission. The decision to admit is based on consideration of the entire application file; promising applicants in unusual circumstances are encouraged to apply.

Students accepted for graduate study in the Master of Arts degree in television, film and new media production are initially admitted with conditional graduate standing (classified). Full classified standing is awarded only after the student has completed Television, Film and New Media 600 with a grade of B or better.

## Advancement to Candidacy

In addition to meeting the general requirements for advancement to candidacy described in Part Two of this bulletin, students seeking the Master of Arts in television, film, and new media production must complete Television, Film and New Media 600 with a grade of B or better prior to advancement.

## Specific Requirements for the Master of Arts Degree

(Major Code: 06031)

Candidates for the Master of Arts degree in television, film and new media production must complete 30 units of coursework and to include the following:

1. Television, Film and New Media 799A (Plan A, the thesis option, is required of all students in the program) and Television, Film and New Media 600 (required for classified graduate standing).
2. With approval of the graduate adviser, 21 additional graduate units in Television, Film and New Media, Communication, Theatre, and other departments, of which nine units must be at the 600-700 level.
3. No more than nine units of electives outside the School of Theatre, Television, and Film.

## Courses Acceptable on Master's Degree Program in Television, Film and New Media Production (TFM)

### UPPER DIVISION COURSES

#### TFM 510. Script Writing for Television and Film (3)

Prerequisites: Television, Film and New Media 110, 260 or 261; and satisfaction of the English Placement Test and Writing Competency requirements.

Scripting of dramatic original and adaptation forms, and the documentary. (Formerly numbered Television, Film and New Media 410.)

#### TFM 522. Film and Television Cinematography (3) I

Two lectures and three hours of laboratory.

Prerequisites: Television, Film and New Media 110, 122, and 123.

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

Advanced theory and practice of cinematography for film and television production. Practicum in cinematography problems related to control of light and image for television and film, including use of specialized equipment, film and videotape stock, location and studio shooting, and complex blocking problems.

#### TFM 550. Art Direction for Television and Film (3) II

One lecture and four hours of activity.

Prerequisites: Television, Film and New Media 350, 260 or 261, and consent of instructor. **Proof of completion of prerequisites required:** Copy of transcript.

Aesthetic, technical, and administrative aspects of design for television and film. Experience in scenic design, construction, decoration, lighting, and special effects.

#### TFM 551. Production Design for Television and Film (3)

Prerequisites: Television, Film and New Media 350 and credit or concurrent registration in Television, Film and New Media 401.

Theory and analysis of production design concepts for television and film. Determination of stylistic and technical requirements for fictional and nonfictional productions.

#### TFM 555. New Media Production (3)

Two lectures and three hours of activity.

Prerequisite: Television, Film and New Media 365. Limited to television, film, and new media majors.

Development of audio visual products in new media formats. Multi-media laboratory to be arranged. (Formerly numbered Communication 555.)

## Television, Film and New Media Production

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### **TFM 560. Advanced Film (3)**

Two lectures and more than three hours of activity.

Prerequisites: Television, Film and New Media 260, 261, and 510 with grade of B (3.0) or better in each and consent of instructor. **Proof of completion of prerequisites required:** Copy of transcript.

Practicum in direction and production of dramatic and non-dramatic film. Cameras, lighting, design, sound techniques, experience in University sponsored productions. Completion of a short film.

### **TFM 561. Advanced Television (3)**

Two lectures and more than three hours of activity.

Prerequisites: Television, Film and New Media 260, 261, and 510 with grade of B (3.0) or better in each and consent of instructor.

Critical analysis of relationship of form and content in nonfiction production.

### **TFM 562. Documentary and Propaganda Film/Television (3)**

Prerequisite: Television, Film and New Media 160.

Analysis through viewing of persuasive concepts, techniques, and forms in international, documentary film and television programs, and special effects.

### **TFM 565. Animated Film and New Media Techniques (3) II**

Two lectures and more than three hours of activity.

Animation production and practical experience in digital technologies.

### **TFM 569. Advanced Projects in Film and Video (3)**

Two lectures and more than three hours of activity.

Prerequisites: Television, Film and New Media 510, and 560 or 561.

Original and creative work demonstrating significant achievement in film and video production. Maximum credit six units. (Formerly numbered Television, Film and New Media 469.)

### **TFM 596. Selected Topics in Television, Film and New Media (3)**

Prerequisite: Twelve units in television, film and new media.

Specialized study of selected topics from the areas of television, film and new media. May be repeated with new content. 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

### **TFM 600. Seminar: Research and Bibliography in Media Production (3)**

Methods of research, telecommunications policy, critical analysis, and writing in relation to creative work.

### **TFM 610. Seminar in Writing for Television and Film (3)**

Prerequisite: Admission to creative specialization.

Non-dramatic and dramatic structures as they apply to non-fiction and fiction television programs and films. Writing full length script or scenario. Maximum credit six units applicable to a master's degree.

### **TFM 615. Seminar in Criticism of Electronic Media and Cinema (3)**

Prerequisite: The equivalent of an undergraduate major in television, film, and new media production.

Standards for objective appraisal of the ethical and artistic aspects of radio, television and film programs.

### **TFM 660. Seminar in Dramatic and Documentary Forms in Television and Film (3)**

Prerequisite: Admission to creative specialization.

Techniques and stylistic contributions of major directors as seen in their television and film productions. Maximum credit nine units applicable to a master's degree.

### **TFM 665. Seminar in Documentary Filmmaking (3)**

Prerequisites: Television, Film and New Media 560, 562, and admission to creative specialization.

Documentary production, emphasizing conceptual and technical understanding, intellectual, artistic and emotional aspects of screen authorship, historical, and contemporary uses and practical experience in production of documentaries. Maximum credit six units applicable to a master's degree.

### **TFM 700. Seminar: Television and Film Production Management (3)**

Prerequisites: Television, Film and New Media 600.

Planning, organizing, and staffing television and motion picture production. Managing creative processes in media production. (Formerly numbered Communication 700.)

### **TFM 761. Seminar: Selected Topics in Television, Film and New Media (3)**

Prerequisite: Television, Film and New Media 600.

Intensive study in television, film and new media issues and trends. See Class Schedule for specific content. May be repeated with new content. Maximum credit nine units applicable to a master's degree in television, film and new media. (Formerly numbered Communication 761.)

### **TFM 798. Special Study (1-3) Cr/NC/RP**

Individual study. Contract required. Arranged with graduate coordinator in area of study. Maximum credit six units applicable to a master's degree.

### **TFM 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

### **TFM 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.

Following assignment of RP in Course 799A, registration in this course is required in any semester in which the student expects to use the facilities and resources of the University; also student must be registered in this course when the completed thesis or project is granted final approval.

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# Theatre Arts

**OFFICE: Dramatic Arts 204**  
**TELEPHONE: (619) 594-6363**  
**FAX: (619) 594-7431**  
<http://tff.sdsu.edu>

In the School of Theatre, Television, and Film  
In the College of Professional Studies and Fine Arts

## Faculty

W. Nick Reid, M.F.A., Professor of Theatre, Television, and Film,  
Director of School

Ralph Funicello, B.F.A., The Don W. Powell Chair in Scene Design

Paula Kalustian, M.F.A., Professor of Theatre, Television, and Film  
(Graduate Adviser)

Peter F. Larlham, Ph.D., Professor of Theatre, Television, and Film

Terry L. O'Donnell, D.M.A., Professor of Theatre, Television, and Film

Beeb Salzer, M.F.A., Professor of Theatre, Television, and Film

Loren P. Schreiber, M.F.A., Professor of Theatre, Television, and Film

R. Craig Wolf, M.F.A., Professor of Theatre, Television, and Film

Margaret C. Larlham, M.A., Associate Professor of Theatre, Television,  
and Film

Randy Reinholz, M.F.A., Associate Professor of Theatre, Television,  
and Film

Peter J. Cirino, M.F.A., Assistant Professor of Theatre, Television, and  
Film

Holly Poe Durbin, M.F.A., Assistant Professor of Theatre, Television,  
and Film

Jeff Morrison, M.F.A., Assistant Professor of Theatre, Television, and  
Film

## Associateships and Assistantships

Graduate teaching associateships and graduate assistantships are available to a limited number of qualified students. Application forms and further information may be obtained from the school.

## The Don W. Powell Chair in Scene Design

The Don W. Powell Chair in Scene Design was established through a trust provided by the late professor emeritus. Always concerned about students, Powell, who retired after 30 years with the theatre department, created the trust in order to enhance theatre education at S.D.S.U. The current Don W. Powell Scene Design Chair is the nationally acclaimed designer Ralph Funicello.

## General Information

The School of Theatre, Television, and Film offers graduate study leading to the Master of Arts degree and the Master of Fine Arts degree in theatre arts. The Master of Fine Arts degree is offered in the areas of acting, design/technical theatre, and musical theatre. The M.A. is a 30-unit program; the M.F.A. a 60-unit program. Both programs of study limit the number of students accepted in order to offer individual attention and extensive opportunity to participate in theatre production. The Dramatic Arts building contains the proscenium-style Don Powell Theatre seating 500, with state-of-the-art computer lighting and sound control, and the flexible Experimental Theatre seating 200, rehearsal and recording areas, a design studio and CADD laboratory, paint shop, wagon house, scene shop, and fully equipped costume laboratory. The theatre arts degree is accredited by the National Association of Schools of Theatre (N.A.S.T.).

## Master of Arts Degree in Theatre Arts

### Admission to Graduate Study

General requirements for admission to the University with classified graduate standing are described in Part Two of this bulletin. In addition, the student's area adviser will judge the applicant capable of graduate work in theatre arts. The judgment will be based on (1) the applicant's transcripts of prior academic work; (2) three current and relevant letters of recommendation from individuals familiar with the applicant's academic ability; (3) the applicant's scores on the GRE General Test; (4) the applicant's scores on the GRE Writing Assessment Test; and (5) an interview, when appropriate, revealing the applicant's ability to succeed in the chosen area. NOTE: M.A. applications are accepted for fall admission only. Application deadline is April 15 for the following fall semester.

### Advancement to Candidacy

All students in the Master of Arts program must meet the general requirements for advancement to candidacy, as described in Part Two of this bulletin. In addition, students seeking the Master of Arts degree in Theatre Arts (regardless of area of specialization) are required to have completed Theatre 600A, and to have removed any deficiencies assigned. It is recommended that all graduate students take Theatre 600A during their first semester.

## Specific Requirements for the Master of Arts Degree

(Major Code: 10071)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of a minimum of 30 units to include Theatre 600A, 600B, 610, 621, 647A or 647B or 649, and 799A. Eighteen of the 30 units must be in 600- and 700-numbered drama courses and the remaining 12 units may be selected from 500-, 600-, or 700-numbered courses. A maximum of 9 units may be elected outside the Theatre Department. PLEASE NOTE: Theatre 600A, 600B, 610, 621, 647A or 647B or 649, and 799A are required courses for all Master of Arts candidates.

## Master of Fine Arts Degree in Theatre Arts

### Admission to Graduate Study

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

1. Achieve a score of not less than 1000 on the GRE General Test (combined verbal and quantitative).

## Theatre Arts

2. Possess a baccalaureate degree in theatre or an approved affiliated field with a grade point average of not less than 2.85 overall in the last 60 units of study attempted, with a 3.0 undergraduate average in the major, and a 3.5 average in those theatre classes considered prerequisites for the M.F.A. concentration in design/technical theatre or musical theatre.
3. Complete undergraduate requirements commensurate with the proposed concentration in the M.F.A. program.
4. Complete a minimum of six units of theatre history.
5. Satisfy additional concentration requirements listed below.

Students who have not met certain criteria or demonstrate deficiencies in undergraduate preparation or basic skill development, may be granted conditional admission with the understanding that *remedial* coursework will be completed prior to advancement to classified standing. Remedial coursework cannot be applied to the 60-unit minimum requirement for the degree. Students who do not satisfy the requirements for an M.F.A. degree will not automatically be considered for an M.A. degree. A student holding an M.A. degree in theatre arts from San Diego State University or any other institution of higher learning must formally apply for the M.F.A. degree. PLEASE NOTE: Applicants holding an M.A. or M.F.A. degree from an accredited institution may transfer up to 30 units upon review and recommendation of the faculty in the area of specialization, and the graduate coordinator of the School of Theatre, Television, and Film, and the approval of the graduate dean.

Students already accepted into the program who request a change of specific concentration at a later date, will be required to meet the admission requirements for the new concentration.

### Concentration in Acting

No students admitted to program at this time.

In addition to meeting the admission requirements listed above, a student must demonstrate exceptional artistic talent in the acting area by providing:

1. A resume of acting accomplishments.
2. An audition, either in person or via videotape (VHS), which would include two contrasting works: one contemporary piece and one classical piece from Shakespearean drama (total time not to exceed 12 minutes).
3. Three letters of recommendation attesting to the candidate's academic qualifications and level of competence in acting.

For specific audition dates and locations, write to the Director, Graduate Acting Program, School of Theatre, Television, and Film, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-7601.

### Concentration in Design and Technical Theatre

In addition to meeting the admission requirements listed above, a student must demonstrate outstanding abilities in a particular area of design/technical theatre by submitting the following items.

1. Those students primarily interested in design must submit a design portfolio which contains sketches, renderings, graphics, floor plans, elevations, plots, color/fabric swatches, and photographs of productions, revealing the applicant's creative ability in the chosen area or areas of design.
2. Those students primarily interested in technical theatre must submit a portfolio which contains evidence of technical direction and management experiences in scenic, lighting, or costume technology and design.
3. A resume which contains documentation of participation in not less than five full-length theatrical productions.

4. Three letters of recommendation attesting to the candidate's academic, professional and personal qualifications from academic or professional theatre sources.

For specific interview dates and locations, write to the Director, Design Program, School of Theatre, Television, and Film, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-7601.

### Concentration in Musical Theatre

This program admits new students every other year only.

In addition to meeting the admission requirements listed above, a student must demonstrate professional potential in musical theatre by providing:

1. A resumé of musical theatre accomplishments.
2. An audition, either in person or via videotape, to include two contrasting vocal selections, two contrasting monologues, and a dance/movement piece.
3. Three letters of recommendation attesting to the candidate's academic qualifications and level of competence in musical theatre performance in the areas of acting, singing, and dancing.

For specific audition dates and locations, write to the Director, Musical Theatre Program, School of Theatre, Television, and Film, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-7601.

## Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. Candidates for the M.F.A. must have completed 30 units within their official program with a minimum grade point average of 3.0. A minimum of 24 units in the official program must be enrolled in and completed concurrently with or after advancement to candidacy. Students in each concentration must have successfully completed Theatre 600A and removed any deficiencies noted by the faculty.

## Specific Requirements for the Master of Fine Arts Degree

### (Major Code: 10072)

Forty-five of the sixty units required must be completed in courses numbered 600 or above. The remaining units may be selected from 500-, 600-, or 700-numbered courses in theatre or outside departments.

At least 30 units of the student's program must be completed in residence at San Diego State University, and the student must be in residence not less than two semesters. No more than six units in 798 will be accepted for credit toward the degree.

### Concentration in Acting

No students admitted to program at this time.

Candidates for the M.F.A. with a concentration in acting, in addition to meeting the requirements for classified graduate standing, must complete a 60-unit graduate program consisting of the following courses: Theatre 600A, 600B, 607\* (must be taken four times for a total credit of 12 units), 610, 621, 624\*, 630 (maximum 2 units), 631\*, 632\*, 633\*, 634\*, 746, 795, 799A.

\* Courses not currently offered at SDSU.

Twelve additional units are to be selected from courses acceptable for graduate credit in the following areas: theatre, art, communication, education, English and comparative literature, exercise and nutritional sciences, history, linguistics, music, television, film, and new media. It is recommended that students include at least 3 units from Theatre 532, 533A, 533B, 551 among the 12 units of electives. In special circumstances, additional courses acceptable for graduate credit in other departments may be selected with the approval of the student's adviser.

Students in the concentration in acting will be reviewed by a faculty panel each semester to determine if their progress warrants continuation in the program. In conjunction with the completion of Theatre 746 and 799A, students must complete an adjudicated performance thesis project established and approved by their thesis committee. This project will be supported by a written thesis project report (analysis/apologia).

### Concentration in Design and Technical Theatre

Candidates for the M.F.A. with a concentration in design and technical theatre, in addition to meeting the requirements for classified graduate standing, must complete a 60-unit graduate program to include 35 units of core courses as follows: 1) three units selected from Theatre 540, 547, or 552, depending on student's area of specialization; 2) Theatre 530A or 530B, 539, 600A, 600B, 610, 621, 644, 645; and 3) four semesters (12 units) of Theatre 643. The student must also complete 14 units of practicum, internship, and thesis/project consisting of Theatre 642 (must be taken for a total of four units), 746, 795 (must be taken for a total of four units), and 799A.

Eleven units of electives selected by student and adviser from graduate level courses in the following areas: theatre, art, music, English and comparative literature, history, and television, film, and new media. In special circumstances courses acceptable for graduate credit in other departments may be selected with the approval of the student's adviser.

Candidates must prepare a production thesis project approved by their thesis committee. This project must be supported by a written thesis project report (analysis/apologia).

### Concentration in Musical Theatre

Candidates for the M.F.A. with a concentration in musical theatre, in addition to meeting the requirements for classified graduate standing, must complete a 60-unit graduate program which includes a core of courses totaling 25 units as follows: Theatre 520A, 520B, 521A, 521B, 555, 600A, 600B, 610, 623, 650, and 659. The student must also complete 29 units of studio, voice, internship, practicum, and thesis/project consisting of Theatre 627 (taken four times for a total of 16 units), Theatre 630 (taken four times for a total of four units), 746, 795, and 799A.

Six additional units are to be selected from courses acceptable for graduate credit in the following areas: theatre, art, communication, education, English and comparative literature, history, linguistics, music, and television, film, and new media. In special circumstances additional courses acceptable for graduate credit in other departments may be selected with the approval of the student's adviser.

Candidates will prepare an adjudicated performance thesis project established and approved by their thesis committee. This project will be supported by a written thesis project report (analysis/apologia).

## Courses Acceptable on Master's Degree Programs in Theatre Arts (THEA)

### UPPER DIVISION COURSES

*(Unless otherwise noted, all Drama courses are now listed as Theatre courses.)*

#### THEA 510. Creative Drama and Language Arts (3) I

Prerequisite: Theatre 310.

Advanced techniques in using creative drama to teach literature and language. Emphasis on use of drama in teaching of reading and world literature. Practical experience through fieldwork in elementary or middle school classrooms.

#### THEA 520A-520B. History of Musical Theatre (3-3) I

Prerequisite: Upper division standing.

Chronological survey of representative works from musical theatre history including major productions, personalities, styles, and genres. (Formerly numbered Theatre 520.)

A. Nineteenth Century Viennese Operetta through 1950

B. 1950 to Present

#### THEA 521A. History of Musical Theatre Laboratory (1) Cr/NC I

Three hours of laboratory.

Prerequisite: Upper division standing. Must be taken concurrently with Theatre 520A.

Laboratory component of Theatre 520A. Students read librettos, listen to scores, view filmed performances, and profile musical-theatre writers and composers as part of the historical overview studied in Theatre 520A.

#### THEA 521B. History of Musical Theatre Laboratory (1) Cr/NC II

Three hours of laboratory.

Prerequisite: Upper division standing. Must be taken concurrently with Theatre 520B.

Laboratory component of Theatre 520B. Students read librettos, listen to scores, view filmed performances, and profile musical-theatre writers and composers as part of the historical overview studied in Theatre 520B.

#### THEA 523. Stage Combat (2) II

Four hours of activity.

Prerequisites: Theatre 332 and by audition.

Skills and choreography of armed and unarmed stage combat. Performance application to selected scenes from world drama.

#### THEA 525. Dramaturgy (3) I

Two lectures and three hours of activity.

Prerequisite: Theatre 325 or graduate standing.

Theory and application of various aspects of dramaturgy and theatre literary management. Production-oriented synthesis of advanced text analysis, dramatic theory and criticism, historical research, and dramatic literature. Attendance at select plays required.

#### THEA 530A-530B. Period Dress and Decor (3-3) II

Prerequisite: Theatre 240B or graduate standing.

Visual survey of relationships and cultural significance of period dress, architecture, and decorative arts as applied to theatrical productions. Emphasis on significant historic periods in dramatic literature. Theatre 530A is not open to students with credit in Theatre 530.

A. Ancient World Through Eighteenth Century

B. NeoClassical Through Twentieth Century

#### THEA 532. Advanced Acting and Directing (3) I

Prerequisites: Theatre 332 and by audition.

Problems in characterization in contemporary drama, and in plays of Ibsen, Strindberg, Chekhov, and Shaw.

### **THEA 533A-533B. Theory and Styles in Acting and Directing I and II (3-3)**

Prerequisites: Theatre 332 and by audition.

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.

### **THEA 539. Theatre Rendering (2) II**

Four hours of activity.

Prerequisite: Theatre 240B.

Rendering for scenic, costume, and lighting designer. Techniques, media, and portfolio preparation. Maximum credit four units.

### **THEA 540. Scene Design II (3) I**

Prerequisites: Theatre 440 and 530.

History of scene design and application of contemporary styles to various types of dramatic production.

### **THEA 541. Scene Painting (2) II**

Four hours of activity.

Prerequisite: Theatre 530.

Theories and techniques of scene painting, including both historical backgrounds and modern procedures. Full-scale projects executed in scenery studio.

### **THEA 545. Mechanical Drawing for the Theatre (2) I**

Four hours of activity.

Prerequisite: Theatre 240A or admission to MFA in Design.

Theatre drafting standards and techniques. Floor plans, sections, elevations, perspective drawings, and light plots.

### **THEA 546. CADD for the Theatre (2) II**

Four hours of activity.

Prerequisite: Theatre 545.

Computer aided drafting applications for theatre designer.

### **THEA 547. Lighting Design II (3) I**

Two lectures and three hours of laboratory.

Prerequisite: Theatre 447.

Advanced design theories and lighting practice for theatre and dance. Laboratory and production related activities.

### **THEA 548. Sound Design for the Theatre (3) I**

Two lectures and two hours of activity.

Prerequisites: Theatre 240C and 325.

Theories and techniques of sound design and reinforcement for theatrical performance. Laboratory experience in sound production.

### **THEA 549. Lighting and Sound Technology (2) II**

One lecture and three hours of laboratory.

Prerequisite: Theatre 447.

Use of electrics for the stage. Lighting, sound, computer. Practical applications emphasized.

### **THEA 550. Software for Theatrical Design (2) I**

Four hours of activity.

Prerequisites: Theatre 440, 447, 452, or 546.

Application of computer software for theatre, including scenery, costume, lighting, and sound design.

### **THEA 551. Costume, Movement, and Manners (3) I**

Prerequisite: Upper division standing or admission to the graduate program.

Interrelationship of period costumes and the movement and manners of selected historical periods; application to staging of plays from pre-modern theatre.

### **THEA 552. Costume Design II (3) I**

Prerequisites: Theatre 452 and 530.

Advanced studies in costume design. Emphasis on theatrical style, rendering layout, design problems, materials, and budget.

### **THEA 554A. Costume Design Technology I (2) I**

Four hours of activity.

Prerequisite: Theatre 240B.

Current materials and practices of costume technology: advanced construction techniques, fabric selection and use, period pattern drafting, draping and cutting. Maximum credit four units.

### **THEA 554B. Costume Design Technology II (2) II**

Four hours of activity.

Prerequisite: Theatre 240B.

Advanced costume craft construction techniques and management procedures for costume production: millinery, fabric dyeing and painting, jewelry, and related crafts. Maximum credit four units.

### **THEA 555. Movement for the Theatre II (2) I**

Four hours of activity.

Prerequisite: Theatre 130 or admission to the M.F.A. program.

Movement techniques for theatre. Movement patterns, phrase development, and musical theatre movement styles. Maximum credit four units applicable to a bachelor's degree; maximum credit eight units applicable to the M.F.A. degree in theatre arts.

### **THEA 570A-570B. Practicum in Theatrical Production (1-3) (1-3)**

Prerequisite: Theatre 440, 447, or 452; or admission to MFA in Design.

Design projects in areas of scenery, costume, lighting, sound, or makeup. Maximum credit six units for 570A and six units for 570B.

**A.** Independent Study

**B.** Design for Department Public Performances

### **THEA 580. Theatre in the Classroom (3)**

Prerequisites: Theatre 310 and 315.

Methods of teaching theatre in elementary, middle, and secondary schools. Emphasis on pedagogy, organization of curriculum, play selection, and principles of producing plays in the classroom.

### **THEA 596. Selected Topics in Theatre (1-3) I, II**

Prerequisite: Twelve units in theatre.

A specialized study of selected topics from the areas of theatre. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a 30-unit master's degree.

## GRADUATE COURSES

### **THEA 600A. Research and Bibliography (2)**

Basic reference works, scholarly and critical journals; introduction to bibliographical techniques; exercises and problems in methods and exposition of research as it relates to the various areas of theatre. Recommended for first semester of graduate work, and prerequisite to advancement to candidacy.

### **THEA 600B. Thesis Preparation (1)**

Prerequisite: Theatre 600A.

Development and presentation of thesis with focus on writing and formal parameters.

### **THEA 610. Seminar in Aesthetics for the Stage (3)**

Prerequisites: Theatre 600A and admission to M.A. or M.F.A. program in drama.

Aesthetic theories influencing contemporary theatre.

### **THEA 621. Seminar in Theories of the Theatre (3)**

Prerequisites: Minimum three units of upper division theatre history; credit or concurrent registration in Theatre 600A.

Theories of dramatic literature and performance, reflecting major stylistic movements and aesthetic philosophies of the stage from the classical Greeks to today (e.g., Aristotle, Lessing, Appia, Brecht, and Grotowski).

**THEA 623. Seminar in Musical Theatre Script and Score Analysis (3)**

Prerequisite: Admission to M.F.A. musical theatre program.

Representative works from the musical theatre spectrum analyzed in terms of dramatic and musical content, environment, action, character and style.

**THEA 627. Musical Theatre Studio (4)**

Eight hours of activity.

Prerequisite: Admission to M.F.A. musical theatre program.

Acting, singing, and dancing skills in relation to musical theatre performance, direction, choreography, and composition.

**THEA 630. Individual Vocal Instruction (1)**

Prerequisite: Admission to M.F.A., concentration in acting or musical theatre.

Individual vocal instruction/coaching devoted to diagnosis and correction of problems for students in M.F.A. concentration in acting or musical theatre. Maximum two units applicable to acting. Musical theatre students must take one unit each semester for a maximum of four units.

**THEA 642. Theatre Practicum Skills (1) Cr/NC**

Prerequisite: Admission to M.F.A. concentration in design and technical theatre.

Design projects for department productions. To be arranged with area adviser. Should be repeated each semester during the first two years of study for maximum credit four units.

**THEA 643. Collaborative Studies in Design (3)**

Two lectures and two hours of activity.

Prerequisite: Admission to M.F.A. program in design/technical theatre. This course must be repeated each semester by the M.F.A. design student for a maximum of 12 units.

Design of theatrical productions with emphasis on artistic collaboration and integration of scenery, costumes and lights. Attention to graphic presentation techniques as well as designs produced.

**THEA 644. Seminar in Contemporary Designers (3)**

Prerequisite: Theatre 643.

Major set, costume, and lighting designers working in contemporary theatre, film, and television.

**THEA 645. Seminar in Theatrical Lighting (3)**

Prerequisite: Theatre 643.

Aesthetics of stage lighting as it applies to the areas of scenery and costume design. Exploration of literature in the field of theatrical lighting. Investigation of commercial and architectural lighting. Projects involving use of color and distribution of light.

**THEA 647. Seminar in History of Theatre and Drama (3)**

Prerequisites: Theatre 325, 460A and 460B or admission to M.A. or M.F.A. program in theatre arts.

- A. British and Continental Theatre
- B. American Theatre

**THEA 649. Topics in World Theatre (1-3)**

Prerequisite: Admission to M.A. or M.F.A. program in theatre arts.

Intensive study in specific areas of world theatre. Forms, technologies, genres, cultural expressions, and contemporary developments. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to the M.A. or M.F.A. degree in theatre arts.

**THEA 650. Seminar in Musical Theatre Dance History (3)**

Prerequisite: Admission to M.F.A. musical theatre program.

Intensive study of the various choreographic styles of the musical theatre from the viewpoint of the choreographer and director.

**THEA 659. Musical Theatre Stage Direction (3)**

Prerequisite: Admission to M.F.A. musical theatre program.

Special problems in directing for the musical theatre.

**THEA 746. Theatre Internship (3) Cr/NC**

Prerequisites: Theatre 600A and consent of graduate coordinator and program director.

Professional field experience in areas of design/technical theatre, acting, directing musical theatre, and theatre for young audiences. (Formerly numbered Drama 746B.)

**THEA 795. Practicum in Theatre Arts (1-6)**

Prerequisite: Theatre 600A.

Faculty supervised projects in design/technical theatre, performance or direction leading to public presentation. Maximum credit six units.

**THEA 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Project/assignment to be arranged with area adviser.

Individual study. Maximum credit six units applicable to a master's degree.

**THEA 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy. Theatre 795 (Practicum in Theatre Arts) is a prerequisite if the student elects the preparation of a project.

Preparation of a project report or thesis for the master's degree.

**THEA 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.

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

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# Women's Studies

In the College of Arts and Letters

**OFFICE: Adams Humanities 3138**  
**TELEPHONE: (619) 594-6524**

## Faculty

Susan E. Cayleff, Ph.D., Professor of Women's Studies,  
Chair of Department

Olivia M. Espin, Ph.D., Professor of Women's Studies, Emeritus

Patricia Huckle, Ph.D., Professor of Women's Studies, Emeritus

Bonnie Kime Scott, Ph.D., Professor of Women's Studies  
(Graduate Adviser)

Bonnie Zimmerman, Ph.D., Professor of Women's Studies,  
Associate Vice President for Faculty Affairs

Anne Donadey, Ph.D., Associate Professor of Women's Studies

Doreen J. Mattingly, Ph.D., Associate Professor of Women's Studies

Huma Ahmed Ghosh, Ph.D., Assistant Professor of Women's Studies

Irene Lara, Ph.D., Assistant Professor of Women's Studies

Deboleena Roy, Ph.D., Assistant Professor of Women's Studies

## Associateships and Assistantships

Graduate teaching associateships and graduate assistantships in women's studies are available to a limited number of qualified students. Application forms and additional information may be obtained from the graduate adviser in the Department of Women's Studies.

## General Information

The Department of Women's Studies offers graduate study leading to the Master of Arts degree in women's studies.

The department, recognized as the nation's first (1970) and among the strongest, has a distinguished faculty in the humanities and social sciences. Discipline-specific expertise as well as feminist theoretical paradigms are available to satisfy students' multi-faceted interests.

The Master of Arts degree is designed to provide advanced training for (1) students who plan to terminate their graduate studies at the master's level, and (2) those who anticipate further study leading to a doctoral degree in women's studies or related fields. It will also provide a foundation for further graduate work in professional degree programs such as counseling, social work, law, and public health. The M.A. will enhance students' ability to participate professionally in a range of organizations and businesses in the public and private sector, particularly those addressing women's issues.

## Admission to Graduate Study

The application deadline for fall admission of new students in the Department of Women's Studies is February 15. All students must satisfy the general requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin. As an additional requirement, students must demonstrate sufficient preparation for the program. This preparation can include possession of a bachelor's degree in women's studies from an accredited institution or completion of sufficient units in women's studies and related fields. Evaluation of a student's transcript will be made on an individual basis by the admissions committee to determine whether evidence of sufficient preparation can be demonstrated. A student whose preparation is deemed insufficient by the Graduate Admissions Committee may be admitted as conditionally classified and will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

The grade point average required for admission to the M.A. program in women's studies is 3.0 for the last 60 units of the student's undergraduate work, plus satisfactory scores on the verbal and quantitative sections of the GRE. Conditional admission is possible pending the taking of the GRE General Test and the attainment of a satisfactory score by the start of the fall semester.

Students applying for admission should electronically submit the University application available at <http://www.csumentor.edu>. GRE scores (official notification) are submitted to San Diego State University.

The following materials should be submitted as a complete package directly to the Department of Women's Studies:

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) Two letters of reference from individuals with direct knowledge of the applicant's scholarly ability;
- (3) A personal statement of background, intentions, and goals, including experience in women's studies and with women's issues, rationale for pursuing the M.A. degree, and relation of the M.A. degree in women's studies to prior academic work and to career objectives.

Mail or deliver your complete admissions package to:

Department of Women's Studies  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-8138

## Advancement to Candidacy

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

## Specific Requirements for the Master of Arts Degree

**(Major Code: 49991)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of 30 units with at least 21 units in women's studies including Women's Studies 601; 12 units selected from Women's Studies 602, 603, 604, 605, 606, 607; Women's Studies 797 and 799A (for Plan A Thesis); and a theme of study composed of nine units of graduate electives, selected with the approval of the student's adviser. The theme may include courses in departments other than women's studies. Normally, students will be expected to pursue Plan A, which requires presentation of an acceptable thesis. In certain special circumstances and with the prior approval of the graduate adviser, a student may be permitted to pursue Plan B, comprehensive examination. When Plan B is chosen, three additional graduate units in women's studies shall be selected in lieu of 799A. Candidates for this degree must demonstrate knowledge of either a relevant foreign language or an approved substitute in computer language or statistical methods. Other substitutes may be approved where the skills involved are directly related to the student's research interests. Course selection and programs must be approved by the graduate adviser.

## Courses Acceptable on Master's Degree Program in Women's Studies (WMNST)

### UPPER DIVISION COURSES

#### WMNST 512. Latinas in the Americas (3)

Prerequisite: Three upper division units in women's studies.

How social and other factors impact the lives of Latin American women. Theoretical frameworks illuminate their situation. Sociocultural perspectives are offered on Latin American women's life narratives.

#### WMNST 515. Women: Myth, Ritual, and the Sacred (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.

#### WMNST 521. Life Cycles of Women (3)

Prerequisite: Three upper division units in women's studies.

Women's developmental processes across the life cycle; their impact on women, men, and the family, including life passages related to adolescence, marriage, motherhood, divorce, widowhood, "second careers," and aging in varying socioeconomic and cultural contexts.

#### WMNST 522. Women: Madness and Sanity (3)

Prerequisite: Three upper division units in women's studies.

Concepts of mental health and mental illness in narratives as well as clinical approaches to women's lives. Includes Freudian, post-Freudian, and feminist approaches to mental health.

#### WMNST 530. Women's Movements and Activism (3)

Prerequisite: Three upper division units in women's studies.

Comparative study of women's movements worldwide, including organizations, issues and initiatives. Women's diverse social/political strategies within local, national, and global contexts. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

#### 535. Lesbian Lives and Cultures (3)

Historical, cultural, and social exploration of lesbianism. Topics include myths and stereotypes, history and literature, social and political movements, theoretical explanations, and current conditions.

#### WMNST 536. Gender, Race, and Class (3)

Prerequisite: Three upper division units in women's studies.

Major issues and themes in the history, culture, and contemporary lives of women of color in the U.S. Analysis of theories explaining similarities and differences in opportunities and life choices. Roles within social and political movements.

#### WMNST 553. Women and the Creative Arts (3)

Prerequisite: Three upper division units in women's studies.

Representations of women in literary, visual, and/or performing arts as well as crafts; artistic contributions of women across cultures; theories of creativity and gender. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

#### WMNST 565. Women: Health, Healing, and Medicine (3)

Prerequisite: Three upper division units in women's studies.

Relationship of women to "modern" and "traditional" health care/healing systems in historical and cultural perspective. Representations and practices regarding the politics of women's health and illness.

#### WMNST 572. Women and Violence (3)

Prerequisite: Three upper division units in women's studies.

Forms of violence against and by women. Processes which shape women's resistance to, and collusion in, social, economic, political, and sexual violence.

#### WMNST 580. Women, Development and the Global Economy (3)

Prerequisite: Three upper division units in women's studies.

Women's roles as agents and recipients of global economic and political change focusing on women's empowerment, work, health, and the environment. Topics include women's movements worldwide and non-government organizations.

#### WMNST 581. Women's Experiences of Migration (3)

Prerequisite: Three upper division units in women's studies.

Gender analysis of impact of international migration on women's lives. Identity formation, trauma, language, gender roles, and sexuality in life narratives of immigrant and refugee women. Economic and legal issues affecting immigrant and refugee women.

#### WMNST 582. Science and Technology in Women's Lives (3)

Prerequisite: Three upper division units in women's studies.

Role of science and technology in women's lives to include historical participation, contemporary opportunities and barriers; public policies; feminist critiques and alternative strategies for thinking about and doing science.

#### WMNST 590. Feminist Thought (3) I

Prerequisite: Six upper division units in women's studies.

Readings of feminist theory in historical perspective, with attention to contemporary debates in feminist scholarship.

#### WMNST 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.

#### WMNST 596. Topics in Women's Studies (3)

Prerequisite: Consent of instructor.

Advanced topics in women's studies. See Class Schedule for specific content. May be repeated with new content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

#### WMNST 597. Research Project (3) I, II

Prerequisites: Six upper division units in women's studies and consent of adviser.

Individual research project. May be taken in place of Women's Studies 595, Seminar in Women's Studies.

#### WMNST 598. Women's Studies Internship (3) II Cr/NC

Prerequisite: Three upper division units in women's studies and consent of instructor.

Application of women's studies theories and scholarship to community service and activism through combination of classroom discussion and field internship. Internship includes 80 hours of work in local public and private agencies dealing primarily with women and girls. Maximum credit six units. (Formerly numbered Women's Studies 498.)

### GRADUATE COURSES

#### WMNST 601. Foundations of Feminist Scholarship (3)

Prerequisite: Graduate standing.

Theories, issues, and major paradigms underlying feminist scholarship. Development of women's studies as a discipline. Emphasis on multicultural approaches and perspectives.

#### WMNST 602. Seminar: Methods of Inquiry in Women's Studies (3)

Prerequisites: Six upper division units in women's studies.

Examination and critique of traditional research methods; methods of critical feminist investigation; designs of research proposals.

**WMNST 603. Seminar: Advanced Feminist Theory (3)**

Prerequisite: Six upper division units in women's studies.

Analysis of categories of contemporary feminist theory including concepts of identity and difference; theories of subjectivity; feminist discourses, strategies, and practices.

**WMNST 604. Seminar: Gender, Culture, and Representation (3)**

Prerequisite: Six upper division units in women's studies.

Representations of women and femininity in cultural systems. Women as images in and creators of literature, art, music, and other cultural endeavors. Interconnection between representations of gender and of race, ethnicity, class, and sexualities.

**WMNST 605. Seminar: Women, Relationships, and Social Policy (3)**

Prerequisites: Six upper division units in women's studies.

Theories of women's friendships and family relationships; relationship development in historical and cross-cultural context; effects of social policies on women's relationships.

**WMNST 606. Seminar: Narrating Women's Lives (3)**

Prerequisites: Six upper division units in women's studies.

Exploration of women's biographies and autobiographies. Theories of narration, identity construction, and oral and written life histories. Interconnection between self-presentation and social, historical, and multicultural institutions and discourses.

**WMNST 607. Seminar: Privilege and Oppression (3)**

Prerequisite: Graduate standing or two upper division women's studies courses.

How gender, culture, ethnicity, class, religion, and physical challenges define interplay of privilege and oppression. Theoretical and practical implications discussed.

**WMNST 696. Selected Topics in Women's Studies (3-6)**

Prerequisite: Classified graduate standing.

Intensive study in specific areas of women's studies, with emphasis on theoretical and methodological issues. May be repeated with new content. Maximum credit of six units of 696 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

**WMNST 701. Seminar in Women's Studies (3)**

Prerequisite: Six upper division units in women's studies.

Interdisciplinary seminar integrating research in various areas of women's studies in humanities, social sciences, arts and/or sciences. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

**WMNST 797. Research (1-3) Cr/NC**

Prerequisite: Advancement to candidacy and written approval of the Women's Studies department graduate adviser.

Independent research in a specialized subject in women's studies.

**WMNST 798. Special Study (1-3) Cr/NC/RP**

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

Independent study. Maximum credit six units applicable to a master's degree.

**WMNST 799A. Thesis (3) Cr/NC/RP**

Prerequisite: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**WMNST 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

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

**WMNST 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

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# Upper Division and Graduate Topics Courses

(Also Acceptable for Advanced Degrees)

The following courses are acceptable on selected advanced degree programs.

## CHICANA AND CHICANO STUDIES COURSE (CCS)

### CCS 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.

## CLASSICS COURSES (CLASS)

### CLASS 599. Special Study (1-3) I, II

Prerequisites: Consent of major or graduate adviser; to be arranged by department chair and instructor. For 599C: Classics 304L or 304G. For 599G: 304G. For 599L: 304L.

Individual study. Maximum credit nine units in any combination of 599C, 599G, 599L.

- C. Special Study in Classics.
- G. Special Study in Greek.
- L. Special Study in Latin.

## HUMANITIES COURSES (HUM)

### HUM 596. Topics in Humanities (1-3)

Prerequisite: Upper division standing and consent of instructor.

Special topics on selected aspects of civilization from an interdisciplinary humanities perspective. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. No more than six units of 596 may be applied to either the bachelor's or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

### HUM 599. Special Study (1-3)

Prerequisites: Humanities or European studies major or minor with upper division standing, twelve units in courses acceptable for major or minor, and consent of instructor and program chair; or graduate standing and consent of instructor and program chair.

Directed individual study. Maximum credit six units.

## INTERNATIONAL BUSINESS COURSE (I B)

### I B 596. Topics in International Business (1-3)

Prerequisite: Upper division standing.

Selected topics in international business. May be repeated with new content. 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.

## RECREATION COURSES (REC)

### REC 561. Legal Aspects and Research in Recreation and Parks (3)

Prerequisite: Recreation 464.

Legal obligations and research pertinent to delivery of leisure services. Liability and risk management, open space acquisition and preservation, constitutional guarantees, administrative regulations, contracts, and criminal law. Methods of investigation and evaluation, data analysis and reporting in relation to research needs in recreation, parks and tourism. (Formerly numbered Recreation 560.)

### REC 566. Administration and Fiscal Aspects in Recreation and Parks (3)

Prerequisite: Recreation 464.

Organizational behavior, planning, policy development, and future trends in recreation systems. Basic principles of fiscal management including budgeting, record keeping, and marketing as applied to recreation, parks and tourism agencies. (Formerly numbered Recreation 565.)

### REC 575. Designing Recreation and Park Areas and Facilities (3) I, II

Prerequisite: Recreation 101.

Design principles and concepts applied to planning and development of park and recreation areas and facilities.

### REC 580. Leisure, Recreation Therapy, 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 in relationship to recreation therapy services.

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# PART FOUR

Division of Research  
Administration and  
Technology Services

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# Division of Research Administration and Technology Services

## Research Administration and Technology Services

The Division of Research Administration and Technology Services is responsible for the institutional approval of all funded grant proposals and contracts relating to sponsored research, instruction, and service agreements; administration of research regulatory and intellectual property services; administration of faculty grants-in-aid, fellowships and other institutional research support programs; administration of university cost-sharing; coordination of SDSU Foundation/University liaison.

The Associate Vice President for Research is the chief administrator of the Division of Research Administration which is supervised by the Assistant Vice President for Research and Technology. The Associate Vice President for Research is responsible for the development, improvement, and administration of research activities at the University.

The importance of research in graduate instruction is recognized by the faculty, and all graduate programs provide for research on the part of the graduate student. Graduate students involved in thesis or other research at the University must comply with all applicable university research policies, including those related to the use of human and animal subjects in research.

## University Research Facilities and Organizations

Among the facilities for research that students may utilize are those provided in organized bureaus, centers and institutes located on the campus; specialized off-campus research facilities and field stations; inter-institutional, consortia and other cooperative research facilities.

## Graduate Research Centers and Institutes

### The Center for Biopharmaceutical and Biodevice Development

**A. Stephen Dahms, Director;**  
**Robert Wang, Associate Director**

The Center is a new interdisciplinary organization focusing on the research, development, manufacturing, production, processing, and marketing of biotechnological, biopharmaceutical, pharmaceutical, in vitro diagnostic and medical device products. As an administrative, instructional, and research entity, it incorporates faculty and programs from the Colleges of Sciences, Engineering, Business Administration, Health and Human Services, Professional Studies and Fine Arts, Education, and Arts and Letters. The Center addresses research and workforce needs of companies in their transition from research and development into manufacturing and production, with

an additional focus on the overarching legal, ethical, and regulatory elements that both guide and restrict the industry. The Center has a management structure similar to a bioscience company, with section directors for regulatory affairs, biopharmaceutical marketing, bioprocessing/manufacturing, QA/QC, etc., each with research and capstone professional graduate degrees overlaying a cluster of specific certificate programs, and degree emphases, as well as continuing education programs for existing corporate employees. Activities under the Center also include regional economic development, workforce development, the acquisition of new training and research facilities, in some cases, fermentation, cell culture, small molecule synthetic, and pilot plant scale facilities, as well as biotechnology business incubation. The Center employs long-distance telecommunications to corporate, government, and other university sites within California, between its academic partners, and with several international partners. The Center interfaces intensively with the California State University Program for Education and Research in Biotechnology (CSUPERB) providing novel capstone training experiences for CSU biotechnology students.

### CSU Program for Education and Research in Biotechnology (CSUPERB)

**A. Stephen Dahms, Executive Director**

The California State University Program for Education and Research in Biotechnology (CSUPERB) is based at San Diego State University. It exists to provide a coordinated and amplified development of biotechnology research and education within the university system; to foster competitiveness both on the state and national levels; to facilitate training of a sufficient number of biotechnology technicians and scientists; to catalyze technology transfer and enhance intellectual property protection; and to facilitate the acquisition and long-term maintenance of state-of-the-art biotechnology resource facilities across the university, such as the Microchemical Core Facility and the Macromolecular Structural Analysis Resource Center, both localized at SDSU. It facilitates interdisciplinary cooperative activities between the Colleges of Sciences and Engineering, and key departments on all campuses, as well as between faculty and from a number of allied academic and research units such as bioengineering, agricultural biotechnology, environmental and natural resources, molecular ecology, and marine biotechnology. It also operates a grants program of over \$1 million annually for programmatic development and for joint corporate research ventures with industry. It also serves as the official liaison between the CSU and industry, government, the Congressional Biotechnology Caucus, and the public arena in biotechnological matters. CSUPERB operates through an Executive Director, two Associate Directors, a Director of Operations and Workforce Development, a Strategic Planning Council composed of five corporate CEOs, five CSU Deans of Sciences, and ten faculty from the system. CSUPERB is overseen by the Presidents' Commission composed of five CSU campus Presidents from San Diego State University, San Jose State University, Cal Poly Pomona, CSU Los Angeles, and Cal Poly San Luis Obispo. Faculty input into the organization and its multiple activities is through a 55 member Biotechnology Faculty Consensus Group.

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

**6310 Alvarado Court, San Diego, CA 92120, (619) 594-4756,  
FAX (619) 287-6756**

The June Burnett Institute was created in 1985 at the San Diego State University Foundation from a \$1.5 million bequest from the estate of June Estelle Burnett. The mission of the Institute is to develop innovative programs for children, youth, and families that blend service, training, and research. It is dedicated to developing the potential of all children, youth, and parents in a manner that is sensitive and responsive to cultural, social, and economic differences and needs. The Institute fosters cooperation and collaboration through interdisciplinary/interprofessional approaches that promote the well-being of children, youth, and families through prevention, intervention, and volunteer-based services. An advisory board composed of SDSU faculty and community members directs the activities of the Institute in cooperation with its director and a staff of approximately 100. The Institute has two major program divisions that include the San Diego Choice Program and the California PARENT Center.

**San Diego Choice Program** – The Institute, in cooperation with the San Diego Juvenile Court and the County of San Diego, coordinates the San Diego Choice Program which serves approximately 800 court-involved delinquent youth annually that are referred by the County Probation Departments and the County Health and Human Services Agency. The San Diego Choice Program is modeled after the Choice Program developed by the Shriver Center at the University of Maryland. The program currently maintains offices that serve most areas of San Diego County emphasizing intensive case contact services and services for children reentering the foster care system. The Institute has two major program divisions that include the San Diego Choice Program and the California PARENT Center.

**The California PARENT Center** serves as a hub for strong outreach to parents through contacts with parent groups, parent centers, parent advocates, and educators across the state. The Center's "Cyber Center" provides easily accessible resources through an extensive Web site at <http://parent.sdsu.edu> and toll free Parent Warm Line (619) 594-3349; in other areas of California (877) 9PARENT. Staffed in seven languages daily from Noon to 2:00 p.m., the Warm Line makes available a group of multilingual parents who can provide specific "how-to's" for parents or educators who wish to build effective parent programs at the preschool, elementary, middle school or high school levels. The Center currently combines the efforts of skilled service staff, community-based agencies, and volunteers to promote three "best practice" parent training models: Families and Schools Together (FAST), the Home/School Partnership, and the HIPPIY program (Home Instruction for Parents of Preschool Youngsters). A statewide training program for parent advocates is being developed through an agreement with three collaborative, direct service parent programs. It is being expanded to new sites through subcontracts with the Homey's Youth Foundation, Chicano Federation, the Parent Teacher Association, Union of Pan Asian Communities, San Diego Urban League, Parent Institute for Quality Education, San Diego Unified School District, the San Diego Unified PTA council, and the Alliance for Children and Families.

**Support for SDSU Faculty** – The Burnett Institute has sponsored a range of support programs for SDSU faculty including: the Burnett Institute Mini-Grant Program, 1986-1992, and the June Burnett Institute Faculty Fellows Program, 1997-2002. The Institute Board is now reviewing these prior programs to identify innovative new ways to support faculty.

**Microchemical Core Facility**

**Long T. Wen, Director**

The Microchemical Core Facility (MCF) is a component of the California State University Program for Education and Research in Biotechnology (CSUPERB). The MCF is a full-service, state-of-the-art facility that provides DNA synthesis, sequencing, and purification

services for cell and molecular biologists associated with any of the 22 CSU campuses. In addition, the MCF provides for CSU faculty access to the most recent advances in computer-assisted analyses of molecular structure. Located in the Biology Department at SDSU, the MCF provides state-of-the-art molecular analyses and characterization to CSU scientists for the lowest possible cost, as well as fostering the training of university faculty at all levels in the most recent techniques available in the molecular life sciences. Funding for the establishment and maintenance of the SDSU MCF is derived from the National Science Foundation with matching funds provided by the State of California. Call (619) 594-1669 for more information.

**Mount Laguna Observatory**

**Paul B. Etzel, Director**

San Diego State University operates the Mount Laguna Observatory, which is located 45 road miles east of the campus at an elevation of 6100 feet. The research telescopes at the observatory include three reflectors with apertures of 40, 24 and 16 inches. The 40-inch telescope is operated jointly with the University of Illinois. Auxiliary equipment for the telescopes includes CCD and Near-IR cameras for direct imaging, CCD spectrographs, and photoelectric photometers. A dormitory for observers and a shop-laboratory building complete the main research facilities at the observatory. Additionally, each dome has dedicated PCs and/or UNIX workstations for telescope control, data collection, and on-line data reduction. All buildings at the observatory are connected to a fiber-optics local area network which in turn is connected to a high speed (45 Mbps) wireless Internet service. Associated with the observatory is the Awona Harrington Visitor Center, which provides facilities for educational programs and for visiting astronomers. The 21-inch Buller reflecting telescope is employed exclusively for education and public outreach programs.

**National Language Resource Center/Language  
Acquisition Resource Center (LARC)**

**Mary Ann Lyman-Hager and Paul Wong, Directors**

**Wayne Stromberg, Associate Director for Operations and  
John Vitaglione, Associate Director for Multimedia**

**Norman Léonard, Associate Director for Outreach and  
Christian Degueidre, Associate Director for the Advancement  
of Distinguished Language Proficiency**

**Maria Ortega, Program Coordinator**

SDSU created the Language Acquisition Resource Center (LARC) in 1989 to improve its capacity to teach foreign languages more effectively. In 1990, LARC at SDSU became one of the first three national Language Resource Centers (LRCs), with funding from the U.S. Department of Education to conduct research in second language performance testing, cross-cultural competence, and technology for language learning. Currently the Department of Education funds 14 national centers located at campuses around the country. SDSU's LARC has one of the nation's finest multimedia collections, more than 80 high-end multimedia computers, digitizing and desktop video conferencing capabilities, a research library, smart classrooms, and faculty offices. The laboratories serve foreign language students and faculty in the Departments of European Studies, Linguistics and Oriental Languages, and Spanish and Portuguese Languages and Literatures.

LARC is enhancing its basic infrastructure and increasing Internet capabilities of its current space. New models of distributed and/or distance learning reflect the changing demographics of SDSU students. The new models will require new curricula and outreach capabilities to match the demographics and learning preferences of these students. In addition to a solid infrastructure equipped to handle new models of distributed learning, LARC has a dedicated professional language faculty and staff to create and manage the proposed projects and bring them to completion. A major focus of the national center is on

wide dissemination of authentic and pedagogical materials created by LARC and by collaborators worldwide. A major emphasis of the Center is developing high level proficiency in Arabic, Persian, and Spanish. We also emphasize intensive courses and materials for Latin American less commonly taught languages.

### **Southwest Center for Environmental Research and Policy (SCERP)**

**D. Rick Van Schoik, Director and  
Paul Ganster, Chair of Management Committee**

Our Mission – Enabling A Border Future Through Sustainability Science:

Discovery, learning, and innovations related to people, ideas, and tools.

The Southwest Center for Environmental Research and Policy (SCERP), a consortium of five U.S. and five Mexican universities located in ten border states, assists U.S.-Mexico border peoples and their environments by applying research information, insights, and innovations. The five American universities are SDSU, Arizona State University, New Mexico State University, University of Texas at El Paso, and University of Utah.

The center was established in 1989 and funded by Congress in 1990 to address environmental issues of the U.S.-Mexico border region and to “initiate a comprehensive analysis of possible solutions to acute air, water and hazardous waste problems that plague the United States - Mexico border region.”

The consortium works closely with the EPA/SEMARNAT Border XXI and 2012 Programs and other organizations with the multi-fold mission of applied research, outreach, education, policy development, and regional capacity building for the communities.

The center exists to address the deteriorating border environment, protect and enhance the quality of life and health of border residents, and support the educational mission of our universities.

The center's vision is a vital region with dynamic and diverse economy, sustainable environmental quality, intact ecological systems and processes, and a more equitable quality of life.

The approach is to integrate and focus transdisciplinary academic expertise; binational, state, tribal, and local policy making; non-governmental organization advocacy capacity; and private industry attention and influence on trans-border issues; and to inform the decision-making process without advocating for or against a particular position. By interpreting the results of unbiased scientific inquiry, motivation is provided to adopt comprehensive, regional, and long-term policies and solution sets.

SCERP sponsors interns, the Border Institute that convenes the 100 top decision makers and stakeholders from the region to examine critical issues and recommend policy actions, and funds graduate level research.

## **College Research Centers and Institutes**

### **College of Arts and Letters**

#### **Africana Center for Cultural Literacy and Research**

**JoAnne Cornwell and Francis Nesbitt, Co-Directors**

The Africana Center for Cultural Literacy and Research provides independent and collaborative projects (across a broad spectrum of academic disciplines) that create professional development opportunities with an Africana cultural focus for students, faculty and staff; research opportunities for students and faculty; and culturally enhanced teaching opportunities for SDSU faculty. The Center's programs also provide venues for community service which focus on Africana cultural groups.

The Africana Center is housed in the Department of Africana Studies and can be reached by calling the department office at (619) 594-6531 or Dr. Cornwell at (619) 594-4131.

### **Bread and Roses Center**

The Bread and Roses Center for the promotion of creativity, scholarship, and community action in support of the women's movement, is the first such center in the nation.

The Center brings activists, artists, and scholars committed to feminist social change to SDSU to network with colleagues and students on the campus and in the San Diego community, and to reflect upon and reorient their practices. Visiting residents of the Center benefit from the opportunity for rejuvenation. The Center also supports a strong international community of artists, students, scholars, and community activists working to achieve equality for women. The Center hosts such activities as colloquia, festivals, readings, exhibitions, and special events. For those wishing to expand their knowledge of women's movements, the Center provides a forum for courses, guest lectures, and workshops. The Center enhances two missions of SDSU: promoting internationalization of the curriculum and students' learning experiences, and reaching out to, and positively interacting with, the larger San Diego community.

The Bread and Roses Center is housed in the Department of Women's Studies and can be reached by calling the department office at (619) 594-2952.

### **China Institute**

**Paochin Chu, Director**

The China Institute coordinates and supports on-campus teaching and research related to China. The Institute develops and fosters faculty and student exchange programs with Chinese universities and institutions of higher learning. Various cultural programs on China and activities on campus and in the community promote cultural awareness and understanding. The development of Chinese publications, audiovisual materials, periodicals, newspapers, and other resources on campus fosters relationships between San Diego State University and the Chinese community, as well as nurtures friendship between the Chinese and American peoples.

### **Institute of Druze Studies**

**Samy Swayd, Director**

The Institute of Druze Studies (IDS) is an academic non-profit organization dedicated to research and discourse on the Druzes and related topics. The Druzes are a Middle Eastern minority group that live predominantly in the mountainous regions of today's Lebanon, Syria, Jordan, Israel, and with smaller numbers elsewhere around the world. More than 25,000 Druzes live in the United States with California as the main Center of the American Druze Society (ADS). The Druze sect began in Cairo and has survived for almost one thousand years.

The IDS aims to 1) provide information on Druze history, society, and faith; 2) encourage research and studies on historical and contemporary Druze communities; and 3) promote academic discourse about other immigrant religious communities. The IDS pursues these objectives through an international multidisciplinary conference, an academic journal, and a newsletter. The IDS participates in professional conferences and provides guest lectures to interested organizations.

For more information, call the IDS office at (619) 594-1880, the Department of Religious Studies at (619) 594-5185, FAX (619) 594-1004, or <http://www.druzestudies.org>.

**Donald I. Eidemiller Weather Station**

**Edward Aguado, Director**

The Donald I. Eidemiller Weather Station serves as a teaching and research resource. 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 40 years.

**Institute for Ethics and Public Affairs**

**Darrel Moellendorf, Director**

The Institute for Ethics and Public Affairs at San Diego State University seeks to promote critical thinking about moral issues that are often complex in nature. It aims both to be a resource to members of the campus community, the larger community of scholars, and the greater San Diego community who wish to pursue thoughtful discussion and research as a means of clarifying moral problems. It also aims to raise the profile of the moral dimensions of contemporary issues. The Institute is housed in the Philosophy Department, but seeks interdisciplinary discussion and collaboration since clarity on contemporary moral problems often involves both the application of normative theorizing and empirical investigation. The Institute organizes and sponsors a variety of programs on applied and theoretical moral issues. Among these programs are colloquia, community outreach talks, lectures, and student essay contests.

**Center for European Studies**

**James L. Schorr, Director**

The Center for European Studies, through its associated faculty and students, is committed to the multidisciplinary study of Europe and its dynamic and evolving calculus of nations, cultures, languages, and perspectives. The Center is a vehicle for fostering appreciation of Europe, the societies and cultures within its geographical boundaries, and the ideas that make up various European realities. The Center will develop grant funded programs (e.g. colloquia, symposia, etc.), collaborative teaching and research opportunities, faculty exchanges, internship leads for partner programs, workshops, and related activities.

For more information regarding the Center for European Studies, contact James L. Schorr, Department of European Studies, (619) 594-5111 or 594-5671; jschorr@mail.sdsu.edu.

**Center for International Business Education and Research (CIBER)**

**Michael L. Hergert and Steven J. Loughrin-Sacco, Co-Directors**  
**David P. Earwicker, Managing Director**

The Center for International Business Education and Research (CIBER), one of 30 such centers of excellence in the United States, was established in 1989 under the auspices of a grant from the U.S. Department of Education and is administered by the Colleges of Arts and Letters and Business Administration.

CIBER promotes: (1) interdisciplinary programs which incorporate foreign language and international studies training into business, finance, management, communications systems, and other professional curricula; (2) interdisciplinary programs which provide business, finance, management, communications systems, and other professional training for foreign language and international studies faculty and advanced degree candidates; (3) evening or summer programs, such as intensive language programs, available to members of the business community and other professionals, which are designed to develop or enhance their international skills, awareness, and expertise; (4) collaborative programs, activities, or research involving other institutions of higher education, local educational agencies, professional associations, businesses, firms or combinations thereof, to promote the development of international skills, awareness, and expertise among current and prospective members of the business community and other professionals; (5) research

designed to strengthen and improve the international aspects of business and professional education and to promote integrated curricula; and (6) research designed to promote the international competitiveness of American businesses and firms, including those not currently active in international trade.

CIBER is located in Business Administration 428; (619) 594-3075; FAX (619) 594-7738; ciber@mail.sdsu.edu; <http://www.sdsu.edu/ciber>.

**International Population Center**

**John R. Weeks, Director**

The International Population Center (InterPop) promotes applied demographic research and the provision of technical assistance and consulting, especially focusing on population issues and policy within the San Diego/Tijuana region and the Middle East.

Although it is located in the Department of Geography, InterPop is a multidisciplinary facility, linking Center faculty from several departments on campus with Center associates from other organizations and universities in the San Diego region. The telephone number for the center is (619) 594-8040.

**Institute for International Security and Conflict Resolution**

**Alan R. Sweedler and Dipak Gupta, Co-Directors**

The SDSU Institute for International Security and Conflict Resolution (IISCOR) encourages and facilitates teaching and research in the multidisciplinary area of international security and conflict resolution. Specifically, topics such as nuclear armaments, international and intranational conflict, sociopolitical violence, and global environmental issues as they relate to security are covered.

The Institute is a joint effort of the Colleges of Arts and Letters, Professional Studies and Fine Arts, and Sciences. IISCOR is administered by two co-directors, advised by an executive committee consisting of faculty members representing the different disciplines that provide input into the study of international security and conflict resolution.

The Institute promotes teaching and research by organizing public forums, faculty and student seminars, developing appropriate curricula for undergraduate and graduate instruction and facilitating research and scholarly activities. SDSU offers, through IISCOR, a multidisciplinary Bachelor of Arts degree in International Security and Conflict Resolution.

**International Technology and Trade Network (ITTN)**

**David P. Earwicker and Marc Siegel, Co-Directors**

The International Technology and Trade Network (ITTN), an institute of San Diego State University's Center for International Business Education and Research (CIBER), is a collaborative offering of the College of Arts and Letters and the College of Business Administration. The objective of the ITTN is to promote methods for creating a stable economic environment for transnational business, trade, and research. The Institute will seek ways to use business as a catalyst for regional peace and cross-border economic development. This effort will focus on networking together business assistance organizations, academic institutions, and research centers in regions of conflict and emerging economies. We will establish a virtual business assistance network that will take advantage of the latest Internet, information, and telecommunications technologies to provide business-to-business and organizational links. We will use these technologies to share information as well as provide educational, training and distance learning opportunities to participating members of the network. For more information, contact David Earwicker with the SDSU CIBER at (619) 594-6023 or david.earwicker@sdsu.edu.

### Center for Islamic and Arabic Studies

**Paul Wong, Acting Director**

The Center for Islamic and Arabic Studies administers the minor in Islamic and Arabic Studies. It is committed to supporting teaching and research focused on the lives of Muslim and Arabic-speaking peoples past and present. The Center's study of the Islamic world focuses on the global context in which Islam emerged historically, the cultures and societies that it helped shape, most especially in Eurasia and Africa, and the current global condition in which people in the Islamic world situate themselves today. It sees the Arabic language as the cultural medium for diverse ways of life that are of world-historical significance.

The Center is multi-disciplinary and includes in its scope of study the Arabic and Persian languages and literatures; the history of Muslim and Arabic-speaking peoples; political, economic, and social dynamics of contemporary societies; art and architecture; social, political, religious, and philosophic thought; and the experience of Muslim communities in the United States and around the world. For more information, contact Farid Abdel-Nour at (619) 594-6598 or [abdelnou@mail.sdsu.edu](mailto:abdelnou@mail.sdsu.edu).

### Latin American Studies

**James B. Gerber, Director**

**Ramona L. Pérez, Associate 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. It also participates in joint degree programs in International Business, Business Administration, and Public Health. Since 1976, the Center for Latin American Studies has been designated a National Resource Center for Latin American Studies (one of only 21 in the nation) by the United States Department of Education and funded through a Title VI grant, in consortium with the Center for Iberian and Latin American Studies at the University of California, San Diego. CLAS, along with CIBER and LARC, is one of three Title VI funded centers on the San Diego State University campus. In conjunction with this award, the Center administers programs that are interdisciplinary, drawing on the expertise of an outstanding Latin Americanist faculty from the following departments and schools: Anthropology; Art, Design, and Art History; English and Comparative Literature; Economics; Geography; History; Political Science; Public Administration and Urban Studies; Public Health; Social Work; Sociology; Spanish and Portuguese Languages and Literatures; Women's Studies; and the College of Business Administration. In addition, the Center is involved with the development of innovative methods of instruction in Spanish, Portuguese, and Mixtec; the provision of informative and in-service training programs for elementary and secondary school teachers; and the provision of services for the general public through the sponsorship of conferences, workshops, lectures, and films. The Center also assists in the development of the University library's Latin American holdings. The Center has cooperative agreements for research, faculty, and student exchanges with several Latin American universities, particularly in Mexico, Chile, and Costa Rica.

### Lipinsky Institute for Judaic Studies

**Lawrence Baron, Director**

The Lipinsky Institute for Judaic Studies, located in the College of Arts and Letters, serves to coordinate the CSU consortial major in Modern Jewish Studies and the Jewish Studies minor at SDSU. Established with contributions from the San Diego community, the Institute provides financial support for an annual visiting professor from Israel, the annual Galinson-Glickman symposium on contemporary Israeli issues, the Robert Siegel Memorial Lecture, and the Jewish heritage video collection housed in the library's Media Center. It also complements regular course offerings by sponsoring lectures, acting as a community resource on Jewish studies, and housing the Jewish Historical Society of San Diego archives in the Snyder Judaic Studies reading room (Love Library 363).

### National Center for the Study of Children's Literature

**Alida L. Allison, Director**

For 25 years, SDSU's Children's Literature Circle has served as a focus for regional commitment to children's literature and to enhance the understanding of scholars, teachers, students, and librarians of the intricacies of the field. The Children's Literature Circle has developed into the National Center for the Study of Children's Literature.

The Center will promote scholarly research and support the preparation of future literature teachers. A strong international community of scholars as well as a growing national cadre of those committed to and active in this field will benefit from the Center. For those who already define themselves as children's literature scholars, the Center will provide leadership through such activities as conferences, festivals, colloquia, and special events. For those who are training in this field, including prospective and current educators at all levels, the Center plans to offer courses, summer programs, and workshops offering the study of children's literature from advanced critical perspectives.

### Institute for Regional Studies of the Californias

**Paul Ganster, Director**

The Institute for Regional Studies of the Californias (IRSC) provides San Diego State University with a forum for the investigation, discussion, and dissemination of information about the United States-Mexican border region. Although the Institute focuses on the border region of California, Baja California, the United States, and Mexico, it is also concerned with important issues of border regions elsewhere in the world.

Created in 1983, the Institute has undertaken multidisciplinary applied research projects on important regional concerns including transborder environmental issues, policy perspectives of the California-Mexico relationship, quality of life, and sustainable development. IRSC also plays an active role in Mexico-related professional organizations and is frequently consulted on transborder issues by the media, nongovernmental organizations, the public sector, and other border stakeholders.

Other Institute activities include conducting binational symposia; improving communication between public and private sector representatives on both sides of the border; serving as a clearinghouse for information on transborder events, issues, and institutions; and encouraging the effective use of educational resources among the region's universities. The Institute serves as a major link between SDSU and Mexican institutions.

IRSC has an ongoing publications program that includes books, monographs, and shorter items. Many titles are co-published with SDSU Press.

IRSC conducts applied research projects on border environmental issues and policy, regional economic issues, and transborder planning issues. The Institute serves as the SDSU link to the Southwest Center for Environmental Research and Policy, a congressionally established consortium of Mexican and U.S. universities for research and policy studies on border environmental issues.

### Social Science Research Laboratory

**Douglas S. Coe, Director**

<http://ssrl.sdsu.edu>

The Social Science Research Laboratory (SSRL) was founded in 1974 to support academic computing and social research within the College of Arts and Letters (CAL), the University, and the regional community. SSRL is organized into five units: Instructional Services, Research Services, Systems Support Group, CAL Help Desk, and Data Resources. The department employs 12 full-time staff and over 50 part-time employees classified as lecturers, graduate teaching associates, laboratory consultants, research assistants and data collection specialists.

*Instructional Services* works closely with faculty to assimilate technological resources into the curriculum and to support academic

computing among students and faculty. This is accomplished through four programs: (1) one-unit Social Science courses on the use of statistical, database, spreadsheet, and presentation software and on utilizing academic Internet resources; (2) workshops on the use of selected software applications; (3) class presentations requested by faculty to support computer-related instructional assignments; and (4) individual consultation for students using SSRL's open-access computing classrooms.

**Research Services** offers a complete range of public opinion polling and survey research services, including sample design, data collection, data reduction, graphic presentation of data, statistical analysis, and data archiving. The section maintains computer systems to support faculty research. Undergraduate internships and research assistant positions are available. Typical research clients include units of government, community groups, and research projects conducted by faculty and SDSU administrators.

**Data and Web Services** provides support for Web site design and support for the use archived datasets. Sources of archived datasets include: the Inter-University Consortium for Political and Social Research (ICPSR), the Social Science Database Archive (SSDBA), the U.S. Census, Field Institute California Polls, the Roper Center for Public Opinion Research and Lexis/Nexis Academic Universe. Assistance is provided for locating, downloading, installing, and subsetting datasets for instructional or research applications. Web services for departments and faculty include visual design, cognitive structure, usability testing and site maintenance.

**Systems Support Group** provides technical support for College of Arts and Letters computing systems. Services include managing computer classrooms, network administration, installing operating systems, software applications and hardware, virus recovery, and procurement advice.

**CAL Help Desk** serves as the initial point of entry and triage for College of Arts and Letters faculty and staff who need assistance with computer-related problems. Work order requests for hardware and software problems are entered into an on-line system that schedules technical services. The Help Desk also conducts an extensive individualized software coaching program for individual faculty and staff in their office.

The SSRL is located in Professional Studies and Fine Arts 140.

## College of Business Administration

### Center for Community Economic Development (CCED)

**Harold K. Brown, Associate Dean and Director**

Community economic development (CED) is an innovative and practical approach to helping communities and neighborhoods prosper through the use of business, economic, and leadership skills. CED is a systematic and planned intervention that is intended to promote economic self-reliance for communities and their residents.

The Center for Community Economic Development (CCED) was established in 2000 and culminated the offering of a certificate program in community economic development that began in 1995. The CED program is one of a few in the United States that offers a comprehensive and practical curriculum in community economic development.

The Center offers a non credit certificate program in community economic development which consists of ten business courses: Introduction to CED, Accounting, Consensus Community Organizing, Financial Management, Legal Structures, Marketing Strategies, Organizational Management, Alternative Sources of Capital, Real Estate and Land Development, and Small Business Development; a series of class related seminars; and a community project. Classes are held on alternate Saturdays from 10 a.m. to 4 p.m. The Center also offers consulting and technical assistance to educational institutions, businesses, local government, and community and civic organizations, in addition to a variety of seminars and workshops on topics related to community development and to community economic development.

The mission of the certificate program is to produce technically competent and community minded economic development professionals, and to produce graduates committed to the principle that residents of neighborhoods and communities should play a major role in the development of their areas.

### Corporate Governance Institute (CGI)

**Craig P. Dunn, Executive Director**

The Corporate Governance Institute (CGI) is an education and research center dedicated to the study and application of corporate governance principles. Founded in 1998 as a joint venture between the College of Business Administration (CBA) and the Corporate Directors Forum, the mission of the CGI is to enhance the skills of organizational directors and senior executives in the private and public sectors through creating and delivering initiatives related to a) director and executive development, b) research, and c) curriculum innovation. CGI programs focus on identifying "best practices" in all aspects of corporate governance. All CGI initiatives are guided by the principle that corporate leaders hold a primary duty to insure the financial viability of the organizations they manage, while at the same time taking adequate account of the emerging reality that all institutions, including corporations, are imbedded within communities that justifiably deserve their attention.

The CGI conference room is located in Student Services 3375-A. CGI staff can be reached by telephone at (619) 594-0823, or by e-mail at [corporate.governance@sdsu.edu](mailto:corporate.governance@sdsu.edu). The CGI Web site is <http://www.corporategovernance.cc>.

### Entrepreneurial Management Center (EMC)

**Sanford B. Ehrlich, QUALCOMM Executive Director**  
**Richard D. Brooks, Director of Community Relations**  
**Alex F. DeNoble, Director of Academic Programs**

The Entrepreneurial Management Center (EMC) serves the emerging growth sector of the regional business community. The growth, development and success of new business ventures is essential to the future of the San Diego region. The mission of the EMC is to assist this sector of the economy through educational programs focused on the application of the underlying principles and perspectives of entrepreneurship offered to students, organizations, and individuals.

The range of entrepreneurial programs offered includes: (1) support for the M.S. and M.B.A. programs specialization in entrepreneurship; (2) individual knowledge and skill development; and (3) organizational consulting and development. The entrepreneurial topics presented include the outcomes of the entrepreneurial process: the creation of wealth, new enterprises, innovation, organizational change, increased firm value, and organizational growth. The EMC focuses program development on both the entrepreneur and the entrepreneurial process which results in a variety of outcomes essential to economic development.

The EMC sponsors an annual international student business plan competition that provides students with an opportunity to present their business ideas to a distinguished panel of judges. The competition involves students from colleges around the world. The EMC is located in Gateway 1502, (619) 594-2781; FAX (619) 594-8879; <http://www.sdsu.edu/emc>.

### Center for Hospitality and Tourism Research

**Robert A. Rauch, CHA, Director**

The Center for Hospitality and Tourism Research represents a joint venture equally supported by the Colleges of Business Administration and Professional Studies and Fine Arts. The Center is an education and research center dedicated to the study and application of business and professional principles in the broad field of hospitality and tourism. The mission of the Center is to enhance the skills and knowledge of professionals and students in the field of hospitality and tourism management through the creation and delivery of initiatives in executive development, research, and curriculum innovation.

Programs associated with the Center focus on identifying "best practices" in all aspects of hospitality and tourism such as hotel operations, restaurant operations, global tourism, and attractions, events, and convention management. The Center's mission is pursued in multiple venues, including private, public, and not-for-profit agencies. Our vision is to become the leading center for hospitality and tourism management education in Southern California and a prominent national and international resource for questions related to education in hospitality and tourism. The Center actively seeks to support SDSU, the College of Business Administration, the College of Professional Studies and Fine Arts, and members of the local and national community in matters related to hospitality and tourism. The Center is located in PSFA 436, (619) 594-4964; <http://www.sdsu.edu/business/htm>.

### **Center for International Business Education and Research (CIBER)**

**Michael L. Hergert and Steven J. Loughrin-Sacco, Co-Directors**  
**David P. Earwicker, Managing Director**

The Center for International Business Education and Research (CIBER), one of 30 such centers of excellence in the United States, was established in 1989 under the auspices of a grant from the U.S. Department of Education and is administered by the Colleges of Arts and Letters and Business Administration.

CIBER promotes: (1) interdisciplinary programs that incorporate foreign language and international studies training into business, finance, management, communications systems, and other professional curricula; (2) interdisciplinary programs which provide business, finance, management, communications systems, and other professional training for foreign language and international studies faculty and advanced degree candidates; (3) evening or summer programs, such as intensive language programs, available to members of the business community and other professionals, which are designed to develop or enhance their international skills, awareness, and expertise; (4) collaborative programs, activities, or research involving other institutions of higher education, local educational agencies, professional associations, businesses, firms or combinations thereof, to promote the development of international skills, awareness, and expertise among current and prospective members of the business community and other professionals; (5) research designed to strengthen and improve the international aspects of business and professional education and to promote integrated curricula; and (6) research designed to promote the international competitiveness of American businesses and firms, including those not currently active in international trade.

CIBER is located in Business Administration 428; (619) 594-3075; FAX (619) 594-7738; [ciber@mail.sdsu.edu](mailto:ciber@mail.sdsu.edu); <http://www.sdsu.edu/ciber>.

### **International Technology and Trade Network (ITTN)**

**David P. Earwicker and Marc Siegel, Co-Directors**

The International Technology and Trade Network (ITTN), an institute of San Diego State University's Center for International Business Education and Research (CIBER), is a collaborative offering of the College of Business Administration and the College of Arts and Letters. The objective of the ITTN is to promote methods for creating a stable economic environment for transnational business, trade, and research. The Institute will seek ways to use business as a catalyst for regional peace and cross-border economic development. This effort will focus on networking together business assistance organizations, academic institutions, and research centers in regions of conflict and emerging economies. We will establish a virtual business assistance network that will take advantage of the latest Internet, information, and telecommunications technologies to provide business-to-business and organizational links. We will use these technologies to share information as well as provide educational, training and distance learning opportunities to participating members of the network. For more information, contact David Earwicker with the SDSU CIBER at (619) 594-6023 or [david.earwicker@sdsu.edu](mailto:david.earwicker@sdsu.edu).

### **Real Estate and Land Use Institute (RELUI)**

**James L. Short and Andrew Q. Do, Co-Directors**  
**Roger J. Brown, Research Director**

Established in 1983, the Real Estate and Land Use Institute (RELUI) is the first systemwide research-oriented institute of its kind in the 23-campus California State University system. The San Diego regional office of RELUI is located in the College of Business Administration.

CSU-RELUI's mission is to promote education and research in real estate and land use. In support of this mission, RELUI seeks to (1) support, coordinate, and manage systemwide and intercampus research activities; (2) obtain funding sources for education and research activities; (3) promote the general well-being of undergraduate and graduate study within the CSU system; and (4) maintain liaison with government agencies, private industry, and associated organizations with interest in public policy.

At SDSU, RELUI maintains a research and reference center in the College of Business Administration where specialized real estate and land use related materials are available for use by students and faculty.

RELUI also sponsors an internship program for placement of qualified students with local firms to provide a combined working and learning experience. For more information, call (619) 594-2301. E-mail: [relui@mail.sdsu.edu](mailto:relui@mail.sdsu.edu).

### **Strategic Technologies and Research (STAR) Center for Electronic Business**

**Annette Easton and George Easton, Co-Directors**

The Internet is reshaping business and the future of business is electronic business (e-Business). The Strategic Technologies and Research (STAR) Center for Electronic Business is dedicated to exploring the strategies, technologies, and business models associated with conducting business electronically.

The interdisciplinary STAR Center engages in activities that focus on information technologies, management strategies, markets and operational issues of electronic business. The goals of the Center include creation and implementation of educational programs in electronic business; creation of research and professional development opportunities with an electronic business focus; creation of opportunities for professional and community service that focus on electronic business; creation of effective development strategies to ensure long term viability; and creation of effective methods of information sharing and outreach. The STAR Center provides the framework for the College of Business Administration to manage the curriculum, grow the research programs, and harvest opportunities provided by this new discipline.

The STAR Center is located in the College of Business Administration's electronic boardroom (SS-2601). STAR Center staff can be reached at (619) 594-2759, via e-mail at [starcenter@sdsu.edu](mailto:starcenter@sdsu.edu) or at <http://starcenter.sdsu.edu>.

## **College of Education**

### **Center for Counseling and School Psychology**

**Valerie Cook-Morales, Director**

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

**Center for Educational Leadership,  
Innovation, and Policy**

**Ann I. Morey, Director**

The Center for Educational Leadership, Innovation, and Policy examines issues that affect policies and practices of educational institutions, including their implications for leadership, planning, innovation, and organizational development. The Center engages in research, development, and dissemination activities that focus on a few critical educational issues. As a result of its policy analysis and research, the center develops plans and programs which enhance organizational capacity to respond to the challenges and opportunities and which lead to the improvement of practice.

**Interwork Institute**

**Fred R. McFarlane and Ian R. Pumpian, Co-Directors**

The Institute's efforts focus on promoting the integration of all individuals, including those with disabilities, into all aspects of education, work, family, and community life. The Institute conducts research, training, and education using a variety of strategies including distance learning technologies. Educational and research efforts involve organizations and individuals in the states, the Pacific Basin, Asia, Mexico, South America, and Europe. Faculty and staff associated with the Institute are uniquely prepared to promote the meaningful participation and productivity of each member of the community. The Institute's mission is supported through local, state, federal, and international organizations. The Institute's facilities are located at 3890 Camino del Rio North in Mission Valley.

**Center for Learning, Instruction,  
and Performance Technologies**

**Donn C. Ritchie, Director**

The Center's faculty and staff conducts research on the design and use of technology-based systems for enhancing human learning and performance, monitors trends in advanced applications of educational technology and allied disciplines, and evaluates the effectiveness and usability of educational products and services.

The Center consults with corporations, agencies, and SDSU affiliates on the design of products for education and training, arranges for on-site and electronic delivery of professional development courses and seminars by the nationally recognized faculty of SDSU Department of Educational Technology, and coordinates fieldwork and internship opportunities for advanced graduate students.

**Pre-College Institute (PCI)**

**Cynthia D. Park, Executive Director**

The faculty and staff of the Pre-College Institute (PCI), an Institute to provide and promote the advancement of pre-college education, implements programs to enhance teaching and learning in multicultural settings and studies their outcomes. The Institute, operating from the University's historic strength in teacher education and its proximity to Mexico, delivers services geared towards promoting educational advancement among pre-college students from low-income families. The Institute also supports continuous professional enhancement of teachers from all cultural backgrounds and conducts systematic research and evaluation of the programs that deliver these services.

The Institute offers services through five federally funded TRIO programs and partnerships with the Colleges of Science, Engineering, and Health and Human Services, as well as the Division of Undergraduate Studies and the City Heights Pilot Project. The Institute's international branch offers exchange opportunities for University faculty and students to visit and study in other countries.

**Center for Social Equity Technical Assistance**

**Ruben W. Espinosa and Alberto M. Ochoa, Co-Directors**

The Center conducts training and research on issues of social equity and bilingual/multicultural policy, and provides technical assistance to districts throughout southern California. The Center conducts research in public equity and school finance. The Center houses projects funded by federal, state, and private sources. Current projects include the Parent Leadership and the Social Equity project. The Center functions within the Department of Policy Studies in Language and Cross-Cultural Education at San Diego State University.

**Center for the Study of International Education**

**Donn C. Ritchie and Laura Hall, Co-Directors**

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

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

**College of Engineering**

**California Institute of Transportation Safety**

**Sheila Sarkar, Director**

The California Institute of Transportation Safety (CITS) was created to conduct research, administer programs, and teach courses in transportation safety. Several renowned professionals in engineering, public health, and psychology are affiliated with the Institute, and GIS is used for engineering design work. CITS offers courses for traffic engineers as well as opportunity for students in transportation engineering to work as interns. Current projects include traffic safety evaluation (engineering and enforcement) of cities, collision mapping and analyses, and statistical research on driving behaviors.

**Communications Systems and Signal  
Processing Institute**

**Madhu S. Gupta, Director**

This Institute is engaged in educational, research, and service activities in the field of electronic communication systems, with an emphasis on radio frequency and digital signal processing aspects. Faculty, students, and industrial partners collaborate to advance the state-of-the-art in the institute's core areas of expertise, such as RF devices and integrated circuits, modems, receivers, transmitters, synthesizers, A-D and D-A converters, digital signal processing algorithms and hardware, antenna, and communication networks. Specific activities include research and design projects; development of products, software, algorithms, and techniques; and training programs including short courses.

**Concrete Research Institute**

**M. Ziad Bayasi, Director**

The Concrete Research Institute supports educational needs in civil engineering curriculum and concrete research performed for sponsors from industry and governments. The Institute encompasses a wide range of topics. The main emphasis is currently on concrete materials and structures. Civil and environmental engineering faculty members are involved with finding optimum design solutions in bridges, seismic resistant structures, residential buildings, and retaining walls.

### **Energy Engineering Institute** **Asfaw Beyene, Director**

The Energy Engineering Institute has supported educational and research activities in energy related areas since 1985. Undergraduate and graduate students and faculty from the mechanical engineering and electrical and computer engineering departments are involved in obtaining solutions to problems presented by industrial sponsors. Institute research projects cover a wide range of areas from optimizing energy resources to international energy studies.

### **Facility for Applied Manufacturing Enterprise (FAME)** **James S. Burns, Director**

The centerpiece of San Diego State University's manufacturing endeavors is the Facility for Applied Manufacturing Enterprise. FAME was planned as an interdisciplinary center-of-excellence dedicated to science and technology in the area of manufacturing. Its mission is to provide students with a complete and immersive product development environment in which to augment their job experiences with next-century tools and strategies. This facility evolved from the Computer Integrated Manufacturing (CIM) center founded in 1988. Since then, it has grown considerably in physical size and scope. FAME resources include 3000 square feet of dedicated floor space in the Engineering and Engineering Laboratory Buildings and another 2000 square feet for student projects. Manufacturing-related equipment includes plastic injection, compression, extrusion, pultrusion, resin transfer molding and vacuum forming equipment, a composite repair station, ultrasonic scanning equipment, platen presses, mechanical testing machines, ovens, CNC lathe and mill, automated parts bin, and four multi-axis robots. A 3" diameter by 15" long, high-pressure and temperature autoclave facility is currently under construction.

### **San Diego Center for Materials Research** **Ronald A. Kline, Director**

Materials research, by its fundamental nature, is interdisciplinary. It directly involves expertise across departmental and college boundaries. The physical sciences (chemistry, physics), life sciences (biology, including biomaterials/biomechanics) and engineering (aerospace, biomedical, chemical, civil, electrical, mechanical, and nuclear). At SDSU, we have ongoing activities in a variety of important new technological areas, including smart materials/structures, high temperature materials, biomaterials, magnetorheological fluids, sensors, and coatings. The Center for Materials Research develops and promotes the interdisciplinary relationships needed to advance the state-of-the-art in materials research at the university, regional, national, and international levels.

## **College of Health and Human Services**

### **University Center on Aging**

The Center is involved with such activities as supporting interdisciplinary educational and curriculum efforts; undertaking research, demonstration and evaluation activities; providing technical assistance and agency consultation for the community; coordinating workshops and seminars; and providing opportunities for student involvement in aging activities. The Center serves as a central point for the development and dissemination of data related to diversity and aging and long-term care and is administratively responsible for the National Resource Center for Safe Aging.

### **Center for Behavioral and Community Health Studies** **John P. Elder, Director**

The Center for Behavioral and Community Health Studies is housed at 9245 Skypark Court, Suite 221, San Diego, CA 92113. The Center, formerly known as The Center for Behavioral Medicine, was established in 1982 for the purpose of promoting research and academic programs relevant to the applications of behavioral science principles to medicine and health care. The Center has seven investigators from three different colleges. The interdisciplinary center encourages participation from all of the University colleges and departments. Currently, active investigators come from the Departments of Exercise and Nutritional Sciences, Psychology, and the Graduate School of Public Health. Current Center projects involve collaboration between scientists and clinicians from a variety of specialties as well as a variety of other institutions, including Scripps Clinic and Research Foundation, the University of California, San Diego Medical Center, and the Children's Hospital and Health Center. Funding for the Center comes from federal and private foundation grants including several National Institutes of Health agencies. Current sponsors include the National Cancer Institute, National Heart, Lung and Blood Institute, the State of California Department of Health Services, and the University of California Tobacco Related Disease Research Program.

The Center provides important research experience to diverse students who intend to pursue related careers and offers opportunities for project staff and graduate students to participate in community interventions.

### **Center for Behavioral Epidemiology and Community Health** **Melbourne F. Hovell, Director**

Administered through the Graduate School of Public Health, the Center was established for the purpose of promoting research to study behavior that prevents or contributes to the cause of disease and injury. Both non-intervention and empirical studies are conducted to determine the factors most responsible for lifestyle practices related to morbidity and mortality. The Center focuses on health related behavior – either protective practices or risk practices – and has been concerned with a wide range of public health and medical concerns such as: tobacco prevention in youth; environmental tobacco exposure reduction in children; STDs, AIDS, pregnancy prevention in adolescents, and prevention in women and divorced adults; violence and anger prevention. C-BEACH conducts scientific investigations into the following broad areas: behavioral epidemiology, measurement, and interventions (clinical and community-based).

### **California Center for Childhood Injury Prevention** **David W. Lawrence, Director**

Administered through the Graduate School of Public Health, the California Center for Childhood Injury Prevention serves as a resource center on child and adolescent injury prevention strategies. The primary mission of the Center is to reduce the frequency, severity and cost of child and adolescent injuries by assisting public health agencies and programs to incorporate injury prevention strategies into their ongoing efforts to improve the health and safety of young people. Center staff can provide data on child and adolescent injuries; technical assistance with the development, implementation and evaluation of child and adolescent injury prevention programs; and linkages with agencies, researchers, advocates and injury professionals as well as access to a variety of educational materials. The Center also houses one of the four national sites of the Children's Safety Network.

**Communications Clinic for Speech, Language,  
Hearing Disorders and Deafness**

**Kathee Christensen and Charlotte Lopes, Co-Directors**

Administered by the School of Speech, Language, and Hearing Sciences, the Clinic provides assessment and remediation services for SDSU students, staff, faculty, and the community. Comprehensive diagnostic and treatment programs are available for children and adults in the areas of delayed speech/language development, voice, fluency or articulation disorders, aphasia, cleft palate, cerebral palsy, loss of communication function, hearing loss and deafness. Also provided are services for bilingual/multicultural clients and speakers of English as a second language. The *Assistive Device Assessment Program* provides language, cognitive, and technical assessments related to augmentative/assistive devices and systems for individuals who have communication disabilities. Audiologic services provided by the Clinic include hearing assessment, hearing aid evaluation and selection, assistive listening device evaluations, earmolds, ear protectors, hearing conservation and speech reading/aural rehabilitation therapy. In addition, the Clinic offers opportunities for research, consultation, supervised field internships, continuing education, and other service activities. The clinic is located at 6330 Alvarado Court, Suite 100, San Diego, CA 92120-4917, (619) 594-6477.

**Consensus Organizing Center**

**Michael Eichler, Coordinator**

The Consensus Organizing Center is administered through the School of Social Work. The Center's mission is to educate and train a new generation of social workers in community building techniques in order to make them effective catalysts for civic engagement and social change. Through school based programs and community interventions, the Center has created an environment for the teaching of consensus organizing skills to social workers, high school students, foster youth, and community leaders. Specific activities include developing a fellowship program for high school students and provide employment opportunities for undergraduate and graduate students. The Web site for the Center is <http://www-rohan.sdsu.edu/~consensu>. The Center telephone number is (619) 594-4813.

**Heart Institute**

**Christopher C. Glembotski, Director**

The Heart Institute is sponsored by the College of Health and Human Services and the College of Sciences. The goals of the Institute are to enhance basic and clinical research in the cardiovascular sciences, to foster undergraduate and graduate education in cardiovascular physiology and medicine, and to provide a community outreach service focused at heightening the awareness of cardiovascular disease and its prevention in the San Diego region surrounding SDSU. The Institute is comprised of faculty members representing four different colleges at SDSU, as well as physicians and scientists from local hospitals and clinical research centers. Importantly, the Institute also sponsors SDSU undergraduate and graduate student memberships, which strengthens the involvement of students in all aspects of Heart Institute activities. The unusual blend of talent and expertise that comprise the Institute membership results in an interdisciplinary approach to cardiovascular research, education and community outreach that is unique to the Heart Institute. The Institute sponsors special seminars, on- and off campus, which cover a wide range of topics in the field, and provides funding for the support of graduate students who are involved in cardiovascular research at SDSU. Areas of focus for the Institute include studies of the molecular basis of cardiovascular disease, establishment of unique approaches for the early detection and prevention of cardiovascular disease, and the promotion of cardiovascular health in San Diego area K-12 schools. An important feature of these efforts that distinguishes the Heart Institute is the central role that SDSU students play in each of these areas. Funding for Heart Institute activities comes from a variety

of sources, including the National Institutes of Health, the American Heart Association, the Muscular Dystrophy Association, the Rees-Stealy Research Foundation, and several San Diego-based biotechnology companies. For more information contact the Heart Institute office at (619) 594-5504.

**International Institute for Health and Human Services  
Development**

**Dolores A. Wozniak, Director**

Administered through the Office of the Dean of the College of Health and Human Services, the purpose of this International Institute is to respond to the urgent global need for human resources, particularly in the fields of health and human services. Specific activities include the development of education and training programs; promoting relevant research and model demonstration programs and projects; encouraging technical cooperation with developing countries; promoting exchange of information and experience at the international level; and engaging in the convening of conferences. The Institute also provides a comprehensive, centralized source of data and information on human resource development, linking it to internationally recognized networks, and serving as a repository and a clearinghouse for information.

**Center for Injury Prevention and Research**

**Dolores A. Wozniak, Director**

Administered through the College of Health and Human Services, the purpose of the Center is to prevent intentional and unintentional injury among all segments of the community and in all age ranges, from birth to old age. The Center accomplishes this purpose by: 1) Coordinating a multidisciplinary group of professionals dedicated to injury control and prevention including traffic safety; 2) Assisting in the coordination of existing local and state resources for injury intervention and prevention; 3) Conducting ongoing injury data surveillance; 4) Supporting appropriate injury related intervention and prevention strategies aimed at individual and community change; 5) Stimulating injury intervention and prevention based research and program development; 6) Disseminating the results of injury intervention and prevention research activity generated by the Center; and 7) Providing technical assistance, training, and continuing education to appropriate target audiences in California and outside of California, as requested. Specifically, the Center will identify injury problems and gain extensive community information which will be used to develop strategic plans to control and prevent injuries. In addition, the Center will define the changes required to reach desired solutions. A systems approach will be used to address these issues as such an approach also recognizes the comprehensive nature of injury problems and the need to develop equally comprehensive solution sets.

**Institute for Nursing Research**

**Gwenievere W. Anderson, Director**

Administered through the School of Nursing, the purpose of the Institute is to promote collaboration in the conduct, dissemination, and utilization of nursing research which will contribute to the quality of patient care and service. The Institute provides a forum for research interests and activities, and also fosters collaborative research efforts among Institute nurse clinicians and SDSU Nursing faculty. This includes identifying research priorities for individual and multi-site research projects, and providing consultation for design, method, analysis, computer services, instrumentation, and manuscript preparation. The Institute also facilitates the dissemination of research findings. Web site for the Institute is at <http://www-rohan.sdsu.edu/dept/chhs/nursing/INR.html>.

### **Institute for Public Health**

**Robert L. Seidman, Director**

Administered through the Graduate School of Public Health, the mission of the Institute is to serve as a vehicle for the development and support of functional linkages between the SDSU Graduate School of Public Health, local public health agencies, and private organizations in the San Diego community and neighboring areas, including Mexico. These linkages expand the availability of university-based public health expertise, research and information in the areas of biostatistics, environmental health, epidemiology, health services administration, health promotion, industrial hygiene, maternal and child health, occupational health, and toxicology. Specific activities include collaborative research, technical assistance, program evaluation, consultation, continuing education and professional development, student field placement, faculty/practitioner exchange, information dissemination, and various service activities. The Institute serves to bridge public health academics and practice by facilitating meaningful partnerships between faculty, students, and local practitioners. The Web site for the institute is <http://www-rohan.sdsu.edu/dept/iph>.

### **Social Policy Institute**

**Terry E. Carrilio, Coordinator**

Administered through the School of Social Work, the mission of the Institute is to assist local, state, public, and private sector leaders in the development of policies and programs that better meet the needs of the people of San Diego County and the State of California. The Social Policy Institute is dedicated to helping to create quality human service programs, with a focus upon prevention and early intervention for vulnerable individuals and families. The Institute is engaged in examining health and human services issues through conducting research and program evaluations, and through reviewing existing policy and academic literature. This information is shared with social services staff and leadership, community leaders, and the professional community for the purpose of enhancing services for individuals and families, and participating in the development of just social policies. The Social Policy Institute has recently developed a book and CD-ROM for the purpose of guiding home visiting and family support efforts with vulnerable families, and has developed software to assist social service agencies in managing quality and measuring outcomes.

The SPI Web site is located at <http://www.sdsu-spi.org>. Dr. Carrilio can be reached at (619) 594-0780.

### **Center on Substance Abuse**

**Anita S. Harbert, Director**

**John D. Clapp, Associate Director**

Administered through the School of Social Work, the Center was established in 1985 with a primary mission of facilitating the development of knowledge and skills for the prevention and treatment of alcohol and other drug problems. Goals include developing and supporting projects in substance abuse research, curriculum, and community service. The Center is actively engaged in conducting alcohol and other drug research and evaluation projects. Over the past decade, the Center has received numerous federal, state, and county grants. Recent projects of the Center included the Community-Collegiate Alcohol Prevention Partnership (C-CAPP). C-CAPP is funded by the National Institute for Alcoholism and Alcohol Abuse and the U.S. Department of Education. C-CAPP had the goal of reducing alcohol and other drug problems among college students. Other recent research projects included a study of California's publicly-funded substance abuse treatment system and an evaluation of the Pacific Southwest Addiction Technology Transfer Center. In addition, the Center provides services such as the Central District Driving Under the Influence Program, providing education and counseling for court-ordered offenders in the central judicial district of San Diego

County. It has also been involved in the training of several hundred community professionals in substance abuse intervention, and participates in the San Diego Intercollegiate Consortium for Alcohol and Drug Abuse Prevention, and on the Professional Development Committee of the California Addiction Training and Resource Center at UCSD.

The Center is located at 6475 Alvarado Road, Suite 236, (619) 594-6859. The DUIP program is located at 9245 Sky Park Court, Suite 101, (858) 467-6810.

## **College of Professional Studies and Fine Arts**

### **Institute for Built Environment and Comparative Urban Research (BECUR)**

**Lawrence A. Herzog, Director**

The main purpose of the Institute for Built Environment and Comparative Urban Research (BECUR) is to: (1) study the impact of culture on the design and shape of the urban built environment; and (2) understand how cities in different cultural settings are being transformed by global processes. BECUR provides a forum for research and dialogue among SDSU faculty and students on the cross-cultural nature of urban space and urban place. The Institute is administered by the College of Professional Studies and Fine Arts. Among its activities, the Institute promotes public lectures and conferences, research projects, and networking among urbanists, social science, planning, design and architectural scholars both in the region, as well as in other parts of the world. The Institute is located in Professional Studies and Fine Arts 111; (619) 594-6964.

### **Center for Hospitality and Tourism Research**

**Robert A. Rauch, CHA, Director**

The Center for Hospitality and Tourism Research represents a joint venture equally supported by the Colleges of Business Administration and Professional Studies and Fine Arts. The Center is an education and research center dedicated to the study and application of business and professional principles in the broad field of hospitality and tourism. The mission of the Center is to enhance the skills and knowledge of professionals and students in the field of hospitality and tourism management through the creation and delivery of initiatives in executive development, research, and curriculum innovation.

Programs associated with the Center focus on identifying "best practices" in all aspects of hospitality and tourism such as hotel operations, restaurant operations, global tourism, and attractions, events, and convention management. The Center's mission is pursued in multiple venues, including private, public, and not-for-profit agencies. Our vision is to become the leading center for hospitality and tourism management education in Southern California and a prominent national and international resource for questions related to education in hospitality and tourism. The Center actively seeks to support SDSU, the College of Business Administration, the College of Professional Studies and Fine Arts, and members of the local and national community in matters related to hospitality and tourism. The Center is located in PSFA 436, (619) 594-4964; <http://www.sdsu.edu/business/htm>.

### **International Center for Communications**

**John M. Eger, Director**

The International Center for Communications draws upon the resources of the University, the community and the communications industry to provide the nation's first international focal point in the Pacific in which academic study, innovative research and practical experience among the private and public sectors are joined to help solve critical issues confronting the Pacific region. The Center serves

two main purposes: 1) to initiate dialogues leading to new understanding among the diverse cultural and community interests of the region; and 2) to link communications and community in the new relationships essential to fulfilling the promise of the Pacific world.

The goals of the International Center are to establish an institutional approach to learning, problem-solving and practical work focusing on the critical issues of communication and information; to create a new and dynamic partnership in San Diego between business and industry, government and academia, redefining and building a sense of community; and to develop a forum and agenda for research, discussion and collaboration with other organizations in the Pacific leading toward the establishment of a permanent "Pacific Dialogue on the Media."

The Center also houses the California Institute for Smart Communities founded to assist communities understand the use of technology as a catalyst for economic and social development.

### **Institute for International Security and Conflict Resolution**

**Alan R. Sweedler and Dipak Gupta, Co-Directors**

The SDSU Institute for International Security and Conflict Resolution (IISCOR) encourages and facilitates teaching and research in the multidisciplinary area of international security and conflict resolution. Specifically, topics such as superpower confrontation, nuclear armaments, international conflict, sociopolitical violence, and global environmental issues as they relate to security are covered.

The Institute is a joint effort of the Colleges of Professional Studies and Fine Arts, Arts and Letters, and Sciences. IISCOR is administered by two co-directors, advised by an executive committee consisting of faculty members representing the different disciplines that provide input into the study of international security and conflict resolution.

The Institute promotes teaching and research by organizing public forums, faculty and student seminars, developing appropriate curricula for undergraduate and graduate instruction and facilitating research and scholarly activities. SDSU offers, through IISCOR, a multidisciplinary Bachelor of Arts degree in International Security and Conflict Resolution.

### **Institute for Leisure Behavior**

**Gene G. Lamke, Director**

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

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

The Institute administers a variety of service programs within San Diego County. Camp Able at Coronado, an aquatic-based camp for disabled children and adults, operates ten weeks during the summer at Silver Strand State Beach. The Spring Valley R.E.A.C.H. Program, funded by Social Advocates for Youth, provides recreational and educational activities for children and youth. Additionally, the Institute conducts research for local tourism, park and recreation entities as well as the California Department of Parks and Recreation and the United States Forest Service.

The Institute publishes 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/tourism services.

### **Production Center for Documentary and Drama**

**Jack Ofield, Director**

The Production Center for Documentary and Drama is located in the School of Theatre, Television, and Film. The Center mentors graduate students in media in the creation of projects that promote their artistic and technical growth, serves the outreach purposes of the University, and works with global film schools, film institutes, and filmmakers in the production of its long-running, international TV series, "The Short List," showcasing short films. The Center interfaces with local, state and national entities in the creation of films and television programs for a range of uses in the arts, humanities, and sciences, including distribution on public and cable television. These projects provide senior and graduate students with professional opportunities to work in key capacities, such as writing, directing, camera crew, editing, and production design.

### **Institute of Public and Urban Affairs**

**Louis M. Rea, Director**

The Institute of Public and Urban Affairs is located in the School of Public Administration and Urban Studies. The Institute was established to conduct research in community and governmental affairs and to sponsor conferences, colloquia and symposia related to issues in public administration and affairs including urban planning, management and criminal justice administration. The Institute also publishes occasional working papers and research monographs. Selected students and faculty of San Diego State University staff the Institute. An integral part of the Institute is the Public Administration Center which contains a specialized and growing collection of research materials emphasizing issues in public affairs particular to San Diego and California.

### **Dr. Sanford I. Berman Institute for Effective Communication and General Semantics**

The Dr. Sanford I. Berman Institute for Effective Communication and General Semantics within the School of Communication is dedicated to the study of language and behavior in social context. Contemporary trends no longer seem to answer to the call of the individual's command of language in everyday experience. It is therefore imperative that the connections between communication and the practical realms of polity, family, and society be re-established. To do so requires scholarly attention to and an understanding of the relations among our symbolic activities, society, and the mind. The Dr. Sanford I. Berman Institute serves in this vanguard role. The Institute measures its stature by the success of those it trains to lead a more enriching existence through communication.

### **Center for the Visual and Performing Arts**

The Center for the Visual and Performing Arts serves as a focal point for the arts on campus and in the San Diego region. The Center's primary activities involve enhancing, coordinating, and publicizing the College's visual and performing arts programs, forming alliances and partnerships with San Diego arts agencies, and initiating new programs to expand the impact of the arts on the campus and in the community.

The Center promotes the integration of the arts on campus through curriculum initiatives by designing collaborative courses that integrate the arts into other discipline areas. The Center enhances art on campus through the "Masters of the Living Arts Program," which brings internationally known artists to perform and exhibit, to conduct master classes and workshops, and to present lectures for students, faculty, and the San Diego arts community. The Center promotes the arts throughout the community by initiating outreach programs from the campus in the visual and performing arts. The Center also serves the campus and the San Diego artistic community by exploring important issues and themes relative to the arts through educational opportunities, public forums, research, and multidisciplinary and multicultural exhibits and performances.

## **College of Sciences**

### **Edwin C. Allison Center for Historical Science**

**Lindsey Leighton and Stephen Schellenberg, Co-Directors**

Throughout the history of science, many of the critical breakthroughs in scientific understanding have resulted from cross-disciplinary research. The mission of the Allison Center for Historical Science is to foster this approach across the fields of paleontology, paleoclimatology, geochemistry, sedimentology, and organismal biology. The center seeks to facilitate research designed to improve and disseminate our understanding of global change and biodiversity, arguable the two most important topics facing current and future generations. Research materials of the co-directors and their students form the core of an in-house reference and systematics collection, including Cretaceous to Recent Ostracodes from globally distributed ocean drilling sites and Ordovician, Devonian, and Carboniferous brachiopods and associated communities from the Appalachian Basin, the Great Basin, the Ohio Valley, and the mid-continent. Scholarly examination of these and other materials by SDSU students, faculty, and guests (e.g. visiting students, faculty) are supported through dedicated research space and facilities, including image analysis, carbonate microsampling, and hydrodynamics flume systems.

### **Center for Behavioral and Community Health Studies**

**John P. Elder, Director**

The Center for Behavioral and Community Health Studies is housed at 9245 Skypark Court, Suite 231, San Diego, CA 92113. The Center, formerly known as The Center for Behavioral Medicine, was established in 1982 for the purpose of promoting research and academic programs relevant to the applications of behavioral science principles to medicine and health care. Administratively, the Center has three co-directors who report to the deans of the College of Sciences and the College of Health and Human Services. The interdisciplinary center encourages participation from all of the University colleges and departments. Currently, active investigators come from the Departments of Exercise and Nutritional Sciences, Psychology, and the Graduate School of Public Health. Current Center projects involve collaboration between scientists and physicians from a variety of specialties as well as a variety of other institutions, including the County of San Diego and University of California, San Diego. Funding for the Center comes from federal and private foundation grants including several National Institutes of Health agencies. Current sponsors include the American Heart Association, Department of Defense, National Cancer Institute, National Heart, Lung and Blood Institute, the State of California Department of Health Services, and the University of California Tobacco Related Disease Research Program.

The Center provides important research experience to students who intend to pursue related careers and offers opportunities for project staff and graduate students to participate in community interventions.

### **Center for Behavioral Teratology**

**Edward P. Riley, Director**

Teratology is the study of birth defects. The faculty and students at the Center for Behavioral Teratology (CBT) are interested in how prenatal exposure to various drugs influences both brain and behavioral development. Additionally, members of the Center engage in research related to the general neurotoxicity of alcohol. The CBT is truly an interdisciplinary research organization, with a broad range of basic and clinical research interests. While the primary purpose of the CBT is to promote research in teratology, personnel in the Center also act as a resource to the University and the community. The staff provides in-service talks at local hospitals, schools, and drug treatment facilities, as well as lectures to various classes at the University. The CBT staff has active collaborations with faculty from UCSD, the VA Hospital, Children's Hospital, and the Scripps Research Institute. Faculty in the Center have grants from the National Institutes of Health, Tobacco-Related Disease Research Program, and the State of California.

## **Coastal and Marine Institute**

**Richard M. Gersberg, Director**

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

### **Computational Science Research Center**

**José E. Castillo, Director**

**Donald R. Short and Faramarz Valafar, Associate Directors**

The Computational Science Research Center (CSRC) promotes the development and advancement of the interdisciplinary subject of computational science. This is accomplished by fostering research, developing educational programs, and promoting industrial interaction, outreach, and partnership activities.

The Center provides an environment for scientific research at San Diego State University. It facilitates the interaction between applied mathematics, computer science, and other disciplines by providing the necessary infrastructure for productive research efforts. Real world applications are the focus of faculty and student projects. These projects provide an educational opportunity for students to hone industrially relevant computational skills.

The goals of the Center are to encourage and facilitate research in computation, simulation, visualization, and numerical modeling in all disciplines (business and finance, biology and bioinformatics, engineering, physical sciences, and geography); to interact with other centers, laboratories, universities, and local industry; to reduce lag time between algorithm development/analysis and applications; to participate in programs with other countries, including international programs sponsored by the National Science Foundation; to arrange visits by professors, including foreign visitors on sabbaticals and professional staff on industrial sabbaticals; to arrange part time and adjunct appointments for consulting activities by professional staff from local research laboratories; to provide employment, experience, and contacts for students; to sponsor conferences, workshops, and courses; to facilitate collaboration with government laboratories with private sector; to provide bridges to regional industry; and to direct the computational science program at San Diego State University.

Interested students and faculty may obtain more information by calling the CSRC office at (619) 594-7205, <http://www.sci.sdsu.edu/csrc>.

### **Education Center on Computational Science and Engineering**

**Kris W. Stewart, Director**

The Education Center on Computational Science and Engineering (ECCSE) has supported and promoted the use of new computational tools in undergraduate instruction at SDSU and the California State University (CSU) since 1997. The main goal of the ECCSE is to better prepare learners for post-baccalaureate activities where collaborative interdisciplinary teams, sophisticated computer tools, and effective communication are part of the research and problem-solving environment.

Funded in part by the National Science Foundation, the ECCSE represents the CSU system within the National Partnership for Advanced Computational Infrastructure (NPACI), one of only two National Science Foundation-supported high performance computing partnerships in the nation, involving research centers from across the United States and the world.

The ECCSE team of faculty educators, student developers, and education technology specialists accomplishes its mission by working closely with some of the world's leading computational scientists at the San Diego Supercomputer Center (SDSC), the 'Leading Edge Site' of NPACI. By providing a wide variety of education outreach projects, presentations, and training, the ECCSE is most valuable to faculty with a strong interest in broadening their undergraduate students' exposure to modeling, simulation, visualization, and high-performance computing resources in their specific discipline.

Education, outreach, and technology transfer play an important role in achieving the national goal of ensuring our leadership in advanced computing in the world. The ECCSE makes a valuable contribution to this effort by serving as an educator-friendly gateway to high-end computing and communications technologies. Through projects such as the ECCSE Faculty Fellows program, the Computational Science Olympics, and the Computational Science Resource Community, undergraduate faculty and their students gain valuable practical experience with some of the most advanced computational resources in the world. To learn more about the ECCSE, please visit our Web site at <http://www.edcenter.sdsu.edu>.

### Center for Energy Studies

**Alan R. Sweedler, Director**

The San Diego State University Center for Energy Studies (CES) facilitates, promotes and supports research and academic programs relating to energy, with particular emphasis on energy matters of concern to the San Diego and local southwest region including the international border with Mexico. The Center encourages interdisciplinary research and instructional programs in the broad areas of energy modeling, technology assessment of energy systems, local energy policy planning and data collection relating to energy usage in the San Diego region. SDSU offers through the Center an interdisciplinary minor in energy studies. Completion of the minor will give the student a broad understanding of the technical, economic, social, and political aspects of energy issues. For more information call the Center at (619) 594-6240 or (619) 594-6155. The Center works closely with local and state agencies concerned with energy policy and planning, and serves as a community resource in matters concerning local energy issues, and the impact of energy use of the environment.

### Field Station Programs

**Sedra S. Shapiro, Executive Director**

The Field Station Programs provide opportunities for a broad community of students and faculty to explore the natural ecosystems of southern California. In addition, the field stations serve SDSU by functioning as a liaison to broader public community, highlighting SDSU's expertise regionally, nationally, and internationally. The Field Station Programs manage almost 9,000 acres of San Diego and Riverside county land for university teaching and research.

SDSU currently has four field stations: the Sky Oaks Field Station, 1,640 acres of high elevation redshank chaparral habitat in the Chihuahu Valley east of Temecula Valley; the Santa Margarita Ecological Reserve (SMER), a 4,464 acre reserve located along the upper Santa Margarita River inland from Camp Pendleton in San Diego and Riverside Counties; Fortuna Mountain, 231 acres close to the SDSU campus located within Mission Trails Regional Park; and the Tijuana River National Estuarine Research Reserve, a 2,513-acre reserve which serves as an auxiliary field station for SDSU.

Providing research and education opportunities for the future requires detailed knowledge of how changes in the environment outside the boundaries of a certain area affect ecosystem dynamics within that area. As habitat continues to be lost to development, areas such as the SDSU field stations will increase in importance as sites for studying natural ecosystems.

The proximity of sensitive habitats to a rapidly urbanizing landscape makes this region a recognized biodiversity "hot spot." San Diego State University has an extremely dynamic group of scientists

(faculty, researchers, and students) working to understand these unique and threatened ecosystems. Research ranges from the global scale examining global warming and the impacts of increased carbon dioxide on native vegetation to the meso- and micro-scales of chaparral ecosystems dynamics, as well as plant, vertebrate, insect, and fungal diversity. Researchers at SDSU are also increasingly using sophisticated computer modeling and molecular techniques for analyzing environmental change. Natural sciences are the core users of the SDSU field stations. Biology, geography, geological sciences, hydrogeology, and other field sciences are consistent areas of study. There are growing opportunities for interdisciplinary work as well as for non-traditional study in the fields ranging from public health, civil and environmental engineering, recreation, business, and art, to education.

Persons interested in conducting research, instructional use, or access to the SDSU field stations should contact the academic programs of the SDSU Field Station Programs at (619) 594-0580. Inquiries can also be made through the SDSU Field Station Web site at <http://fs.sdsu.edu/kf/>.

### Heart Institute

**Christopher C. Glembotski, Director**

The Heart Institute is sponsored by the College of Sciences and the College of Health and Human Services. The goals of the Institute are to enhance basic and clinical research in the cardiovascular sciences, to foster undergraduate and graduate education in cardiovascular physiology and medicine, and to provide a community outreach service focused at heightening the awareness of cardiovascular disease and its prevention in the San Diego region surrounding SDSU. The Institute is comprised of faculty members representing four different colleges at SDSU, as well as physicians and scientists from local hospitals and clinical research centers. Importantly, the Institute also sponsors SDSU undergraduate and graduate student memberships, which strengthens the involvement of students in all aspects of Heart Institute activities. The unusual blend of talent and expertise that comprise the Institute membership results in an interdisciplinary approach to cardiovascular research, education and community outreach that is unique to the Heart Institute. The Institute sponsors special seminars, on- and off campus, which cover a wide range of topics in the field, and provides funding for the support of graduate students who are involved in cardiovascular research at SDSU. Areas of focus for the Institute include studies of the molecular basis of cardiovascular disease, establishment of unique approaches for the early detection and prevention of cardiovascular disease, and the promotion of cardiovascular health in San Diego area K-12 schools. An important feature of these efforts that distinguishes the Heart Institute is the central role that SDSU students play in each of these areas. Funding for Heart Institute activities comes from a variety of sources, including the National Institutes of Health, the American Heart Association, the Muscular Dystrophy Association, the Rees-Stealy Research Foundation, and several San Diego-based biotechnology companies. For more information contact the Heart Institute office at (619) 594-5504.

### Center for Inland Waters

**Stuart H. Hurlbert, Director**

The Center for Inland Waters is an interdisciplinary academic unit consisting of faculty members from four SDSU colleges (Arts and Letters, Engineering, Health and Human Services, Sciences). Its purpose is to foster basic and applied collaborative research among SDSU scientists and scholars on inland water resources and ecosystems, the application of their expertise to the solution of water-related problems in southern California and adjoining regions, and the coordination and development of courses, curricula, and physical facilities for water-related instruction and research. Inland water resources include the water supply for domestic, agricultural and industrial uses, the growing system of aqueducts, reservoirs, and aquifers in which this supply is transported and stored, and the rivers, lakes, and wetlands important as habitat for wildlife, as maintainers of environmental health, and as recreation areas. Of special interest to the Center are

social, economic, hydrological, public health, and ecological issues concerning the Colorado River and its delta, the Salton Sea, and the new Tijuana and Santa Margarita Rivers and their watersheds. The Center is operated as a special unit of the College of Sciences and is administered by a Director and an elected Executive Committee. Information on the Center and regional water resources is available at <http://www.sci.sdsu.edu/salton/>.

### **Institute for International Security and Conflict Resolution**

**Alan R. Sweedler and Dipak Gupta, Co-Directors**

The SDSU Institute for International Security and Conflict Resolution (IISCOR) encourages and facilitates teaching and research in the multidisciplinary area of international security and conflict resolution. Specifically, topics such as nuclear armaments, international and intranational conflict, sociopolitical violence, and global environmental issues as they relate to security are covered.

The Institute is a joint effort of the Colleges of Sciences, Arts and Letters, and Professional Studies and Fine Arts. IISCOR is administered by two co-directors, advised by an executive committee consisting of faculty members representing the different disciplines that provide input into the study of international security and conflict resolution.

The Institute promotes teaching and research by organizing public forums, faculty and student seminars, developing appropriate curricula for undergraduate and graduate instruction and facilitating research and scholarly activities. SDSU offers, through IISCOR, a multidisciplinary Bachelor of Arts degree in International Security and Conflict Resolution. Students and faculty can obtain more information by calling the IISCOR office at (619) 594-6240.

### **Center for Research in Mathematics and Science Education**

**Kathleen M. Fisher, Director**

The Center for Research in Mathematics and Science Education (CRMSE) is an interdisciplinary consortium of faculty interested in research on substantive questions related to the learning and teaching of science and mathematics. The Center currently has members from the faculties of Biology, Chemistry and Biochemistry, Geological Sciences, Mathematics and Statistics, Physics, Policy Studies in Language and Cross-Cultural Education, Psychology, and Teacher Education. It is administered by a director appointed by the dean of the College of Sciences, and an associate director, appointed by the dean of the College of Education. Through its activities, CRMSE initiates, encourages, and supports the scholarly pursuit of important theoretical and applied problems in mathematics and science education. CRMSE supports faculty in their current research projects and in the preparation of manuscripts for publication and grant proposals for continued research. The Center administers the Doctoral Program in Mathematics and Science Education that is offered jointly by SDSU and the University of California, San Diego. It also houses the Professional Development Collaborative to serve area teachers. The Center is located at 6475 Alvarado Road, Suite 206, San Diego, CA 92120-5013; telephone (619) 594-5090; campus mail code 1862.

### **Center for Microbial Sciences**

**Stanley R. Maloy, Director**  
**Anca M. Segall, Associate Director**

The Center for Microbial Sciences is a non-profit research center dedicated to the study of microorganisms. The Center's mission is to provide a productive, stimulating, and interactive research environment that will lead to rapid progress in the fields of microbial biology. The Center integrates multiple scientific approaches to elucidate basic biological principles that helps in combating human health problems caused by microorganisms and stimulates applications of microorganisms in the biotechnology industry.

The Center encourages multidisciplinary scientific research by bringing together a group of creative, cooperative investigators with different scientific backgrounds to attack major questions in microbial biology using a variety of experimental approaches. The Center also trains scientists to attack important but neglected problems in microbial biology. The close proximity of the Center for Microbial Sciences is a nucleus of biotechnology companies facilitates interactions with industry. The Center also collaborates with neighboring institutions with expertise in other biological areas (UCSD, Scripps Research Institute, Salk Institute, Scripps Institution of Oceanography, and others) providing additional intellectual and physical resources.

The primary goals of the Center are:

- *Research* – To attract a group of imaginative, interactive investigators and provide a stimulating environment for productive, innovative research in microbial biology;
- *Training* – To train a new generation of scientists to solve important problems in microbial biology using innovative experimental approaches;
- *Outreach* – to provide expertise and facilities for visiting scientists from academia and industry to learn new technologies.

### **Microchemical Core Facility**

**Long T. Wen, Director**

The Microchemical Core Facility (MCF) is a component of the California State University Program for Education and Research in Biotechnology (CSUPERB). The MCF is a full-service, state-of-the-art facility that provides DNA synthesis, sequencing, and purification services for cell and molecular biologists associated with any of the 22 CSU campuses. In addition, the MCF provides for CSU faculty access to the most recent advances in computer-assisted analyses of molecular structure. Located in the Biology Department at SDSU, the MCF provides state-of-the-art molecular analyses and characterization to CSU scientists for the lowest possible cost, as well as fostering the training of university faculty at all levels in the most recent techniques available in the molecular life sciences. Funding for the establishment and maintenance of the SDSU MCF is derived from the National Science Foundation with matching funds provided by the State of California. Call (619) 594-1669 for more information.

### **Molecular Biology Institute**

**Greg L. Harris, Director**

The Molecular Biology Institute was established to serve interested departments of the biological and physical sciences in the coordination, support and enhancement of research and instruction in the molecular biological sciences. Interests and activities of the MBI encompass all approaches which aim to explain biology at the molecular level. The MBI sponsors a weekly seminar series that facilitates faculty and student interaction with scientists from other institutions. Currently, full members of the Institute are drawn from the Departments of Biology and Chemistry, and the Graduate School of Public Health, 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, the Department of Energy, the US Department of Agriculture, and the California Metabolic Research Foundation. Additional information is available from the MBI office; (619) 594-7429.

## **NExTWORK**

**William A. Root, Director**

SDSU's Nexus for Technology Workforce Education – NExTWORK – functions as an incubator for new programs designed to help the University respond more nimbly to San Diego's technology workforce needs. Nextwork seeks to invent, implement, and promote new programs at the department and college levels that will help the University to identify, and to incorporate into our curricula promptly, those emerging technologies and technology skills that are critical to the regional workforce. Nextwork's goal is to insure that the number of SDSU technology graduates, and the skills they possess upon graduation, keep pace with local industry demand. Nextwork keeps local industry and government leaders, and the San Diego community informed about SDSU's initiatives in addressing local technology workforce needs. Nextwork focuses on the computer technology segment of the regional technology workforce; consequently the Department of Computer Science serves as the testbed academic department for Nextwork's current prototype programs:

- The Technology Workforce Watch undertakes quarterly surveys of the anticipated technology workforce requirements of a representative sample of local technology firms.
- The Technology Workforce Bulletin, mailed quarterly to selected technology industry leaders and regional legislators, presents recent findings of the Technology Workforce Watch and describes SDSU's responding educational initiatives.
- The Industry Certification Curriculum Program promotes expansion of existing computer science courses into multi-semester sequences including product-specific case-studies that provide excellent preparation for industry-standard certification exams.
- Nextwork's on-campus internships program provides a broad spectrum of relevant technology-oriented internships entirely within, and supporting, SDSU itself.
- Technology Training Partnerships with major commercial technology training providers offer SDSU students and faculty access to training in new technology areas in which SDSU has no current faculty presence.
- Nextwork community programs provide curriculum development and instructional support to SDSU faculty and College of Extended Studies programs for the public at large.

Nextwork is administered by a director appointed by the dean of the College of Sciences, and resides in facilities provided by the College of Sciences. For further information, call the Nextwork office at (619) 286-8715 or (619) 994-8715.

## **Research Lectureship**

### **Albert W. Johnson University Research Lecture**

A project sponsored by the University Research Council and the Office of the Associate Vice President for Research and Dean of the Graduate Division, the Albert W. Johnson University Research Lectureship is awarded annually to an SDSU faculty member for outstanding achievement in research and scholarship. The purpose of the University Research Lectureship is to recognize such achievement, to foster its continuance, and to enable a distinguished resident faculty scholar to share knowledge more broadly with the academic community and the community-at-large.

Lecturers have included Dr. Joseph Ball, Professor of Anthropology; Dr. Alvin Coox, Professor of History; Drs. James Flood and Diane Lapp, Professors of Education; Dr. Maurice Friedman, Professor of Religious Studies; Dr. Arthur Getis, The Stephen and Mary Birch Foundation Chair in Geographical Study; Dr. Dipak K. Gupta, Profes-

or of Public Administration and Urban Studies; Dr. Robert Kaplan, Professor of Psychology; Dr. E. Percil Stanford, Professor of Social Work; Dr. Donna J. Thal, Professor of Speech, Language, and Hearing Sciences; Dr. Helen Wallace, Professor of Public Health; Dr. David Ward-Steinman, Professor of Music; Dr. Catherine Yi-yu Cho Woo, Professor of Chinese; Dr. Edward Riley, Professor of Psychology; and Dr. Melbourne F. Hovell, Professor of Public Health.

## **Research and Technology Services**

### **Conflict of Interest Committee**

SDSU investigators submitting, renewing, or participating in a proposal requesting funds from any designated external sponsor or receiving a gift or monetary pledge must file the appropriate financial disclosure statement at the time of the submission of the federal proposal, or within 30 days or prior to receipt of a privately sponsored grant or contract or receipt of a gift or monetary pledge. Disclosures must be updated on an annual basis during the period of the award and as new reportable significant financial interests are obtained. Disclosure statements are reviewed and evaluated by the Conflict of Interest Committee. The Committee reviews the information provided by the investigator to determine whether the financial interest could affect the conduct or reporting of the project, and determine if any conditions or restrictions should be imposed on the investigator or research protocol in order to manage, reduce, or eliminate conflicts that are identified. The Committee may also evaluate whether the financial interest has the potential to influence financial expenditures, personnel decisions, or facilities usages, limit or influence the teaching and research environment of the University. For more information contact Graduate and Research Affairs, Division of Research Administration, (619) 594-5938.

### **Faculty Grant-In-Aid for Research**

These grants are supported by funds provided by the San Diego State University Foundation. An average of 15 to 20 grants, up to \$8,000 each, are awarded annually each fall to help faculty begin a research program, with the expectation that further funding will be sought from appropriate outside agencies, and to assist faculty in completing projects, or to pursue a new development while outside assistance is being sought. To find out more about faculty grant-in-aid, contact Graduate and Research Affairs, Division of Research Administration, (619) 594-5938 or visit <http://gra.sdsu.edu/dra/gia.htm>.

### **Institutional Animal Care and Use Committee**

The Institutional Animal Care and Use Committee at SDSU functions in accordance with Federal and State regulations and institutional policy. The Office of the Institutional Animal Care and Use Committee provides administrative support to this committee for implementing University policy for research, testing, or education involving the use of animals. Call (619) 594-0905 for more information.

### **Institutional Biosafety Committee**

SDSU is responsible for ensuring that recombinant DNA research or experiments involving biological or potentially hazardous materials are conducted in compliance with the National Institute of Health Guidelines to promote safe and responsible practices. The Institutional Biosafety Committee (IBC) reviews research for this purpose. The IBC is a committee of the University Research Council appointed by the Associate Vice President for Research. Graduate and Research Affairs, Division of Research Administration provides administrative support to the IBC. The IBC membership is determined based on federal guidance and includes a biosafety officer, a veterinarian, scientists, and private citizens.

For information regarding SDSU's Biosafety Program, visit the Environmental Health and Safety Web site at <http://bfa.sdsu.edu/ehs/> or contact the Institutional Biosafety officer, Millie Tran, (619) 594-2865 or e-mail [mdizon@mail.sdsu.edu](mailto:mdizon@mail.sdsu.edu). For information specific to the Institutional Biosafety Committee, contact Graduate and Research Affairs, Division of Research Administration, (619) 594-0905 or e-mail [ibc@mail.sdsu.edu](mailto:ibc@mail.sdsu.edu).

### **Institutional Review Board (IRB)**

The Institutional Review Board (IRB) reviews research when procedures are proposed to obtain information about a living individual through the use of a survey, interview, observation, experimentation, or the analysis of human tissues, records, samples, or other data previously collected from human subjects. All research involving human subjects, conducted within the jurisdiction of SDSU's Federal Wide Assurance, must be reviewed and approved by the IRB in advance of

study initiation. The IRB reviews research involving human subjects to determine and certify that all projects comply with the federal and institutional regulations and policies, and ethical standards.

The Division of Research Administration provides administrative support to the IRB. For general information, application procedures and forms, guidance on ethical practices, and submission deadlines, visit <http://gra.sdsu.edu/irb>. You may also e-mail [irb@mail.sdsu.edu](mailto:irb@mail.sdsu.edu) or call (619) 594-6622.

### **Technology Transfer Office**

The Technology Transfer Office (TTO) provides a central location where faculty, students, and staff may receive advice and assistance in the commercialization of their inventions, copyrights, and other scholarly work. In addition, the TTO assists in setting up new spin-off companies and obtaining venture capital for future development. This office also reports to the SDSU Foundation. Call (619) 594-0516 for more information.

# PART FIVE

## General Information

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# General Information

## Accreditation

San Diego State University is accredited by the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges, 985 Atlantic Avenue, Suite 100, Alameda CA 94501, (510) 748-9001; FAX (510) 748-9797; E-MAIL: [wascsr@wascsenior.org](mailto:wascsr@wascsenior.org); <http://www.wascweb.org>. 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 Commission on Education for Health Services  
Administration  
1911 North Fort Myer Drive, Suite 503  
Arlington, VA 22209-1603  
(703) 524-0511

Accreditation Council for Graduate Medical Education  
(Preventive Medicine Residency Program)  
515 N. State Street, Suite 2000  
Chicago, IL 60610  
(312) 464-4972

American Association of Colleges for Teacher Education  
One Dupont Circle, Suite 610  
Washington, D.C. 20036-1186  
(202) 293-2450

American Chemical Society  
Committee on Professional Training  
1155 Sixteenth Street, N.W.  
Washington, D.C. 20036  
(202) 872-4600

American College of Nurse Midwives  
818 Connecticut Avenue, N.W., Suite 900  
Washington, D.C. 20006  
(202) 728-9896

American Council on Education in Journalism  
and Mass Communication  
University of Kansas  
Stauffer-Flint Hall  
Lawrence, KS 66045  
(913) 864-3973

American Psychological Association  
(Clinical Psychology)  
750 First Street, N.E.  
Washington, D.C. 20002-4242  
(202) 336-5500

American Speech-Language-Hearing  
Association, Council on Academic Accreditation in  
Audiology and Speech-Language Pathology  
10801 Rockville Pike  
Rockville, MD 20852  
(301) 897-5700

California Commission on Teacher Credentialing  
1812 Ninth Street  
Sacramento, CA 95814-7000  
(916) 445-0184

Commission on Collegiate Nursing Education  
One Dupont Circle, N.W., Suite 530  
Washington, D.C. 20036-1120  
(202) 887-6791

Computing Sciences Accreditation Board  
(Computer Science)  
Two Landmark Square, Suite 209  
Stamford, CT 06901  
(203) 975-1117

Council of Graduate Schools  
One Dupont Circle, N.W., Suite 430  
Washington, D.C. 20036-1173  
(202) 223-3791

Council on Education of the Deaf  
405 White Hall  
Kent State University  
Kent, OH 44242-0001  
(330) 672-2294

Council on Education for Public Health  
1015 Fifteenth Street, N.W.  
Washington, D.C. 20005  
(202) 789-1050

Council on Social Work Education  
1725 Duke Street, Suite 500  
Alexandria, VA 22314-3457  
(703) 683-8080, <http://www.cswe.org>

National Association of School Psychologists  
4340 East West Highway, Suite 402  
Bethesda, MD 20814  
(301) 657-0280

National Association of Schools of Art and Design  
11250 Roger Bacon Drive, Suite 21  
Reston, VA 20190  
(703) 437-0700

National Association of Schools of Public Affairs  
and Administration  
1120 G Street, N.W., Suite 730  
Washington, D.C. 20005-3801  
(202) 628-8965

National Association of Schools of Theatre  
11250 Roger Bacon Drive, Suite 21  
Reston, VA 20190  
(703) 437-0700

National Council for Accreditation of Teacher  
Education  
2010 Massachusetts Avenue, N.W., Suite 500  
Washington, D.C. 20036-1023  
(202) 466-7496

National Council on Rehabilitation Education  
c/o Dr. Garth Eldredge, Administrative Secretary  
Utah State University  
Department of Special Education and Rehabilitation  
2870 University Boulevard  
Logan, Utah 84322-2870

National Recreation and Parks Association  
22377 Belmont Ridge Road  
Ashburn, VA 20148  
(703) 858-0784

Western Association of Graduate Schools  
University of Washington, The Graduate School  
Box 351240  
Seattle, WA 98195-1240  
(206) 543-9054

In addition, San Diego State University is accredited by the following agencies:

The College of Business Administration and the School of Accountancy are accredited by the AACSB International—The Association to Advance Collegiate Schools of Business—at both the undergraduate and graduate levels. Several College of Business Administration programs are registered with the Certified Financial Planner Board of Standards, 1700 Broadway, Suite 2100, Denver, CO 80290-2101, (303) 830-7500.

The College of Engineering undergraduate programs in aerospace, civil, electrical and mechanical engineering are accredited by the American Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202, (410) 347-7700.

The School of Nursing is accredited by the California Board of Registered Nursing, State of California, Department of Consumer Affairs, 400 R Street, Suite 4030, Sacramento, CA 95814, (916) 322-3350.

Concentrations in Environmental Health and Occupational Health in the Graduate School of Public Health are accredited by the American Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202, (410) 347-7700.

The Didactic Program in Dietetics and the Preprofessional Practice Program in Dietetics in the Department of Exercise and Nutritional Sciences are approved by the American Dietetic Association, P.O. Box 97215, Chicago, IL 60678-7215, (312) 899-0040.

Undergraduate programs in Athletic Training and Kinesiotherapy, in the Department of Exercise and Nutritional Sciences are accredited by the Commission on Accreditation of Allied Health Education Programs, 335 East Wacker Drive, Suite 1970, Chicago, IL, (312) 553-9355, [caahep@mis.net](mailto:caahep@mis.net).

## Library and Information Access

The Library supports the curricular and research needs of the University community through the development of collections and the provision of services designed to facilitate access to information. Service desks are located in these units: Circulation, Reference Services, Media Center, Current Periodicals and Microforms Center, Reserve Book Room, and Special Collections. The Library also has a comprehensive instruction program, which includes course-related instruction and tours.

The Library's Web site at <http://infodome.sdsu.edu/> provides access, within the library and remotely, to the library's catalogs, electronic books, journals, and more than 50 databases. Interlibrary loan services are provided to obtain materials not held in the library. In addition, students and faculty can place unmediated requests for books from San Diego and selected California academic libraries through Circuit and Link+. The Information Systems and Technology group provides computer accounts to all students, as well as hosting WorldWideWeb pages for students, the University, and the Library. The Library and Information Access provides up-to-date computing resources, with over 600 computers available in the Student Computing Center, Reserve Book Room, and throughout the Library, as well as a student computing help desk which assists students with a variety of computer questions.

The Library's holdings include 1,428,026 monographs and bound periodicals; 652,372 government documents; 4,315,311 microforms; 138,976 maps; 10,905 sound recordings; and 5,857 linear feet of archival papers. The Library receives 8,716 periodical and serial titles, including government publications. It is a depository for United States and California government publications, and receives selected United Nations publications.

## Academic Computing

The SDSU computing environment provides access to scores of software products including World Wide Web browsers, programming languages, word-processing, spreadsheets, presentation packages, relational databases, statistical software, and large databases such as IMF and CRSP. The University provides access to a Sun F4800 Server (running SOLARIS) and a 1152 Processor IBM RS/6000 SP Supercomputer. Both the Sun F4800 Server and the IBM RS/6000 SP computers are available to the university community via the campus Internet which also links students to specialty computing centers located at other California State Universities.

The University has over 2,000 microcomputers as well as a significant number of X-Terminals located in 80 departmental/college computer laboratories. There are also three large computer labs open to all students; all machines in those labs are connected to the Internet. The open computer labs are (1) the Love Library Student Computer Center located in Love Library 200 which has PCs, Macintoshes, and laser printing; (2) the Social Science Research Lab located in PSFA 140 has PCs, Macintoshes, and laser printing; and (3) the Terminal Labs in BA-110 and BA-113 have diskless PCs and laser printing.

The Baseline Access, Training and Support (BATS) program offers free hands-on computer training to the SDSU community. Workshops cover the Microsoft Office Suite (Word, Excel, Powerpoint, and Access), Adobe PageMaker, Adobe Photoshop, Web Page Creation, Introduction to Computers and the Windows and Macintosh Operating Systems, and more.

Student computing and e-mail accounts are available through a student account system. This system allows enrolled SDSU students to create their own accounts via the Internet from a computer or terminal on campus or via the Web from off campus.

A Web site is available at <http://www.sdsu.edu>

## Instructional Technology Services

Instructional Technology Services provides support to faculty in the design, selection, production, and distribution of instructional technology. Service and support are provided in three key areas: Instructional Resources and Technology Systems, Instructional Development, and Multimedia Production.

**Instructional Resources** provides support in the selection, use, and distribution of instructional materials and equipment. Services include consultation on selection and use of media and equipment for instruction; check-out of media and equipment for classroom use; acquisition of new videotapes, DVD's and CD-ROM's for instructional use; on-line access to an instructional media collection containing more than 7,000 titles; and maintenance and repair of audiovisual equipment. **Technology Systems** provides support in the design, installation, operation, and maintenance of instructional systems in classrooms. Services include the design, installation, and maintenance of Smart Classroom systems and basic audiovisual systems; operation of the campus closed-circuit television system; operation of videoconferencing systems for instructional and administrative use; satellite downlink and off-air recording services; and operation of a presentation room for high-quality video and data projection.

The **Instructional Development** program offers professional assistance in instructional design, course design, teaching techniques, and assessment. Services include: assistance in development of instructional materials; assessing and selecting instructional

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methods; facilitating course design; assistance to faculty who wish to analyze their instruction; workshops on teaching skills and techniques; and a facility for faculty to produce their own instructional media and to learn about new technologies. The B.A.T.S. initiative (Baseline Access, Training and Support) provides instruction to faculty, staff, and students in the use of computer hardware and software through a full schedule of workshops held in hands-on computer labs and through Help Desks staffed by instructional computing consultants. In addition, a courseware development specialist is available to assist faculty with the Blackboard web-based course delivery system.

**Multimedia Production** assists in the design and production of instructional and research materials, as well as other University-related materials. Services include development and production of instructional videotapes; graphic and photographic support of instruction, research and publication; and assistance in development of multimedia materials including CD-ROM's, DVD's, and instructional Web sites.

### San Diego State University Foundation

The San Diego State University Foundation was incorporated in 1943 as an auxiliary organization authorized by the Education Code of the State of California. It is a nonprofit corporation, self-financed, and chartered to augment the educational, research, and community services objectives of the University. San Diego State University Foundation serves the University in the following major areas:

- Working with faculty and staff to develop and administer grants and contracts and community-service programs;
- Developing and administering major centers, institutes, community partnerships, and programs;
- Administering a technology transfer program;
- Administering student scholarship, loan funds, and financially managing and investing gifts, trusts and endowments, most on behalf of the University's philanthropic foundation;
- Acquiring, developing, and managing real property to support sponsored programs;
- Assisting in the management functions of KPBS radio and television stations;
- Providing resources to develop new and support existing SDSU faculty sponsored projects, including funds for faculty grants-in-aid, research faculty recruitment, joint doctoral programs, research equipment, and other costs related to advancing the University's research agenda.

San Diego State University Foundation, as a nonprofit corporation, is governed by a board of directors in accordance with its articles of incorporation and bylaws. The principal function of the directors is to establish policies and guide the corporation in achieving its objectives.

### San Diego State University Press

As the scholarly press for San Diego State University, San Diego State University Press publishes works of original research, as well as other meritorious academic and creative works that will further the intellectual mission of the University. The current focus of the Press is in these areas: Latin America and the United States-Mexico border; regional studies of the Pacific Southwest; and postmodernism. In addition to books, the Press also publishes under its imprint the journals, *Fiction International*, and *Poetry International*.

San Diego State University Press imprint is controlled by an editorial committee of scholars, appointed by the Provost and the Senate. Financial accounting and coordination are provided by the San Diego State University Foundation.

### Office of International Programs

In recognition of the rapidly expanding number and importance of international activities on the San Diego State University campus, the Office of International Programs has specific responsibility for coordinating and facilitating the development of the diverse international programs and activities of the University. The Office of International Programs is the primary contact for international programs and represents the University on international matters to external agencies and institutions. The Office of International Programs coordinates all international faculty and student programs and serves as an information clearinghouse regarding international projects, funding opportunities, and academic programs and services that have an international component.

#### International Faculty Exchanges

In order to enhance the international character of instruction and research, San Diego State University has developed a continuing program of faculty exchange with partner universities worldwide. Currently, the University has formal arrangements to exchange faculty periodically with universities across the globe. Over 100 international scholars visit the San Diego State University campus each year to pursue scholarly research, participate in academic or professional programs, and share their international perspectives with the University community.

#### International Student Exchanges

In addition to the CSU International Programs, San Diego State University also sponsors semester abroad, dual degree programs, and travel-study programs. SDSU has also entered into special institutional arrangements with selected universities that provide both undergraduate and graduate students the opportunity for study, research, and internships abroad. Currently San Diego State University has student agreements with many international partners. SDSU's International Student Center assists students who wish to participate in an exchange or other SDSU program. For detailed information, contact the International Student Center at (619) 594-1982.

For more information about the University's international programs, contact the Office of International Programs, (619) 594-1354. E-mail: [oi@sdsu.edu](mailto:oi@sdsu.edu) or visit our Web site at <http://oip.sdsu.edu>.

### Alumni Association

The SDSU Alumni Association is dedicated to connecting SDSU alumni to the University and each other. Membership in the San Diego State University Alumni Association is open to those individuals who have an abiding interest in and commitment to the growth and future of SDSU and the community it serves.

The Alumni Association is a dynamic, exciting organization whose purpose is to serve and support the University and its graduates. 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 sporting events, discounts on purchases at the Aztec Store, access to SDSU's Career Services for a nominal fee, and a subscription to SDSU Magazine, a monthly electronic newsletter, and Aztec update: publications for alumni and friends of the University.

In addition, the Alumni Association sponsors The Montys (annual awards event honoring alumni and faculty of the University), provides scholarships for students, organizes Homecoming, sponsors Career Panels, provides input regarding University programs and policies, and provides excellent networking opportunities through a myriad of events.

For further information, a Web site is available at: <http://www.sdsualumni.org> or phone the Alumni Office at (619) 594-2586.

## Associated Students of San Diego State University

The Associated Students of San Diego State University (A.S.) is a unique, full-service organization. The A.S. provides a variety of programs, services and activities for SDSU students, as well as faculty, staff, alumni, and the public. Directed by elected student executives, the Associated Students offers programs ranging from recreation to entertainment and child care. An independent, not-for-profit corporation, it is funded by the student activities fee and revenues collected from programs and services. Associated Students can be reached by calling (619) 594-6555, or on the Web site at <http://as.sdsu.edu>.

**Student Government.** The Associated Students sponsors extensive student leadership programs designed to encourage active student participation in the decision-making policies of the university. The A.S. Council is the voice of the SDSU student body. Composed of one representative per 1500 students, five executive officers, and representatives of some student organizations, the Council is responsible for the (A.S.) \$15 million annual budget and for formulating policy. Elections held each year allow for the selection of individuals to fill one-year terms on the Council. Meetings of the A.S. Council are weekly, open sessions.

Other student government activities include monitoring academic policies programs and services; appointments to educational or campus-related committees; lobbying to provide student input to city, county, state and federal governments; and representing SDSU's interests with the California State Student Association. Call (619) 594-6555 for more details about student government programs.

**Aztec Center.** The hub of student activity at SDSU, Aztec Center is the headquarters of the Associated Students and its staff. Aztec Center features study lounges, meeting and conference rooms, the Campus Information Center, the Ticket Office and businesses that include STA Travel, Postal Annex, and USE Credit Union. Aztec Center also houses the Aztec Center Food Court, a popular campus eatery and meeting place that offers a variety of food selections, and the Aztec Cafe featuring Starbucks Coffee and free live entertainment.

**Cox Arena at Aztec Bowl.** This facility features seating for over 12,000 people and hosts SDSU basketball and volleyball games in addition to community events, concerts, graduation ceremonies, conferences, sports shows, and more. It features state-of-the-art staging and sound systems, along with deluxe dressing rooms. VIP lounges and meeting rooms are also available for rental. On site is a full-service box office and TicketMaster location for events throughout California. The Cox Arena is adjacent to the Aztec Recreation Center in the heart of the SDSU campus with nearby parking for 2,000 vehicles. Call (619) 594-0234.

**Recreation Programs.** Associated Students manages SDSU's recreation and fitness programs. Offered at affordable prices, they are open to the public, as well as students, faculty, staff, and alumni.

**Aztec Recreation Center (ARC).** The ARC features four full-size gyms; a 30-foot climbing wall; 21,000 square feet of cardio, aerobic, dance, and weight rooms; a TV lounge area; plus locker rooms with full towel service and saunas. Membership includes unlimited access to recreation facilities, aerobics, cardio and weight rooms, racquetball, wallyball, intramural sports, and bowling. Additional programming is offered at minimal fees with a wide variety of recreation classes such as the arts, dance and music, food and beverage, health and fitness, martial arts, horseback riding, tennis and rock climbing. Economical membership fees start at only \$15.00 per month for students. Call (619) 594-PLAY for complete schedules and membership information.

**Aztec Center Bowling and Games.** This facility includes 12 bowling lanes, over 40 video games, billiards, table tennis, and leagues. Also available for parties. Call (619) 594-6561.

**Mission Bay Aquatic Center.** The world's largest instructional waterfront facility, located at 1001 Santa Clara Point in Mission Bay Park, offers classes and recreational opportunities in surfing, sailing, windsurfing, kiteboarding, waterskiing, rowing, wake boarding, and more. Equipment rentals and facilities for group meetings or barbecues are also available. Bus transportation from SDSU available on Transit Route 81. Call (858) 488-1000.

**Aztec Adventures.** Located in the Aztec Recreation Center, this outdoor adventure program offers camping, backpacking, rock climbing, canoeing, sea kayaking, and skiing outings. Also features excursions such as Baja whale watching, surfing safaris, and nature awareness weekends. Trips are always led by experienced guides. Most outings include transportation, food, group equipment, and all permits or fees. Call (619) 594-6222 for more information and trip schedules.

**Recreational Sports.** An extension of the Aztec Recreation Center (ARC), Recreational Sports offers free racquetball and wallyball to ARC members. The golf driving range is available for minimal fees. Non-ARC members can participate in all programs at slightly higher prices. Recreational Sports is located at SDSU on the west end of Peterson Gym. For more information, call (619) 594-6424.

**Sports Clubs.** Sports Clubs are organized, funded, and managed by SDSU students. The collective efforts and organization of the students comprising each team determine each club's success. Sports Clubs practice weekly, from two to five times per week, in preparation for organized intercollegiate competitions at local, state, regional, and national levels. Both new and experienced athletes are actively recruited. In fact, many athletes are new to their sports. Sport Club teams are an excellent setting for the development of athletic skills, student leadership skills, and social opportunities. Groups interested in starting a new club or want information on an existing club should call the ARC at (619) 594-0200.

**Child Care Programs.** Associated Students provides child care and preschool learning programs through the SDSU Children's Center. Programs range from part-time to full-time care for children ages infant to five years, with all programming provided by expertly trained teachers and staff members. For more information, call (619) 594-7941.

**Open Air Theater and Entertainment.** A.S. offers multiple programs that provide fun and versatile entertainment. The 5,100 seat Open Air Theater features regular performances to sellout crowds including concerts, lectures, and symphony performances. Call Aztec Center Ticket Office, (619) 594-6947 for performance schedules.

## Athletics

San Diego State University sponsors a broad array of varsity intercollegiate athletics for women and men. SDSU's commitment to gender equity in athletics includes twelve sports for women (basketball, crew, cross country, golf, soccer, softball, swimming, tennis, indoor/outdoor track and field, volleyball, and water polo) and six for men (baseball, basketball, football, golf, soccer and tennis). As a National Collegiate Athletic Association (NCAA) Division I program, Aztec athletic teams compete at the highest level of intercollegiate competition. All of the teams except soccer compete in the 8-member Mountain West Conference. Men's soccer is a member of the Mountain Pacific Sports Federation.

Athletics serves a number of important roles on campus and within the larger San Diego community. In addition to encouraging student-athletes to expand their competitive capabilities to the fullest, San Diego State teams provide a catalyst which helps generate pride and a shared *esprit de corps* among students, faculty, staff, and alumni.

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This also helps link these groups from generation to generation. Similarly, with nearly a hundred-thousand alumni and former students and tens of thousands of supporters in the county with no other direct connection to the University, Aztec teams frequently carry the aspirations of San Diego in the forum of NCAA Division I Athletics. On-campus athletic events attract both students and members of the community to campus and this reinforces many mutually beneficial town-gown relationships.

### Aztec Shops, Ltd.

#### (Campus Stores, Dining Services)

<http://www.aztecshops.com>

Aztec Shops, Ltd., founded in 1932, is a not-for-profit corporation that functions primarily as an auxiliary of San Diego State University. The corporation provides a diverse portfolio of commercial services including operation of the bookstore and dining services on campus. Aztec Shops also operates selected other enterprises at San Diego State and at other colleges and universities. The corporation employs close to 200 full-time professionals and up to 800 part-time employees – mainly students – during busiest times. Our corporate offices are located on the campus of San Diego State University.

**SDSU Bookstore.** The flagship of Aztec Shops' retail operations, the SDSU Bookstore is one of the largest campus bookstores in the country as measured by sales. The 25,000-square-foot facility – located in the heart of campus – carries every text (required and optional) for every class taught at SDSU. The facility's "Bookstore within a Bookstore" offers an impressive selection of general-interest titles including volumes for children. The store's well-staffed special order desk is available to secure even the most hard-to-find titles. Aztec Shops is the exclusive licensee for the San Diego State University logo and related images. The SDSU Bookstore features the most extensive selection of SDSU-imprinted clothing and gifts available. The store also houses the AzTechnology Zone, a full-service computer hardware and software department. AzTechnology Zone offers significant academic discounts on the most popular systems from Sony, Toshiba, and Apple as well as the most current versions of the nation's most popular software. A broad selection of school supplies, cards, gifts and graduation regalia round out the store's offerings. For more information, call (619) 594-7525.

**Aztec Dining Services.** Aztec Shops is responsible for all restaurants and other food service outlets on the SDSU campus. The corporation operates SDSU's Meal Plan Program which allows residence hall students to choose interesting and healthy meals from virtually any restaurant on campus. In addition to residence hall dining programs, we developed and operate our own branded restaurants such as Durango's and Vinnie's Gourmet Italian Deli in East Commons. We also contract with other restaurant operators such as McDonald's, and Daphne's Greek-to-Go to provide quality food and service on campus. In addition to the varied restaurant options, Aztec Shops operates five Aztec Market convenience stores on campus, including a 3,000-square-foot store in East Commons. All stores carry a wide variety of grab-and-go beverages, sandwiches and salads, as well as traditional convenience store items. Aztec Dining Services' Catering Department is the recognized caterer for all events on the SDSU campus. For more information, call (619) 594-7640.

**Other operations.** Other Aztec Shops operations include:

**Art Etc.** – A specialty store (located in the Art Building at SDSU) which features art supplies for both amateur and professional artists.

**Aztec Store** – Located in San Diego's Fashion Valley Mall, the store offers Aztec team apparel and SDSU imprinted gifts.

**The Campus Store** – Aztec Shops operates The Campus Store, the bookstore at the SDSU branch campus in Calexico, CA.

**Elderhostel** – Aztec Shops runs a successful Elderhostel program that brings senior citizens from around the country to San Diego for specialized educational enrichment programs.

**Montezuma Publishing** – As part of its commitment to providing course materials for every class, Aztec Shops operates Montezuma Publishing which prints customized course materials and readers, securing copyright permissions when necessary.

**University Towers** – In November 2000, Aztec Shops purchased the well-known El Conquistador residence hall near the SDSU campus. Recently renamed University Towers, the facility is home to more than 500 students during the academic year. University Towers is operated under contract by College Park Communities.

**Concessions** – Aztec Shops operates the concession stands at Cox Arena, the Open Air Theater and Tony Gwynn Stadium.

### Children's Center

The SDSU Children's Center, a quality service provided by Associated Students, provides an enriched learning program for infants, toddlers, and preschool children of students, faculty, and staff while their parents are in class, studying, and/or at work. The academic school year program is designed to meet the needs of students and is only open the days school is in session for the fall and spring semesters. The year round program is designed to meet the needs of the working parents and is open year round. We observe all University holidays.

A grant from the State Department of Education, Child Development Division, pays all or partial child care fees for qualifying students' children. Tuition for all others is billed monthly and is determined by the child's classroom/age and contracted schedule.

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 classrooms are staffed by professional and student employees, volunteers, and child and family development majors. Parent participation is strongly encouraged and appreciated. Parents have the opportunity to serve on the Children's Center Board, which is composed of parents and other campus representatives.

Call (619) 594-7941 or go to <http://www.sdsu.edu/as/child> for more information.

### Career Placement

Career Services may furnish, upon request, information about the employment of students who graduate from programs or courses of study preparing students for a particular career field. This information includes data concerning the average starting salary and the percentage of previously enrolled students who obtained employment. The information may include data collected from either graduates of the campus or graduates of all campuses in the California State University system. Information is available at <http://career.sdsu.edu>.

### Career Services

#### Student Services, Room 1200, (619) 594-6851, <http://career.sdsu.edu>

Career counselors assist students in the exploration of their skills, interests and values as they choose a major and develop a career plan. A variety of computerized instruments are used in the career counseling and job search process. An extensive Career Library contains occupational/career information, employer reference materials, directories, video and audio tapes, interactive computer assisted programs, and Internet resources for the job search.

A centralized listing of career positions, part-time jobs, campus jobs, volunteer positions, and internships is available in the Career Resource Room and electronically.

Career fairs are scheduled each semester allowing students to meet employers in an informal setting. A comprehensive career fair is scheduled in September followed by a graduate and professional school day. In the spring semester, a series of specialty fairs are scheduled, including one for summer jobs. Access to a bank of SDSU alumni (through our Career Consultants Network) helps students explore numerous career possibilities.

The on-campus interviewing program brings prospective employers and students together for career employment and internship interviews. Career Services' Web-based program, Aztec Career Connection, <http://career.sdsu.edu>, allows students and alumni access to these interviews, plus additional on-line services and information. Students are assisted in preparing for these interviews and all other aspects of the job quest through workshops and individual career counseling.

The American Humanics Program is designed to prepare students for careers in the non-profit sector. A specialized program, Workability IV, is also available for students with disabilities.

The Center for Community-Based Service Learning (CCBSL) offers programs and resources to SDSU students, faculty, staff, and community members interested in participating in community service and service-learning.

Various services are offered to alumni for a nominal fee.

Career Services is open 8:00 a.m. to 4:30 p.m., Monday through Friday, and the Career Resource Room is open until 6:00 p.m. on Thursdays during fall and spring semesters while classes are in session.

## Catalog, Bulletin, and Class Schedule

The *General Catalog* is published annually in May and can be purchased at the SDSU Bookstore. The catalog carries information on admissions, fees and tuition, programs and degrees, courses, scholarships, residence halls, student services and activities, and a faculty directory.

The *Bulletin of the Graduate Division* is published annually in May and can be purchased at the SDSU Bookstore.

The *Class Schedule* with instructions for registration is available at <http://www.sdsu.edu/schedule.html>.

The catalog and bulletin are available on the SDSU Web site at <http://www.sdsu.edu>.

Mail order information on the catalog and bulletin is available at <http://www.aztecshops.com>.

The College of Extended Studies also publishes three catalogs each year, in spring, summer, and fall, listing extension, certificate, and professional development programs and courses available to the general public. The catalog is free and can be mailed to interested students by calling the College at (619) 594-5152.

## Center for Community-Based Service Learning (CCBSL)

The mission of the Center for Community-Based Service Learning is to enhance learning and civic responsibility through community engagement. The Center serves faculty, students, and community organizations by providing a link to integrate community service programs with classwork, giving students unparalleled insight into community needs. The CCBSL is a supportive and collaborative force for the campus and the community to come together for shared endeavors and goals.

Community-based learning, also known as service learning, is a form of experiential education combined with the ethic of giving back to the community. The goals of the CCBSL include assisting and

supporting faculty as they make community service part of their classwork, and helping individual students and student organizations identify places where they can directly address community needs.

The CCBSL serves as a central location on campus for students, their clubs, faculty and staff to plan and implement community projects. To aid in those efforts, the CCBSL has developed several resources and services to include:

- A listing of faculty and courses involved in community-based learning;

- A listing of community activities meeting student volunteer or service needs;

- A bank of community projects suitable for faculty to include in their courses;

- A listing of grants related to community-based and experiential learning;

- A resource library for research, assessment, grant writing, course design, focusing upon experiential and community-based learning;

- A place for faculty and staff to meet to discuss service-learning curriculum.

The CCBSL is located in Career Services. For more information, contact the CCBSL at (619) 594-0546 or <http://servicelearning.sdsu.edu>.

## Counseling & Psychological Services

**Student Services, Room 2109,  
(619) 594-5220, <http://www.sdsu.edu/cps>**

Social science research confirms what you already know from your own experience. Your I.Q. and the facts you learn account for less than 25 percent of your ability to be successful and happy with your life. People who have Emotional Intelligence (a high EQ) understand and manage strong feelings, persist in the face of frustration and trauma, build strong relationships, listen well, and lead others. The higher your EQ, the more likely you are to be both happy and successful in your life.

Counseling & Psychological Services (CP&S) offers individual and group counseling for the typical college student who wants assistance in coping with, and successfully resolving, the problems they face in everyday life. Issues relating to intimate relationships, self-esteem, personal independence, conflict, anxieties, self-confidence and academic performance are difficult and common obstacles for most college students.

Individual counseling services are designed for students who can benefit from short term counseling. If a student's situation requires longer term therapy, referrals can be made to off-campus resources.

CP&S has a stress management program and Personal Growth Resource Library equipped with over 200 video and audio tapes and a variety of free brochures on topics to assist students in their academic performance and personal growth.

Enrolled SDSU students who want help from the CP&S staff in locating off-campus community services can call (619) 594-5220.

Counseling psychologists at CP&S offer help in:

- Learning to reduce stress. Stress can interfere with concentration, memory, and mental processing.

- Dealing with relationship loss, feelings of helplessness or hopelessness, which may lead to a lack of motivation or prolonged depression.

- Developing communication skills and problem solving techniques to improve important relationships.

- Building self-esteem and improving coping skills.

- Clarifying values and career decisions.

### Disabled Student Services (DSS)

**Student Services, Room 1661,  
(619) 594-6473; TDD: 594-2929; <http://www.sdsu.edu/dss>**

Disabled Student Services provides support services for students with mobility limitations, learning disabilities, hearing or visual impairments, psychological disabilities, attention deficit disorder, and other disabilities. Counselors are available to assist students in making personal, academic, and vocational choices, and show how best to utilize campus facilities. Prior to receiving assistance, appropriate medical documentation must be submitted to Disabled Student Services.

Services available to all DSS students include a writing center/assistive computer technology lab (the High Tech Center) where students may use standard or assistive computer technology for assignments and may receive tutoring assistance with their writing. Other services available when appropriate include priority registration for students with special needs; close-in parking; transportation on campus and information about off-campus transportation; government benefits counseling; accessibility information; library study rooms; reader services and assistance with books on tape; sign language interpreters or real-time captioning for deaf students; accommodated testing assistance; loan of educational support equipment (tape recorders, amplification equipment, wheelchairs, etc.); tutoring and notetaking services, referral to off-campus agencies for mobility orientation, financial benefits; and other services.

In addition, DSS offers special sections of classes aimed at helping students achieve academic success and fulfill University requirements. Rhetoric and Writing Studies 92A and 96 are designed to help students develop their writing skills and meet the lower division writing requirement. General Mathematics Studies 90A, 90B, and 91 are review classes designed to help students meet University mathematics competency requirements. Rhetoric and Writing Studies 98A is designed to teach students effective test preparation, notetaking, and other strategies to help them improve their academic performance.

### Faculty Office Hours

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

### Health Services

**Corner, Campanile Drive and Hardy Avenue,  
(619) 594-5281, <http://shs.sdsu.edu>**

All regularly enrolled SDSU students have prepaid a health fee which entitles them to basic medical services. Some services, including annual Pap smears and pharmacy, require a minimal fee. Charges associated with these services are usually dramatically lower than those found elsewhere. This care is provided at Student Health Services, an on-campus center where health care providers offer a wide range of programs and services. Services include:

Medical care by physicians board certified in family practice, internal medicine, orthopedics, psychiatry, dermatology, and preventive medicine, and by primary care nurse practitioners; nursing, x-ray, and laboratory services; a pharmacy which dispenses prescriptions and over-the-counter items at cost; health-related counseling and campuswide health education programming offered by the Health Promotion Department.

#### **REQUIRED: Proof of Immunity Against Measles, Rubella, and Hepatitis B**

All new or readmitted students born on or after January 1, 1957 must provide proof of immunity against measles and rubella (German Measles) during their first semester at SDSU. The **minimum** requirement is proof of at least one immunization for measles and rubella

given after the first birthday and after 1968. (*All students are encouraged to consider a second measles immunization.*)

Students may fulfill the immunization requirement by bringing or sending medical documentation as proof of either previous illness or immunization to Student Health Services. Students may also receive free immunization at Student Health Services. For more information, call (619) 594-5281.

**Important:** Students who have not complied with this California State University mandate prior to the registration deadline will not be able to register for their second semester.

#### **Hepatitis B**

All new students who will be 18 years of age or younger at the start of their first term must present proof of immunity against hepatitis B during their first semester at SDSU. Hepatitis B vaccination consists of a three-dose series of injections that require four to six months to complete. (*All students are encouraged to consider immunization against Hepatitis B.*)

Students may fulfill the immunization requirement by bringing or sending medical documentation as proof of either previous illness or immunization to Student Health Services. Students may also receive low cost immunization at Student Health Services. For more information, call (619) 594-5281.

**Important:** Students who have not complied with this California State University mandate during their first semester at SDSU will **not** be allowed to register for a second semester until they provide proof of immunity or begin the immunization series. Students who have not completed the immunization series by the end of their third semester will no longer be able to attend SDSU. Students must provide proof of completion of the vaccine series to Student Health Services.

Immunization documentation should be mailed or brought to SDSU Student Health Services, Immunization Program, 5500 Campanile Drive, San Diego, CA 92182-4701. Documentation may also be faxed to (619) 694-7469 (include name, address, telephone number, date of birth, and student ID number).

In addition to demonstrating immunity to measles and rubella at Student Health Services, some students may be further required to present documentation to other campus officials. Students subject to this additional screening include:

Students who reside in campus residence halls;

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

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

#### **Meningococcal Disease**

Each incoming freshman who will be residing in on-campus housing will be required to return a form indicating that they have received information about meningococcal disease and the availability of the vaccine to prevent one from contracting the disease and whether or not he or she has chosen to receive the vaccination.

Although immunization against this infection is not a requirement, all entering freshmen, particularly those living in residence halls, are urged to consider vaccination. The current vaccine is fairly effective against the majority of the strains of this bacterium, but unfortunately its immunity effect declines over a few years. Luckily, the risk of becoming infected with meningococcus also declines with age. Consequently, there is less of a reason to immunize older students, although they may do so if they desire. The meningococcal vaccine is available at Student Health Services.

#### **Strongly Recommended Health Screening**

Immunization from the following diseases may also protect students against potentially severe infections: tetanus, diphtheria, polio, mumps, chicken pox (varicella) and Hepatitis A. Like measles, these

too can be particularly harmful in the college-age group. These immunizations are available at reduced cost in Student Health Services. Flu shots are available annually, as well.

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

### **Appointments**

Students without acute or urgent problems are encouraged to make an appointment. Those with problems requiring immediate medical attention should walk in. Student Health Services is open twelve months of the year. The clinic is open from 8:00 a.m. until 4:30 p.m., Monday through Friday (call for extended hours of operation). All medical care provided at Student Health Services is **strictly confidential**. No one, on or off campus, other than Student Health Services staff has access to medical record information without written permission from the student.

### **Student Health Advisory Board**

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

### **Accidents and Student Insurance Coverage**

First aid or urgent medical care is also provided to faculty, staff, and campus guests for accidents and injuries occurring on campus. Accidents requiring treatment and/or transportation to Student Health Services or a local hospital should be reported immediately to the SDSU University Police, (619) 594-1991.

SDSU students are regarded 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.

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.

Students participating in required or elective academic programs such as internships or practica may be covered under the University's Worker's Compensation program provided an internship agreement between the University and the facility has been executed by an authorized representative of the University. If the facility requires interns to provide and maintain professional liability insurance, it is the student's responsibility to secure professional liability insurance at their own expense. The University does not cover students' liabilities. This coverage is available through various companies, accreditation agencies, and memberships in professional organizations. Students should confirm the facility's requirement for this insurance and maintain acceptable limits in full force during the term of placement. The University makes no warranties as to the nature or quality of the coverage or the financial integrity of the insurers. The information on the availability of coverage is provided as a convenience to the students.

The University does not provide liability, accident or health coverage to students. Through the Associated Students, a supplemental 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 per semester or yearly basis. An open enrollment period is available the beginning of each semester, and the policy may be purchased at the Aztec Center Ticket Office or online at <http://www.csuhealthlink.com>. The University makes no warranties as to the nature or quality of the coverage or the financial integrity of the insurers. The information on the availability of coverage is provided as a convenience to the students.

## **Housing Administration and Residential Education**

**6050 Montezuma Road, (619) 594-5742,**  
<http://www.sdsu.edu/housing>

There are six residence halls/complexes at San Diego State University including the Villa Alvarado Apartments. Graduate students also have the option of living in the Piedra del Sol Apartments, a 66-unit complex that offers entirely independent apartment living in two-, three-, and four-bedroom unfurnished units. These apartments are leased on a 12-month basis with priority given to upper division and graduate students.

The Villa Alvarado Apartments are available for the academic year by license agreement. These furnished two bedroom apartments offer double accommodations for four residents. A full-time professional Residence Hall Coordinator and six part-time Resident Advisers live on-site and offer a residence life program in support of community living. Early application and contracting is highly recommended.

Graduate students may also choose traditional, double residence hall housing in Chapultepec, Tenochca, Zura, or suite-style living in Cuicacalli Suites. Students needing housing over the breaks may select Tenochca Hall or Villa Alvarado Apartments which remains open over Thanksgiving, winter and spring breaks. These undergraduate halls house students for the academic year. Early application and contracting is highly recommended. Space is reserved on a first-come, first-served space available basis. You can obtain an Application for a License Agreement by visiting <http://www.sdsu.edu/housing>.

### **Off-Campus Housing**

Since family housing is not available on campus, off-campus housing serves the needs of families and others. The Office of Housing Administration maintains an Off-Campus Housing Web site with current listings of off-campus rental units or roommate sharing. To view listings posted on the Web site, visit the Housing main page at <http://www.sdsu.edu/housing> and follow the links for off-campus housing.

## **International Student Center**

**International Student Center, (619) 594-1982**  
<http://www.sdsu.edu/isc>

The International Student Center (ISC) advances San Diego State University as a global university by serving as a resource crossroads for international students seeking educational opportunities at SDSU, and for SDSU students seeking educational opportunities in other countries. The ISC offers a full range of programs and services to a variety of communities on and off campus in an effort to foster student success, global perspectives, intercultural awareness, and international goodwill.

### **International Students**

Working closely with almost 1,400 international students from more than 92 countries spanning the globe, the ISC provides support services that meet the logistical, regulatory, cultural, academic, and personal development needs unique to SDSU's most diverse student community.

The International Student Center coordinates a variety of activities designed to foster intercultural goodwill, understanding, and friendship. One such activity is provided by the Intercultural Ambassadors Program through which selected international students make home-country presentations in San Diego schools. The InterNational Partners Program provides service-learning opportunities for international students in the San Diego community by linking students and local community service organizations. In addition, the ISC invites faculty, staff, and the community to become American Friends to international students new to SDSU and to participate in the many events listed in the ISC Calendar of Intercultural Activities. These include the International Coffee Hour, International Peace Village and Festival, International Exchange Camps, and International Film Festivals.

### Study Abroad Students

The International Student Center provides services to all students who want to study abroad as part of their educational experience at SDSU. The ISC serves as SDSU's study abroad resource center and it acts as a window to the world for students beginning the journey. When students have questions about how to study abroad, what opportunities are available, or how to prepare for their time abroad, the ISC becomes their one-stop shop.

The ISC administers SDSU's reciprocal student exchange programs, providing various support services for participants in the 108 agreements SDSU has signed with institutions around the world.

The ISC serves as SDSU's liaison with the CSU International Programs Office (see below) which offers CSU students the traditional year of study abroad experience. The ISC coordinates all promotion, recruitment, selection, processing, and orientation for the participants from SDSU.

The ISC also coordinates SDSU's Risk Management Program for all SDSU students who study or travel in other countries. The focus of the program is to ensure that all participants are adequately insured and prepared for maintaining optimal health and safety abroad, and for planning how to respond to a wide range of possible emergencies.

As with increasing inbound international enrollment, the ISC plays a central role in SDSU's efforts to dramatically increase study abroad enrollment. In the last six years, the number of SDSU students studying abroad has increased more than 500 percent (from 167 to over 900 students).

### The California State University International Programs

Developing intercultural communication skills and international understanding among its students is a vital mission of the California State University (CSU). Since its inception in 1963, the CSU International Programs has contributed to this effort by providing qualified students an affordable opportunity to continue their studies abroad for a full academic year. More than 15,000 CSU students have taken advantage of this unique study option.

International Programs participants earn resident academic credit at their CSU campuses while they pursue full-time study at a host university or special study center abroad. The International Programs serves the needs of students in over 100 designated academic majors. Affiliated with more than 70 recognized universities and institutions of higher education in 18 countries, the International Programs also offers a wide selection of study locales and learning environments.

**Australia** – Griffith University, University of Western Sydney, Macquarie University, Queensland University of Technology, University of Queensland, Victoria University of Technology.

**Canada** – The universities of the Province of Quebec including: Université de Montréal, Concordia University, Université Laval, McGill University, Université du Québec system, Bishop's University

**Chile** – Pontificia Universidad Católica de Chile (Santiago)

**China** – Peking University (Beijing)

**Denmark** – Denmark's International Study Program (the international education affiliate of the University of Copenhagen)

**France** – Institut des Etudes Francaises pour Étudiants Étrangers, L'Académie d'Aix-Marseille (Aix-en-Provence), Universitiés de Paris III, IV, V, VI, VII, VIII, IX, X, XI, XII, XIII, the Institute of Oriental Languages and Civilizations, and Université Evry.

**Germany** – Universität Tübingen and a number of institutions of higher education in the Federal State of Baden-Württemberg

**Israel** – Tel Aviv University, The Hebrew University of Jerusalem, University of Haifa

**Italy** – CSU Study Center (Florence), Università degli Studi di Firenze, La Accademia di Belle Arti Firenze

**Japan** – Waseda University (Tokyo)

**Korea** – Yonsei University (Seoul)

**Mexico** – Instituto Tecnológico y de Estudios Superiores de Monterrey, Campus Querétaro

**New Zealand** – Lincoln University (Christchurch), Massey University (Palmerston North)

**Spain** – Universidad Complutense de Madrid, Universidad de Granada

**Sweden** – Uppsala Universitet

**Taiwan** – National Taiwan University (Taipei), National Tsing Hua University

**United Kingdom** – Bradford University, Bristol University, Hull University, Kingston University, Sheffield University, University of Wales, Swansea

**Zimbabwe** – University of Zimbabwe (Harare)

International Programs pays all tuition and administrative costs for participating California resident students to the same extent that such funds would be expended to support similar costs in California. Participants are responsible for all personal costs, such as transportation, room and board, living expenses, and home campus fees. Participants remain eligible to receive any form of financial aid (except work-study) for which they can individually qualify.

To qualify for admission to the International Programs, students must have upper division or graduate standing at a CSU campus by the time of departure. Students at the sophomore level may, however, participate in the intensive language acquisition programs in France, Germany, and Mexico. California Community Colleges transfer students are eligible to apply directly from their community college if they can meet these requirements. Students must also possess a current cumulative grade point average of 2.75 or 3.0, depending on the program for which they apply. Some programs also have language study and/or other coursework prerequisites.

Information and application materials may be obtained from the International Student Center or by writing to the California State University International Programs, 401 Golden Shore, Sixth Floor, Long Beach, California 90802-4210. Visit the Web site at:

<http://www.gateway.calstate.edu/csuienet/>.

### Ombudsmen

#### Student Services East, Room 1105 (619) 594-6578

<http://www.sa.sdsu.edu/ombuds>

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

The Ombudsmen are independent and impartial agents who help individuals and groups seeking the resolution and correction of complaints. The Ombudsmen act as liaisons between students and the University, assisting students through formal grievance procedures and functioning to mediate and reinforce other means of redress when possible. This office does not supplant existing avenues of redress. It exists to encourage appropriate and timely access to those existing processes which may best resolve the problem.

Examples of student complaints which have been resolved through this process include disputes over grades, faculty or staff conduct, academic disputes, appeals or waivers, administrative policies, and institutional compliance with federal and state nondiscrimination laws. Should a complaint not be resolved at the referral level, the Ombudsmen may act as mediators and suggest compromise solutions between parties. If the problem is still unresolved, the student may file a grievance with the student grievance committee. No student grievance can be filed with this committee later than the last day of the semester (excluding summer session) after the semester during which the student was allegedly aggrieved.

## Parking and Transportation

Where possible, carpooling or use of alternate modes of transportation is recommended. For carpool registration, contact School Pool (1-800-COMMUTE). For additional carpool information call (619) 594-5224.

San Diego Transit has six bus routes connecting the metropolitan area with service to the University Transit Center. These are routes 11, 13, 55, 115, 936, and 955. Semester and monthly bus passes can be purchased at the Aztec Center Ticket Office. San Diego Transit information at 1-800-COMMUTE will provide further information concerning bus routes, fares, and services, or use the free online transit information service at <http://www.sdcommute.com> and <http://www.ridelink.org>.

On-campus parking is by permit only. Purchase or possession of a parking permit does not guarantee a parking space. An additional permit is required for overnight parking. Overnight parking is limited and available on a first come, first serve basis. Parking structures are located on the perimeters of the campus in addition to surface parking lots. A free shuttle bus service to remote parking lots operates weekdays during the academic year. Major events at Cox Arena may require parking location adjustment. Visitor parking is available in several pay parking lots. Visitors are directed to the Information Booth at the College Avenue entrance to the campus for directions to appropriate pay parking areas. For further information on parking at the San Diego campus, contact the Department of Public Safety, (619) 594-6671. For visitor parking at the Imperial Valley Campus, call (760) 768-5500.

## Student Rights and Responsibilities

**Student Services, Room 1604, (619) 594-3069,**  
<http://www.sa.sdsu.edu/srr>

The Center for Student Rights and Responsibilities incorporates compliance and judicial procedures, two distinct components. The center serves to clarify for students their role as members of the campus community, setting forth what is expected of them in terms of behavior and contributions to the success of the University. This center also serves to further San Diego State University's commitment to maintaining a campus environment free from harassment and promoting a policy of non-discrimination.

The center is charged with investigating complaints filed by students alleging discrimination or sexual harassment, providing sexual harassment prevention workshops, reviewing University policy, monitoring campus disputes, and serving as a resource to the administration on issues of regulatory law, constitutional law, and risk management.

The judicial component is responsible for acting on behalf of the University president regarding all aspects of student discipline. The office receives reports of alleged student misconduct relative to Title 5, *California Code of Regulations*, and investigates complaints in order to determine whether University Disciplinary action is to be pursued. University disciplinary action may run concurrently with civil or criminal action initiated by the court system. Campus related violations include both academic and non-academic misconduct.

To review SDSU's Statement of Student Rights and Responsibilities, visit <http://www.sa.sdsu.edu/srr/statement>.

## Testing, Assessment and Research

**Student Services, Room 2549,**  
**(619) 594-5216, FAX: (619) 594-5036**  
<http://www.sdsu.edu/testoffice>

The Office of Testing, Assessment and Research is an important resource for the entire University community, serving both students and faculty by administering paper and pencil and computer-based tests for the purpose of admission, class placement, competency for graduation, licenses, credentials, counseling, and career planning. Test scoring and analysis services are provided for classroom tests. The Office also conducts a comprehensive program to measure the needs, attitudes, perceptions, behaviors of students, identify factors affecting retention, progression to degree, academic success, and assess the effectiveness of Student Affairs programs and services.

Test dates for San Diego State University competency and placement tests are listed in the Test Information section of the current *Class Schedule* and on our Web site. Advance reservations as well as fee payments are required for most tests. The Office of Testing, Assessment and Research will provide students with test dates and registration procedures for major national examinations in the form of a bulletin of information or with the address of the testing service. Reservations for computer-based tests can be made at the Office of Testing, Assessment and Research (619) 594-0968. Students who are interested in assessments for counseling or career planning must contact Counseling & Psychological Services or Career Services. Special arrangements for disabled students are made through Disabled Student Services.

Although competency test requirements are monitored by various offices on campus, the Office of Testing, Assessment and Research will attempt to assist students in signing up for the required examinations or refer them to the proper agency.

## Veterans Affairs

**Office of the Registrar, Student Services, Room 1641**  
**(619) 594-5813**

Veterans Affairs is located in the Office of the Registrar. Students who are eligible for veteran, dependent, or reservist V.A. education benefits should visit SDSU's Veterans Affairs Office (VAO). Services available through the Veterans Affairs Office include assistance in applying for education benefits, administration of the Cal Vet Fee Waiver program, coordinating the V.A. work study program, and processing tutorial assistance paperwork.

Students planning to attend SDSU should contact the Veterans Affairs Office two months before the beginning of their first semester to be advised on how to file for benefits. For additional information about the services provided, please telephone or visit the office.

# PART SIX

College of Extended Studies  
Imperial Valley Campus  
The California State University

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# College of Extended Studies

## Section I. Continuing Education

### Functions

The California State University regards the credit-bearing programs offered through Extended Education 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 that the institution sets for its other programs and courses with regard to resources, faculty, level of instruction, evaluation, and support services.

The College of Extended Studies at San Diego State University serves as the principal University liaison with the adult community and provides a wide variety of traditional and nontraditional, credit and noncredit educational experiences designed to fit the life-style and expectations of lifelong learners. 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, Special Projects, 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.

### Open University

Most regular on-campus courses are open to students through enrollment in Open University. Open University courses earn matriculated resident credit, and enrollment for students not seeking an advanced degree or advanced certificate does not require formal admission to the University. Enrollment in courses through Open University is on a space available basis with the consent of the instructor and approval of the chair of the department in which the course is offered. Students pay College of Extended Studies fees for these units. The course repeat policy applies to courses repeated through Open University. Consult the College of Extended Studies or the current Class Schedule for complete details on Open University qualifications and registration procedures. A maximum of 24 units earned through Open University, Extension, and credit-by-examination combined may be used toward total units required for the bachelor's degree.

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 550 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.
4. Disqualified students – Undergraduate students who have been disqualified from SDSU will not be allowed to attend Open University or classes through Special Sessions until one year from the date of their disqualification. Graduate students will not be allowed for one semester following disqualification.

### Limitations on Open University and Special Sessions Credit

Not more than nine units of combined coursework in Open University and special sessions completed prior to admission to an advanced degree or an advanced certificate program will be acceptable on a program of study. Admission to an advanced program requires formal admission to the University and enrollment in at least one course offered in the regular semester for which the student was admitted, a recommendation of the graduate adviser of the particular program, and the approval of the Dean of the Graduate Division. Once so matriculated, students may take additional courses in Open University to meet degree or certificate requirements only with the prior permission of the Dean of the Graduate Division.

### American Language Institute (ALI)

The American Language Institute offers noncredit intensive (20-25 hours per week) English programs throughout the year to students and professionals interested in improving their English proficiency. By enrolling in the ALI, students may take advantage of a program called conditional acceptance. Conditional acceptance is available to those students who require admission or proof of eligibility to a university in order to obtain a passport, a US visa, or government sponsorship. It is offered to students who do not have an adequate command of English or the required TOEFL (Test of English as a Foreign Language) score to qualify for admission to the University. After transcripts of their academic work have been evaluated by SDSU staff, students may receive an official letter of conditional admission which states that the student has met all University requirements **except** English language proficiency and may enter the University after training at the American Language Institute and achieving appropriate TOEFL scores.

Programs offered by ALI are as follows:

**English for Academic Purposes** – An 11- to 17-week course for students planning to enter San Diego State or other colleges or universities. Classes are offered in reading, writing, grammar, academic listening/note-taking and academic speaking, as well as in special areas, including TOEFL, GMAT, and GRE test preparation and business topics. In addition, students may choose from over 30 elective course offerings, and TOEFL, GMAT and GRE preparation. Students may also specialize in Pre-MBA preparation.

Highly advanced students may register for three to twelve units of SDSU courses in addition to their English classes.

**Intensive English Communications** – A 3- to 19-week course emphasizing oral skills and cultural experiences. Classes include eight hours of oral communication in addition to 12 hours of reading, writing, structure and listening per week. Elective courses are offered, and directed activities at SDSU and in the community provide experiences for real language use. Regular field trips to places of educational and recreational interest are an integral part of the program.

**Specific Purposes Programs** – Programs for students and professionals with specific needs, including Management and Business English, Business Seminar for International Executives, American TEFL (Teaching English as a Foreign Language), Seminar for International Teachers of English, Certificate in Business Administration Program, and Pre-MBA Preparation are offered.

**Summer and Winter Special Programs** – A number of special short-term programs are offered by the ALI each summer (e.g., Management and Business English, Business Seminar for International Executives, Seminar for International Teachers of English, English Language Study Tours). 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. The Web site address is <http://www.americanlanguage.org>.

## Travel Study Programs

The College offers students and the general public the opportunity to study language and culture in foreign countries while earning SDSU credit. In addition, travel study programs include non-credit wilderness trips which enable the public to explore the historical sites and natural wonders of California, Alaska, Arizona, and Mexico.

For further information contact the Coordinator of Travel Study Programs.

## Certificate Programs

Certificate programs provide educational development to meet the needs of the workforce. Certificates are focused on the relevance of career enhancing specialization and are recognized by most employers as a significant academic accomplishment. A listing of graduate certificate programs available is described in Part I of this bulletin.

## Extension

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

### Extension Courses

Extension courses are offered each semester in a number of areas including education, business administration, public administration, and the arts and sciences. Many courses and programs are developed in cooperation with off-campus organizations and groups who have identified specific needs. Many extension courses are now offered on-line. For information on these courses visit the Web site at <http://www.neverstoplearning.net>. Some one-unit weekend workshops are also offered throughout the year. These courses are listed in a special Extended Studies Catalog published three times a year.

There is no limit on the total number of extension units for which a student may enroll; however, the maximum extension credit which may be used toward advanced degree requirements at San Diego State University is six to nine units. Extension work is considered the same as transfer credit and is not included in the student's San Diego State University scholastic average.

## Professional Development

The Division of Professional Development provides business and industry 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 process improvement and leadership techniques that ensure they will add to the productivity and profitability of their organizations.

### Custom On-Site Training

SDSU's Professional Development Division of the College of Extended Studies develops and implements on-site training programs that meet specific needs of the San Diego business community.

The programs serve medium as well as large businesses and organizations with topics ranging from team building and communication skills to supervision, leadership, process improvement, and project management.

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

The programs offer significant value for the time invested and are designed with quality and adaptability in mind.

### Professional Development On-Line (PDOL)

Meeting the needs of our students, the College of Extended Studies has developed a wide offering of professional development courses that can be completed on the Internet. Programs are available in key business areas such as leadership, finance, project management and managing teams. These on-line programs typically consist of five to ten courses, and can be completed at the student's own pace.

### Seminars/Workshops/Certificates

The Division develops and coordinates practical one- to five-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 subjects, such as leadership, finance, marketing, lean six sigma, and customer service issues related to global competitiveness. In addition, more than 30 evening certificate programs are offered in specific functional or industry areas, such as human resources, meeting and events planning, and contract management.

### Corporate Partnerships:

#### Professional Development

Professional Development offers membership benefits to companies joining at the Presidential, Director, and Associate levels. Representatives from member companies sit on advisory boards and play an active role in identifying company needs and instructors. In addition, the annual membership enables the company to get more training for its training dollars. A third benefit to members is the networking opportunities that develop through association with other companies with similar learning needs.

## Section II. University Degree Programs

From time to time, the University offers specialized advanced degree programs through the College of Extended Studies designed to serve discrete groups of students and the special needs of the community. These programs conform to the standards and requirements established by the Graduate Council for all graduate degree curricula. Students enrolling in these programs are fully matriculated and are expected to fulfill all of the academic requirements as described in this Bulletin, including formal admission to the University and to the individual program.

Because of the special nature of these programs, scheduling of courses may not follow the traditional semester schedule. This allows maximum flexibility in the modes, timing, and place of instruction that will best serve the needs of the participating groups. These programs are not supported by the state; correspondingly, the fee structure is different from that listed in this Bulletin. Once accepted into the program, students register for classes and pay fees through the College of Extended Studies. Since these fees cover only the cost of instruction, students who desire access to such services of the associated students as health and placement will be required to pay additional fees on campus.

The following programs described in detail in Part Three of this Bulletin are currently offered through special arrangements with the College of Extended Studies. Persons interested in further information are invited to contact the program coordinator.

### **Master of Business Administration for Executives (M.B.A.)**

A two year program designed for mid-career business executives who have substantial work and managerial experience. Classes meet on alternate Fridays and Saturdays. Approximate cost: \$27,600.

### **Master of Business Administration with a Specialization in Sports Business Management (M.B.A.)**

A 49 unit full time program in the management of sports organizations and related facilities. A four- to six-month internship in a representative organization is an integral component of the program. Elective coursework will emphasize sport and event marketing, community relations, collective bargaining, and legal issues. Approximate cost: \$25,000.

### **Master of Arts in Educational Technology**

This 36 unit program is available on-line. The program includes "soft technology": techniques for identifying educational problems and solving them in a way that uses what we know about how people learn. The SDSU Master of Arts program also provides hands-on experience with "hard technology," preparing its graduates to use exciting new learning technologies.

### **Master of Science in Biomedical Quality Systems**

This 40 unit, two-year program is offered under the auspices of the Center for Bio/Pharmaceutical and Biodevice Development. The curriculum provides those with a background in the biological, chemical, and engineering sciences with a foundational understanding of quality assurance and quality control concepts, practices, and regulatory requirements for the development and manufacturing of medical devices, pharmaceuticals, and biotechnology-related products designed for human use. The curriculum addresses FDA requirements, quality planning, assurance and improvement methods in addition to validation, audit, statistical process control, and experimental design systems. Approximate program cost: \$20,000.

### **Master of Science in Regulatory Affairs**

A 40 unit interdisciplinary program offered under the auspices of the Center for Bio/Pharmaceutical and Biodevice Development. The curriculum is designed for regulatory affairs professionals and focuses on the laws and regulations imposed by the Federal government, especially the Food and Drug Administration. Particular concerns are related to drug discovery, development, testing, and manufacture of products for commercial distribution. Approximate cost: \$18,000.

### **Master of Science in Rehabilitation Counseling**

A three year, 60 semester hour program, designed for currently employed rehabilitation personnel who are counselors and service providers. Courses are offered throughout the calendar year. There is extensive use of mediated technologies. Approximate cost, excluding books: \$13,000.

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# Imperial Valley Campus

## Faculty

Emeritus: Ayala, Baldwin, Ballesteros, Harmon, Hill, King, Merino, Polich, Spencer, Varela-Ibarra

Professors: Dunn, Elizondo, Medeiros, Neumann, Reyes, Ryan, Shumaker

Associate Professors: Amaral, Castañeda, Champion, Garrison, Sabath, Stampfl

Assistant Professors: Arquette, Coates, Herrera, Itzá, King, Marx, Mendez, Perner, Ponce, Ramirez-Pimienta, Verzi, West

## General Information

The Imperial Valley Campus is a branch 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 the last two years of undergraduate education, graduate programs, and fifth year credential programs for teacher preparation, the campus accepts students who have at least 56 transferable units from community colleges or other accredited institutions. The Imperial Valley Campus offers students the advantages of smaller classes and individual contact with the faculty. The Imperial Valley Campus faculty are multinational in their classroom orientation and background. Interactive television provides students in Calexico the opportunity to participate in various classes broadcast live from the 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. Occasional classes are also offered on the weekends.

The Imperial Valley Campus is located in Imperial County which has a population of approximately 140,000 people. Calexico is 120 miles east of San Diego, 60 miles west of Yuma, Arizona and 120 miles south of Palm Springs. Interstate 8 and State Highways 111 and 86 connect the County to the rest of the country and state. In 2003-2004, we proudly expanded our campus to two sites in order to better serve our students and our community. The campus location, six blocks from the Mexican border, provides the opportunity for involvement in a bicultural environment. Just across the border is Mexicali, a city of more than one million people. The Brawley location is 24 miles north of the Calexico site. It is surrounded by rich agricultural fields, the largest industry in the Imperial Valley.

The over 900 students at Imperial Valley Campus have the opportunity to be involved in a rich campus life. Student clubs, student government, lectures, art exhibits, quad musical events, library and computer center special programs enhance the students' education at SDSU – Imperial Valley Campus.

The Imperial Valley Campus Web site is <http://www.ivcampus.sdsu.edu>. The telephone number is (760) 768-5500.

## Curricula Offered

### Graduate Degrees

- Master of Arts degree in Education
  - Concentration in Educational Leadership
  - Concentration in Elementary Curriculum and Instruction
  - Concentration in Secondary Curriculum and Instruction

In cooperation with academic units and the Graduate Division on the San Diego campus, the Imperial Valley Campus also offers the following graduate programs leading to advanced degrees:

- Master of Public Administration
- Master of Science degree in Business Administration
  - Concentration in International Business

## Certificate Programs

Business Administration, Court Interpreting, Public Administration, Translation Studies

## Teaching Credentials

Basic: Multiple Subject Cross-Cultural Language and Academic Development (CLAD) emphasis, Multiple Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) emphasis: Spanish, Single Subject

Specialist: Administrative Services  
Special Education  
(Both in conjunction with the College of Education)

For further information on any of these degrees, see the SDSU – Imperial Valley Campus Bulletin.

## Study Abroad

Graduate students at San Diego State University, Imperial Valley Campus can enhance their education and cultural awareness by taking part in several of the many opportunities available to study abroad. The campus has active exchange agreements with universities in Argentina, Brazil, Croatia, Ecuador, Finland, France, Germany, Iran, Mexico, Morocco, Paraguay, Turkey, the Ukraine, and the United Kingdom. Several other agreements are in the process of negotiation with different academic institutions around the world, including Chile and Costa Rica.

In addition to IVC's own international programs, students may participate in any international programs at SDSU, including the California State University International Programs; the SDSU spring semester programs; or the International Student Exchange Program (ISEP) Consortia.

## Research Center

### California Center for Border and Regional Economic Studies (CCBRES)

The California Center for Border and Regional Economic Studies (CCBRES) specializes in research on the Imperial Valley and U.S.-Mexican border region. The Center collects and compiles statistics on economic, demographic, social, environmental, and trade indicators on the Imperial County, Mexicali, and binational region and publishes a monthly bulletin of in-house and sponsored analysis of the issues involved in bilateral trade. CCBRES also hosts conferences and workshops on border issues, ranging from trade and economics to environmental and educational issues. The Center's vision is to create a resource for the Imperial Valley, California-Baja California, Mexico border residents, and individuals interested in issues surrounding the U.S. Mexican border.

As related to the economic situation in the Imperial Valley, CCBRES has and is maintaining a current economic profile of the Imperial Valley. The data includes economic indicators such as demographic information, quality of life, environmental, labor and agricultural statistics, and macro economic indicators. The Center is providing the community with tools to plan for the future of this binational region.

The Imperial Valley Campus has been designated by the U.S. Department of Agriculture as one of eight national centers of excellence in the United States.

## Facilities

The Calexico campus is located on an eight-acre city block in the heart of Calexico's civic center along the Mexican border. The campus facilities create a pleasing architectural harmony of old and new structures surrounding a spacious central lawn area, the Rollie Carrillo Quad. Adjoining the quad, the expanded library, Rodney Auditorium, and John Stepling Art Gallery provide academic and cultural

## Imperial Valley Campus

resources for the entire community. Other buildings include classroom buildings, the administration building, faculty offices, a computer lab, a bookstore, and the Student Union. In 2003-2004, we proudly expanded our campus to two sites in order to better serve our students and our community. The Brawley location is 24 miles north of the Calexico site. It is surrounded by rich agricultural fields, the largest industry in the Imperial Valley

The library is designed to facilitate research and to provide a pleasant atmosphere for study. The collection is expanding and has more than 110,000 volumes, periodicals, and newspapers which support the curricula offered on the Imperial Valley Campus. Services provided include reference assistance, CD ROM databases, personal computers for word processing, full text database, Internet access, interlibrary loans, and photocopying facilities.

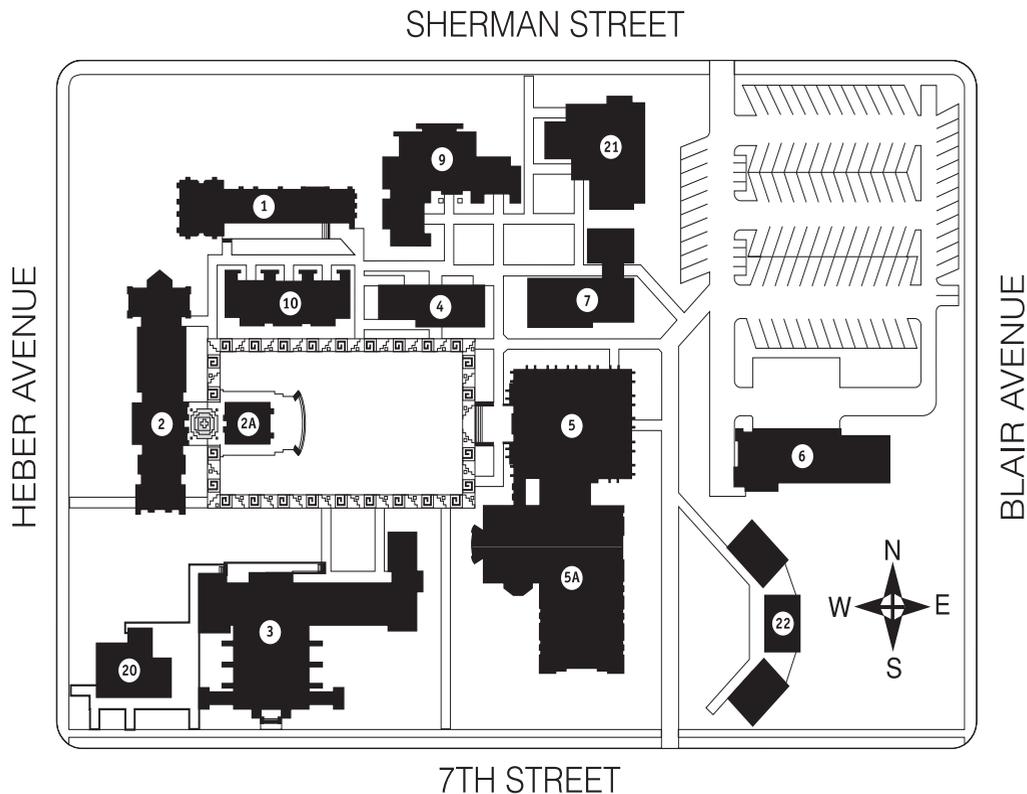
Computer assistance is available in the computer lab. Both Macintosh and IBM compatible systems and Internet access are also available on campus.

## Admission and Registration

To apply for admission to the Imperial Valley Campus, students must file a complete application and transcripts as outlined in Part Two of this bulletin. Both completed application forms and transcripts should be sent to the Admissions Office, San Diego State University, Imperial Valley Campus, 720 Heber Avenue, Calexico, California 92231. Please telephone (760) 768-5509 for further information. Students can register by the touchtone registration system (RegLine), but only after fees are paid. Late registration is allowed during the first two weeks of the semester. Students wishing to late register must pay registration fees plus a \$25.00 late fee.

## Commencement

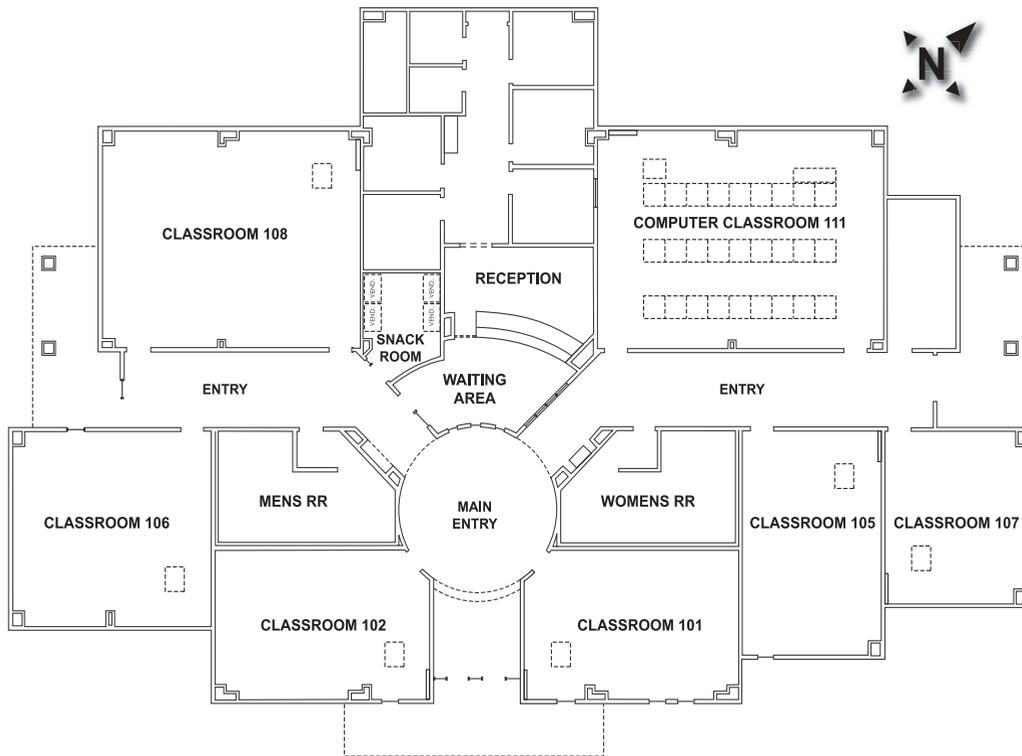
The Imperial Valley Campus holds its own commencement exercises each spring in the Rollie Carrillo Quad area prior to the commencement exercises on the San Diego campus.



## IMPERIAL VALLEY CAMPUS BUILDING LEGEND

- |  |   |  |
|--|---|--|
| 1. North Classroom Building (N-101, N-102, N-106, N-108)                     | 4. Classroom Building (C-7, C-8, C-9, C-10) | 9. Faculty Offices: Building East (Classrooms) |
| 2. Administration Building (Administration/Academic Affairs/Business Office) | 5. Library                                  | 10. Faculty Offices: Building West             |
| 2A. Art Gallery  | 5A. Library Addition                        | 20. Student Center                             |
| 3. Auditorium/ Classrooms (A-3, LA-1, LA-2, LA-3, LA-4)                      | 6. Physical Plant                           | 21. Student Affairs                            |
|  | 7. Computer Building                        | 22. CLAT – Classrooms                          |

Imperial Valley Campus – Brawley Campus Map



**SDSU IVC Campus – Brawley**  
**560 East Highway 78**  
**Brawley, CA 92227**

# 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 the campuses of the CSU include comprehensive and polytechnic universities and, since July 1995, the California Maritime Academic, a specialized campus.

The oldest campus – San José State University – was founded in 1857 and became the first institution of public higher education in California. The newest CSU Channel Islands, opened in fall 2002, with freshmen arriving in fall 2003.

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 of the respective campuses.

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

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

The CSU offers more than 1,800 bachelor's and master's degree programs in some 240 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 number of doctoral degrees are offered jointly with the University of California and with private institutions in California.

Enrollments in fall 2003 totaled 409,000 students, who were taught by some 22,000 faculty. The system awards more than half of the bachelor's degrees and 30 percent of the master's degrees granted in California. Nearly two million persons have been graduated from CSU campuses since 1960.

## Average Annual Cost of Education and Sources of Funds per Full-time Equivalent Student

The 23 campuses and the Chancellor's Office of the California State University are financed primarily through funding provided by the taxpayers of California. The systemwide cost of education is defined as total support expenditures (State University Fee revenue and General Fund support appropriations) divided by the number of full-time equivalent students. The total 2002/2003 state General Fund appropriation to the CSU (not including capital outlay funding in the amount of \$481,178,000) is \$2,680,280,000 and campus budgeted State University Fee Revenue is \$533,430,000 for a total of \$3,213,710,000. The \$3,213,710,000, total cost of education for CSU must provide support for a projected 321,132 full-time equivalent students (FTEs). The number of full-time equivalent students is determined by dividing the total academic student load by 15 units per term (the figure used here to define a full-time student's academic load).

The 2002/2003 systemwide cost of education per full-time equivalent student is \$10,007. Of this amount, the average student fee support per FTE is \$1,926. (The State University Fee and campus fees that must be paid to apply to, to enroll in, or attend the University are included in the average costs paid by the students. Individual students may pay less or more than \$1,926, depending on the campus and whether student is attending part-time/, -full-time, or is resident/, nonresident student. Also, other campus fees may be charged that are not required of all enrolled students, which include user and penalty/deposit fee types.)

2002/2003	Amount	Average Cost Per FTE Student	Percentage
Total Cost of Education	\$3,213,710,000	\$10,007	100.0
-State Appropriation	2,680,280,000	8,346	83
-Student Fee Support	533,430,000	1,661	17

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**Correspondence with Trustees should be sent:**

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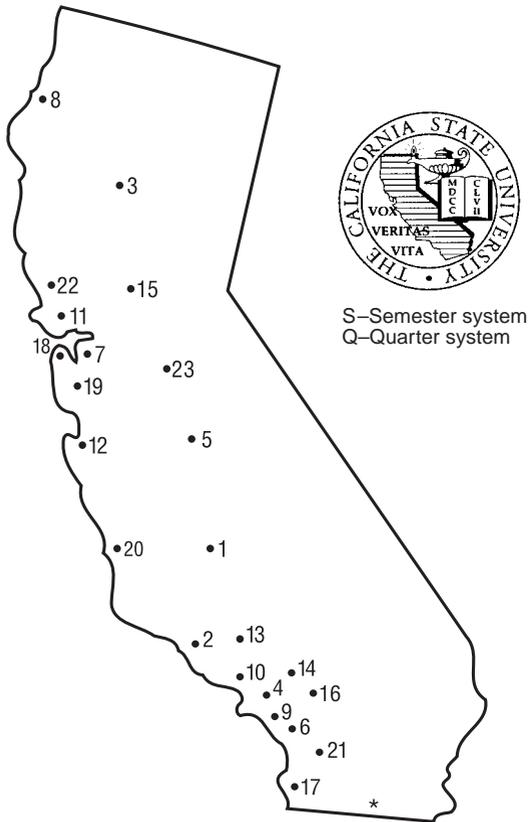
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CSU Campus Locations



- 1 CALIFORNIA STATE UNIVERSITY, BAKERSFIELD • Q  
9001 Stockdale Highway, Bakersfield, CA 93311-1099  
Dr. Tomás A. Arciniega, President  
(661) 664-2011 • <http://www.csusbak.edu>
- 2 CALIFORNIA STATE UNIVERSITY, CHANNEL ISLANDS • S  
One University Drive, Camarillo, CA 93012  
Dr. Richard R. Rush, President  
(805) 437-8400 • <http://www.csuci.edu>
- 3 CALIFORNIA STATE UNIVERSITY, CHICO • S  
400 West First Street, Chico, CA 95929-0150  
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- 4 CALIFORNIA STATE UNIVERSITY, DOMINGUEZ HILLS • S  
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- 5 CALIFORNIA STATE UNIVERSITY, FRESNO • S  
5241 North Maple Avenue, Fresno, CA 93740  
Dr. John D. Welty, President  
(559) 278-4240 • <http://www.csufresno.edu>
- 6 CALIFORNIA STATE UNIVERSITY, FULLERTON • S  
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(714) 278-2011 • <http://www.fullerton.edu>

- 7 CALIFORNIA STATE UNIVERSITY, HAYWARD • Q  
25800 Carlos Bee Boulevard, Hayward, CA 94542  
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(510) 885-3000 • <http://www.csuhayward.edu>
- 8 HUMBOLDT STATE UNIVERSITY • S  
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- 10 CALIFORNIA STATE UNIVERSITY, LOS ANGELES • Q  
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(707) 664-2880 • <http://www.sonoma.edu>
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801 West Monte Vista Avenue, Turlock, CA 95382-0299  
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